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## 20<sup>th</sup> ANNUAL NATIONAL CONFERENCE (09<sup>th</sup> - 11<sup>th</sup> November, 2024)

Demographic Transition and Social Sector Challenges in India :  
Understanding Demographic Dynamics



Agricultural Growth, Rural Poverty, and Sustainable Development



India's External Sector Reforms and Challenges



Exploring Tourism Opportunities and Overcoming Challenges in Uttar Pradesh and Uttarakhand



Climate Change and Environmental Degradation: A Global Challenge



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### *THEME 1*

- Demographic Transition and Social Sector Challenges in India : Understanding Demographic Dynamics

### *THEME 3*

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### *THEME 4*

- Exploring Tourism Opportunities and Overcoming Challenges in Uttar Pradesh and Uttarakhand

### *THEME 5*

- Climate Change and Environmental Degradation: A Global Challenge



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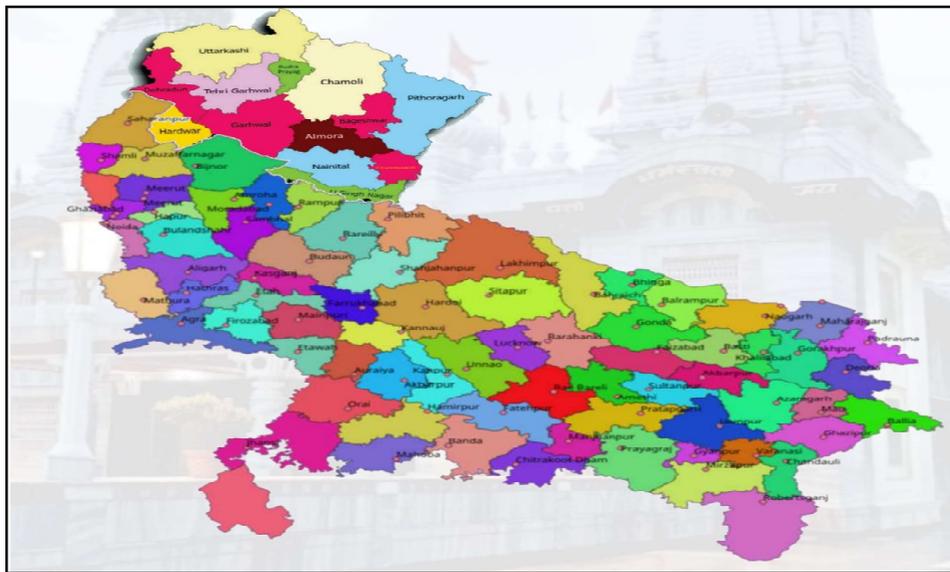
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### *From Secretary's Desk*

The Uttar Pradesh-Uttarakhand Economic Association (UPUEA), established in 2005, has experienced remarkable growth, boasting a membership of two thousand seven hundred (2700) life members in less than 20 years. As a premier society of economists dedicated to promoting economic research in both states, UPUEA actively contributes to the field through the publication of research findings.

UPUEA organizes annual conferences that serve as a platform for economists to share their research, collaborate with peers, and engage in stimulating discussions. The increasing participation of delegates, paper presenters, and renowned resource persons underscores the growing significance of these events. Through its commitment to organizing high-quality events and fostering research collaboration, UPUEA plays a pivotal role in advancing economic understanding within Uttar Pradesh and Uttarakhand.

The Uttar Pradesh-Uttarakhand Economic Association (UPUEA) is gearing up for its 20th Annual National Conference, a three-day event scheduled in second week of November 2024 (i.e 09-11, November, 2024). We have received more than Two Hundred Seventy (270) Research papers under the broad theme of the conference: **"India Amrit Kaal: Paving the Way to a \$5 Trillion Economy through Contemporary issues of Economy, Business, and Management."** This year's conference delves into the dynamic forces shaping the Indian economy, with a particular focus on the tourism state of Uttar Pradesh and Uttarakhand. Researchers and economists have a great opportunity to contribute their expertise by submitting papers on five key sub-themes:

- ***Demographic Transition and Social Sector Challenges in India: Understanding Demographic Dynamics***
- ***Agricultural Growth, Rural Poverty, and Sustainable Development***
- ***India's External Sector Reforms and Challenges.***
- ***Exploring Tourism Opportunities and Overcoming Challenges in Uttar Pradesh and Uttarakhand***
- ***Climate Change and Environmental Degradation: A Global Challenge***

While the acceptance of the papers for publication in the conference proceedings is a significant achievement, we have observed a tough and continuing challenge of delayed submissions. This last-minute submission often disrupts the conference schedule and compromises the quality of the proceedings. Despite our consistent efforts to communicate deadlines and expectations, we continue to receive late submissions. We understand that unforeseen circumstances may arise, but timely submission is crucial to ensure a smooth and efficient conference.

To ensure a seamless conference experience and timely publication of full papers in the Journal, we kindly request all interested members to contact the General Secretary or Organizing Secretary for any clarifications or updates. Adherence to the specified page limits will contribute to a well-organized and informative conference.

The Uttar Pradesh-Uttarakhand Economic Association (UPUEA), a decade-old organization, recognizes the need to adapt to the rapidly evolving economic landscape. As both states face new challenges, particularly in agriculture and rural development, UPUEA views this as an opportune moment for critical reflection and strategic planning. The association aims to analyze past development efforts, identify lessons learned, and formulate strategies to unlock growth across all sectors.

***The Uttar Pradesh Development Report (UDR) is a significant initiative aimed at understanding the state's development trajectory and identifying key areas for intervention. The report prepared by the Association with the help of Uttar Pradesh government shall provide a comprehensive analysis of various socio-economic indicators, including poverty, education, health, and infrastructure. One of the key focus areas of the UDR is to contribute to the state's goal of achieving 'Zero Poverty.' This ambitious target aligns with the broader national goal of eradicating poverty and ensuring inclusive growth. By analyzing the root causes of poverty, the UDR offers valuable insights into the policy and programmatic interventions needed to achieve the 'Zero Poverty' vision. It emphasizes the need for a multi-pronged approach that combines economic growth, social justice, and environmental sustainability.***

The UPUEA extends its sincere thanks to the numerous funding agencies and institutions whose generous support has been instrumental in facilitating conferences, journal publications, and the printing of conference proceedings. The association is also indebted to Rightway Publications, New Delhi, for their efficient and timely printing services.



**(Vinod Kumar Srivastava)**  
**General Secretary**

## UPUEA ECONOMIC JOURNAL

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***THEME 1***

**Demographic Transition and Social Sector Challenges  
in India : Understanding Demographic Dynamics**



# Educational Performance of Non-Specific Category (NSC) States of India: A Comparative Analysis of Statewise Quality of Educational Index (QEI)

Prof. Aloka Kumar Goyal<sup>1</sup> & Drishti Jaiswal<sup>2</sup>

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## ABSTRACT

*Education improves the quality of human capital by equipping individuals with knowledge, skills, and competencies. A more educated workforce is generally more productive, innovative, and capable of using advanced technologies, leading to increased economic output. Education is fundamental in transforming human resources into valuable human capital, which is essential for the process of capital formation and economic development. In this regard, a multidimensional index is constructed as Quality of Educational Index (QEI) which is a comprehensive measure designed to evaluate and compare the educational performance of non-specific category states in India. The study focuses specifically on the elementary education sector, encompassing both primary and upper primary levels in the year of 2015-16 & 2021-22. This QEI is intended to help policymakers, educational planners, and administrators understand the state of education across regions and identify areas for targeted improvement.*

**Keywords:** *Quality of Educational Index (QEI), Non-specific category (NSC) states, Infrastructural facilities, Outcomes, Educational performance.*

## Introduction

A well-educated population is crucial for a functioning democracy. Quality primary education teaches children about their roles as citizens, instilling values like responsibility, respect for others, and the importance of community service. This helps create informed, active citizens who contribute to nation-building and democratic governance. Primary education forms the basic foundation of a person's learning journey. It provides the essential skills in literacy, numeracy, and critical thinking that are necessary for success in secondary education and beyond. Without a strong foundation, children struggle in later stages of education. A high-quality primary education is the cornerstone of an individual's personal and intellectual growth and the foundation of a prosperous society.

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It influences every aspect of a child's life, from cognitive development to social skills, emotional well-being, and future opportunities. By investing in the quality of primary and upper primary education, countries can ensure the holistic development of children and lay the groundwork for future economic, social and political stability.

India is making efforts to promote inclusive education, particularly for girls, differently-abled students, and minority communities. Programs like BetiBachaoBetiPadhao and various scholarship schemes are designed to encourage the education of marginalized groups. High-quality education teaches children discipline, the importance of time management, and the ability to focus on tasks. These skills are crucial not only in academia but in every aspect of life. Children in schools with poor infrastructure and overcrowded classrooms are more likely to develop behavioural issues due to frustration, lack of attention, and inadequate guidance. A robust primary education system includes an understanding of global issues, teaching children to be aware of the world beyond their immediate environment. This is important in today's interconnected world, where global issues affect local communities.

In this regard, a multidimensional index is constructed as Quality of Educational Index (QEI) which is a comprehensive measure designed to evaluate and compare the educational performance of non-specific category of Indian states. The study focuses specifically on the elementary education sector, encompassing both primary and upper primary levels in the year of 2015-16 & 2021-22. The QEI is intended to help policymakers, educational planners, and administrators to understand the quality of education across states and identify areas for enhancing quality.

### **Objectives of the study**

- To identify the states lagging behind in terms of different dimensions of educational performance at primary and upper primary educational levels using the dimensions of QEIs and the composite QEI.
- To compare and ranking of Non-special category states of India through the multidimensional index i.e. Quality of Education Index (QEI) and dimension wise educational performance.

### **Methodology and Data Source**

This study is mainly an Analytical and Descriptive in nature. The study is based upon the secondary data. The study seeks to compare educational performance at two points of time i.e. 2015-16 and 2021-22. The year 2015-16 reflects the situation after about a two decade of economic reforms and 2021-22 represents the latest years for which most of the information is available and shows the impact of the second generation of economic reforms on spatial divergence and regional disparity. The study considers statewise educational performance of Non-specific category states of India on the basis of three significant indices and also the overall composite QEI index. For the collection of secondary data, statewise UDISE+, Department of School Education and Literacy, Ministry of Education, (Annual) 2015-16 & 2021-22 have been used. In order to find the educational performance of Non-specific category states of India, sixteen variables have been taken. These variables are categorised under three indices as follows:

### Box 1: Indicators used to construct different dimensions of QEI and the overall QEI in the present study

Parameters	Variables	
Outcome Index (OI)	E1	Net Enrolment Ratio in primary education
	E2	Net Enrolment Ratio in upper primary education
	E3	Adjusted Net Enrolment Ratio in primary education
	E4	Adjusted Net Enrolment Ratio in upper primary education
	E5	Enrolment ratio of children with disabilities in primary education
	E6	Enrolment ratio of children with disabilities in upper primary education
	E7	Completion rate for grade 8
Infrastructure Index (II)	E8	Proportion of schools with access to electricity
	E9	Proportion of schools with access to computers for pedagogical purposes
	E10	Proportion of schools with access to adapted infrastructure and materials for students with disabilities/ disabled friendly toilets
	E11	Proportion of schools with access to adapted infrastructure and materials for students with disabilities/ disabled friendly ramps
	E12	Proportion of schools with access to basic drinking water
	E13	Proportion of schools with access to basic hand washing facilities (as per the WASH indicator definitions)
Gender Index (GI)	E14	Gender Parity indices for primary education
	E15	Proportion of schools with access to single-sex basic sanitation facilities (Boys)
	E16	Proportion of schools with access to single-sex basic sanitation facilities (Girls)
Educational Performance Index: Quality of Education Index(QEI)	QEI	Outcome Index (OI) Infrastructure Index (II) Gender Index (GI)

Methodological frameworks for the construction of different dimensions of QEIs and multidimensional Quality of Education Index (QEI) have been taken.

#### Normalisation of variables and parameters of the study:

The study aims at computing different sub-indices for different variables of educational performance and then using them to compute overall Quality of Education Index (QEI) of NSC states of India. The methodology for normalising the variables is as under:

$$\text{Performance Index (PI)} = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

$X_i$  stands for actual value;  $X_{\min}$  stands for minimum value;  $X_{\max}$  stands for maximum value.

Indices calculated for the indicators on the basis of above formula lies in between 0 to 1. Quality of Education Index (QEI) has been calculated as the average of the indices of various indicators. Based on their indices value, states have been categorised into four top and bottom as per their indices value of educational performance.

## Analysis of the Study

### Statewise educational performance:

The table 1 describes the educational performance of Non-Specific Category states of India at two points of time i.e. 2015-16 & 2021-22 based on three significant dimensions of QEIs i.e. Outcome Index (OI), Infrastructure Index (II), and Gender Index (GI) and the overall Quality of Educational Index (EDI) (see annexure III). The study finds that Kerala remains in the top four states in terms of outcome index of educational performance of NSC states of India and its outcome index value is improving (from 0.799 to .852) during the study period while Rajasthan and Uttar Pradesh are remains in the bottom four states in this regard and their outcome index value is deteriorating during the study period.

**Table 1: Top four and bottom four states of NSC states of India based on their dimension QEIs and the overall QEI indices value:**

2015-16						2021-22					
TOP FOUR STATES	INDEX VALUE	RANK	BOTTOM FOUR STATES	INDEX VALUE	RANK	TOP FOUR STATES	INDEX VALUE	RANK	BOTTOM FOUR STATES	INDEX VALUE	RANK
<b>OUTCOME INDEX (OI)</b>											
Kerala	0.799	1	Andhra Pradesh	0.231	1	Kerala	0.852	1	Madhya Pradesh	0.127	1
Chhattisgarh	0.792	2	Haryana	0.315	2	Karnataka	0.739	2	Gujarat	0.272	2
Tamil Nadu	0.748	3	Rajasthan	0.348	3	Maharashtra	0.716	3	Rajasthan	0.342	3
Punjab	0.697	4	Uttar Pradesh	0.468	4	West Bengal	0.705	4	Uttar Pradesh	0.398	4
<b>INFRASTRUCTURE INDEX (II)</b>											
Chhattisgarh	0.911	1	Jharkhand	0.148	1	Punjab	0.986	1	Assam	0.131	1
Punjab	0.845	2	Telangana	0.257	2	Chhattisgarh	0.964	2	Telangana	0.332	2
Maharashtra	0.835	3	Assam	0.260	3	Maharashtra	0.832	3	Bihar	0.339	3
Gujarat	0.785	4	Bihar	0.263	4	Gujarat	0.809	4	Madhya Pradesh	0.344	4
<b>GENDER INDEX (GI)</b>											
Chhattisgarh	0.963	1	Assam	0.119	1	Chhattisgarh	1.000	1	Telangana	0.143	1
Uttar Pradesh	0.858	2	Bihar	0.422	2	Gujarat	0.833	2	Assam	0.256	2
Himachal Pradesh	0.794	3	Madhya Pradesh	0.478	3	Tamil Nadu	0.739	3	Andhra Pradesh	0.370	3
Telangana	0.738	4	Odisha	0.520	4	Uttar Pradesh	0.737	4	Odisha	0.480	4
<b>QUALITY OF EDUCATION INDEX (QEI)</b>											
Chhattisgarh	0.889	1	Assam	0.318	1	Chhattisgarh	0.854	1	Assam	0.301	1
Punjab	0.751	2	Andhra Pradesh	0.387	2	Kerala	0.763	2	Madhya Pradesh	0.361	2
Kerala	0.737	3	Bihar	0.413	3	Maharashtra	0.749	3	Telangana	0.379	3
Tamil Nadu	0.717	4	Madhya Pradesh	0.425	4	Tamil Nadu	0.734	4	Rajasthan	0.492	4

**Source:** Author's own calculations on the basis of available data **Source:** Statewise UDISE+, Department of School Education and Literacy, Ministry of Education, (Annual) 2015-16 & 2021-22.

In terms of infrastructural index, Chhattisgarh, Punjab, Maharashtra and Gujarat are remain in top four NSC states of India and their infrastructure index values are improved during the study period while Telangana, Assam and Bihar are remains in the bottom four states in this regard and infrastructure index value of Assam is deteriorating while other two states' index values are improved during the study period.

In terms of gender index, Chhattisgarh and Uttar Pradesh are remain in top four NSC states of India and gender index values of Uttar Pradesh are improved during the study period while Assam and Odisha are remains in the bottom four states in this regard during the study period.

In terms of the overall composite Quality of Education Index (QEI), Chhattisgarh, Tamil Nadu and Kerala are remaining in top four NSC states of India at both points of time. While Assam and Madhya Pradesh are remains in the bottom four states in this regard during the study period.

## Conclusions

This paper addresses the educational performance of twenty Non-Special Category states of India based on the significant sixteen variables using the dimension of QEIs and the overall Quality of Educational Index (QEI) in the year of 2015-16 & 2021-22. The study concludes that the educational performance of twenty NSC Indian states Kerala, Chhattisgarh and Punjab are at top position in terms of dimensions of QEIs and the overall Quality of Education Index (QEI) while Assam, Bihar and Madhya Pradesh are at bottom position in this regard in the year of 2015-16. While in the year of 2021-22, Chhattisgarh, Kerala and Maharashtra are at top position in terms of dimensions of QEIs and the overall Quality of Education Index (QEI) while Assam, Telangana and Madhya Pradesh are at bottom position in this regard in the year of 2021-22. To improve quality of primary education and learning outcomes, policymakers and stakeholders must address the challenges faced by central regions of India. Investing in better infrastructure, especially gender-sensitive facilities combined with initiatives to promote gender equality in schools, can create an inclusive and high-quality educational environment. This, in turn, promotes both academic achievement and broader societal benefits such as gender equality and holistic development.

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Annexure-I

Table I: Dimension QEIs indices value of all 20 NSC Indian states in 2015-16

S. No.	States	OUTCOME INDEX							INFRASTRUCTURE INDEX						GENDER INDEX		
		E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16
1	Andhra Pradesh	0.024	0.049	0.000	0.000	0.519	0.250	0.778	0.911	0.249	0.060	0.000	0.338	0.182	0.071	0.901	0.949
2	Assam	1.000	0.262	1.000	0.279	0.519	0.176	0.788	0.081	0.016	0.738	0.494	0.000	0.229	0.357	0.000	0.000
3	Bihar	1.000	0.534	1.000	0.677	0.166	0.067	0.442	0.235	0.000	0.153	0.607	0.509	0.074	0.500	0.385	0.380
4	Chhattisgarh	0.829	0.638	0.932	0.604	0.685	0.926	0.928	1.000	1.000	0.888	0.579	1.000	1.000	1.000	0.921	0.969
5	Gujarat	0.298	0.422	0.695	0.628	0.204	0.196	0.974	0.997	0.977	0.639	0.910	0.945	0.446	0.286	0.851	0.890
6	Haryana	0.000	0.225	0.363	0.543	0.088	0.112	0.874	0.971	0.441	0.864	0.623	0.906	0.717	0.286	0.647	0.758
7	Himachal Pradesh	0.320	0.580	0.816	0.910	0.215	0.202	0.933	0.893	0.195	0.385	0.829	0.876	0.535	0.429	0.972	0.982
8	Jharkhand	0.968	0.438	1.000	0.499	0.309	0.144	0.930	0.000	0.011	0.055	0.352	0.470	0.000	0.286	0.744	0.774
9	Karnataka	0.922	0.515	1.000	0.487	0.348	0.266	0.937	0.964	0.354	0.170	0.672	0.941	0.572	0.214	0.921	0.958
10	Kerala	0.418	0.688	0.680	0.829	1.000	1.000	0.975	0.954	1.000	0.506	0.569	0.886	0.629	0.214	0.835	0.917
11	Madhya Pradesh	0.442	0.404	0.658	0.498	0.232	0.205	0.952	0.127	0.068	0.296	0.694	0.416	0.280	0.000	0.709	0.726
12	Maharashtra	0.558	0.552	0.708	0.589	0.602	0.378	0.883	0.840	0.590	0.923	1.000	0.874	0.781	0.214	0.896	0.930
13	Odisha	0.651	0.264	1.000	0.530	0.558	0.439	0.851	0.182	0.066	0.671	0.655	0.414	0.188	0.143	0.610	0.806
14	Punjab	0.665	1.000	0.819	1.000	0.829	0.567	0.000	0.999	0.510	1.000	0.734	0.993	0.835	0.286	0.897	0.946
15	Rajasthan	0.334	0.042	0.512	0.256	0.193	0.138	0.961	0.469	0.244	0.360	0.383	0.515	0.431	0.000	0.919	0.979
16	Tamil Nadu	0.680	0.718	1.000	1.000	0.470	0.369	1.000	0.984	0.567	0.330	0.688	0.929	0.599	0.357	0.880	0.924
17	Telangana	0.387	0.276	0.815	0.612	0.348	0.112	0.877	0.863	0.307	0.040	0.064	0.130	0.141	0.214	1.000	1.000
18	Uttar Pradesh	1.000	0.000	1.000	0.206	0.099	0.029	0.943	0.307	0.046	0.198	0.798	0.617	0.243	0.643	0.952	0.978
19	Uttarakhand	0.770	0.314	1.000	0.551	0.000	0.000	0.892	0.640	0.284	0.000	0.394	0.369	0.285	0.357	0.801	0.804
20	West Bengal	0.747	0.400	0.969	0.575	0.436	0.157	0.803	0.671	0.039	0.137	0.549	0.605	0.387	0.214	0.742	0.841

## Annexure-II

Table II: Dimension QEIs indices value of all 20 NSC Indian states in 2021-22.

S. No.	States	OUTCOME INDEX							INFRASTRUCTURE INDEX						GENDER INDEX		
		E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16
1	Andhra Pradesh	0.455	0.348	0.866	0.642	0.426	0.434	0.873	0.948	0.407	0.197	0.000	1.000	0.882	0.083	0.246	0.783
2	Assam	1.000	0.493	1.000	0.437	0.385	0.187	0.100	0.000	0.006	0.174	0.398	0.000	0.206	0.506	0.186	0.000
3	Bihar	0.764	0.396	1.000	0.520	0.287	0.180	0.076	0.511	0.006	0.123	0.442	0.951	0.000	0.333	0.856	0.870
4	Chhattisgarh	0.525	0.608	0.588	0.341	0.374	0.745	1.000	1.000	1.000	0.916	0.869	1.000	1.000	1.000	1.000	1.000
5	Gujarat	0.229	0.141	0.500	0.288	0.210	0.232	0.304	1.000	0.975	0.399	0.722	1.000	0.757	0.583	0.958	0.957
6	Haryana	0.394	0.361	0.778	0.681	0.297	0.120	0.778	0.961	0.917	0.518	0.486	0.967	0.963	0.967	0.910	0.852
7	Himachal Pradesh	0.562	0.396	1.000	0.843	0.144	0.120	0.830	0.943	0.271	0.245	0.612	1.000	0.956	0.167	0.922	0.930
8	Jharkhand	0.667	0.352	0.943	0.888	0.226	0.243	0.351	0.795	0.819	0	0.667	0.721	0.375	0.167	0.892	0.913
9	Karnataka	0.862	1.000	1.000	1.000	0.202	0.315	0.706	0.961	0.466	0.158	0.427	0.951	0.213	0.083	0.790	0.887
10	Kerala	0.552	0.555	1.000	0.983	0.872	1.000	1.000	0.983	0.979	0.274	0.625	0.984	0.941	0.000	0.958	0.965
11	Madhya Pradesh	0.000	0.123	0.000	0.000	0.328	0.438	0.000	0.000	0.093	0.067	0.681	0.738	0.485	0.083	0.874	0.878
12	Maharashtra	0.886	0.767	1.000	0.611	0.554	0.404	0.791	0.782	0.772	0.638	1.000	0.918	0.882	0.500	0.790	0.809
13	Odisha	0.411	0.141	0.871	0.345	0.300	0.768	0.498	0.314	0.989	0.666	0.886	0.603	0.857	0.083	0.695	0.661
14	Punjab	0.653	0.449	0.840	0.258	0.456	0.491	0.754	1.000	0.995	1	0.923	1.000	1.000	0.000	0.934	0.965
15	Rajasthan	0.465	0.189	0.753	0.236	0.292	0.154	0.507	0.463	0.412	0.196	0.996	0.772	0.665	0.333	0.444	0.826
16	Tamil Nadu	0.495	0.471	0.990	0.930	0.426	0.610	0.967	1.000	0.735	0.331	0.519	1.000	1.000	0.200	0.994	0.974
17	Telangana	0.768	0.758	1.000	0.852	0.149	0.213	0.894	0.734	0.300	0.005	0.550	0.246	0.154	0.167	0.000	0.261
18	Uttar Pradesh	0.492	0.000	0.871	0.253	0.369	0.206	0.596	0.323	0.105	0.252	0.275	0.852	0.456	0.417	0.898	0.896
19	Uttarakhand	0.902	0.379	1.000	0.681	0.000	0.000	0.663	0.633	0.489	0.022	0.403	0.792	0.335	0.000	0.737	0.626
20	West Bengal	1.000	0.907	1.000	0.389	0.364	0.277	1.000	0.882	0.000	0.333	0.404	0.918	0.824	0.167	0.988	0.991

## Annexure-III

Table III: Dimension QEIs and the overall QEI indices value of all 20 NSC Indian states in 2015-16 &amp; 2021-22.

S. No.	States	2015-16				2021-22			
		OI	II	GI	QEI	OI	II	GI	QEI
1	Andhra Pradesh	0.231	0.290	0.641	0.387	0.578	0.572	0.370	0.507
2	Assam	0.575	0.260	0.119	0.318	0.515	0.131	0.256	0.301
3	Bihar	0.555	0.263	0.422	0.413	0.460	0.339	0.686	0.495
4	Chhattisgarh	0.792	0.911	0.963	0.889	0.597	0.964	1.000	0.854
5	Gujarat	0.488	0.785	0.675	0.650	0.272	0.809	0.833	0.638
6	Haryana	0.315	0.754	0.563	0.544	0.459	0.802	0.643	0.635
7	Himachal Pradesh	0.568	0.619	0.794	0.660	0.556	0.671	0.673	0.634
8	Jharkhand	0.613	0.148	0.601	0.454	0.439	0.496	0.657	0.531
9	Karnataka	0.639	0.559	0.698	0.632	0.739	0.529	0.587	0.618
10	Kerala	0.799	0.757	0.656	0.737	0.852	0.798	0.641	0.763
11	MadhyaPradesh	0.484	0.313	0.478	0.425	0.127	0.344	0.612	0.361
12	Maharashtra	0.610	0.835	0.680	0.708	0.716	0.832	0.700	0.749
13	Odisha	0.613	0.363	0.520	0.499	0.576	0.554	0.480	0.537
14	Punjab	0.697	0.845	0.710	0.751	0.557	0.986	0.633	0.726
15	Rajasthan	0.348	0.400	0.633	0.460	0.342	0.467	0.668	0.492
16	Tamil Nadu	0.748	0.683	0.721	0.717	0.699	0.764	0.739	0.734
17	Telangana	0.489	0.257	0.738	0.495	0.662	0.332	0.143	0.379
18	Uttar Pradesh	0.468	0.368	0.858	0.565	0.398	0.377	0.737	0.504
19	Uttarakhand	0.504	0.328	0.654	0.495	0.518	0.429	0.621	0.523
20	West Bengal	0.584	0.398	0.599	0.527	0.705	0.594	0.715	0.671

# Demography: Problems & Prospects in Bharatian Perspective

*Prof. (Dr.) Vikram Dev<sup>1</sup> & Dr. Vidushi Sharma<sup>2</sup>*

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## INTRODUCTION

Being a populous country, Bharat has been facing the perennial problem of labour & employment for several decades. Providing employment to the millions of job seekers has been a major challenge for our planners since the beginning of Bharatian planning process. Till the economy remained closed (mid-80s and more particularly the beginning of the 90s) under the socialistic pattern model, employment generation & labour protection was an overriding goal. Particularly, the organized sector was legally obliged to protect employment in return for protection from competition. The interventionist regime created a complex web of labour laws and extensive executive machinery. This resulted in a well-laid framework seeking to provide security of tenure of employment in the organized sector while largely ignoring similar efforts in the unorganized & small-scale sectors.

As the employment generation potential of the organized sector started waning, labour started moving into the unorganized sector. This in turn led to an increase in the number of those engaged in low quality employment (lack of decent jobs) and other related issues. *The growing unorganized sector also became a source of income inequalities in the country.*

After a decade and half of reforms, India is at the crossroads. It is high time to complete the unfinished agenda of reforms by adopting a second dose of hardcore reforms including the labour reforms. At the same time, demographic changes resulting in a growing proportion of economically active younger population, throws a major challenge as well as an opportunity for the economy. The tradeoff between capital intensive (higher productivity) and labour intensive (employment generating) techniques adds to the complexities. Simultaneously, the problems of child labour and gender bias in the labour market continue to bother.

In the post-reform period, Bharat has embarked on a high growth path leaving behind a Hindu growth rate of 3.5%. Today the economy is capable of posting a sustained growth of 8%. Most importantly, our policy makers have realized the significance of inclusive growth. The draft Approach

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Paper to the 11th Five Year Plan mentions that “..the 11th plan provides an opportunity to restructure policies to achieve new vision of growth that will be much more broad-based and inclusive..”

“As the employment generation potential of the organized sector started waning, labour started moving into the unorganized sector. This in turn led to an increase in the number of those engaged in low quality employment (lack of decent jobs) and other related issues. The growing unorganized sector also became a source of income inequalities in the country.”

Labour and employment issues in our economy cannot be seen in isolation. On the contrary they are closely connected to the issues of income and poverty levels and overall developmental policies - the topics dealt separately in this edition of the Liberal Budget. With this background, we attempt to briefly analyze the issues relating to labour and employment particularly during the post-reforms period and also try to find out solutions in broad terms. The chapter is broadly divided into three parts. The first part deals with the structural changes in the labour and employment scene in India. The second part discusses the imperatives inherent in the problem while the last part deals with the challenges posed by these problems.

### **Research Objectives: -**

**RO1:-** To analyze the effects of demographic change in the labour landscape.

**RO2:-** To analyze the effects of demographic change in scenario of economic situation.

**RO3:-** To analyze the impacts of demography change in scenario of employment.

### **Discussion**

#### **Structural Changes in Labour& Employment**

The Post-Reforms period has witnessed structural changes in the labour and employment scene vis-à-vis the pre-reforms period. In the following paragraphs changes in the labour scene are analyzed followed by an examination of the changes in employment.

#### **Changes in the Labour Scenario**

These transformations can be analyzed under three broad categories viz. demographic, social and economic changes explained below.

“Labour and employment issues in our economy cannot be seen in isolation. On the contrary they are closely connected to the issues of income and poverty levels and overall developmental policies - the topics dealt separately in this edition of the Liberal Budget.”

#### **Social Changes**

During the post-reforms period, there have been certain welcome changes in India's labour structure from the social point of view. Illustratively, the component of child labour in the total work force has been declining. Between 1993-94 and 2004 the share of child labour (between the age group of 5-14) has declined from 3.3% of the total work force to 1.7% in the case of male and

from 5.1% to 2.6% for females. This, in a way, is also reflected in increasing school enrolments. Between 1991 and 2002-03 enrolment in primary education increased from 80.5% to 95%. In the case of secondary education, the proportion has risen from 42% to 61% in this period. Still, child labour continues to be major menace and its eradication poses a social challenge. As liberals we support all measures - legal and financial - that will help uproot this problem.

Rising educational levels of workers have been facilitating improving productivity levels of labour. Gross real value added per worker has increased from Rs.19, 737 in 1993-94 to Rs.27, 722 in 1999-2000 - 5.82% growth per annum. According to 2011 census there were 10.1 million child labour in India. Which was 3.9% of total child population according Kailash Satyarthi Foundation in 2023 the number of child labour are approximately 7.8 million. According to NCLP scheme 14.3 lack child labour have been rescued, rehabilitated and main streamed.

### Economic Changes

The rising rate of growth of real wages provides some solace for the working class particularly, in the rural sector. For instance, in the case of casual labour in all activities, real wages increased at an annual rate of 2.51% during 1983 to 1993-94 for males and 3.15% for females. In post reforms period the growth rate was 3.59% for males and 3.19% for females. The analysis of activity-wise real wage growth rate shows that the rise in wages has been higher for females vis-à-vis males (Table-II).

Another structural change in the Indian labour market has been the shift of labour from the organized sector to the unorganized sector. Total employment in the organized sector has increased marginally from 24 mn in 1983 to 27.8 mn in 1999-2000. During this period total employment in the unorganized sector increased from 275.6 mn. to 371.2 mn. Compound annual growth of employment in the organized sector declined from 1.26% during pre reforms period (1983 to 1993-94) to 0.24% in the post reforms period (1993-94 to 1999-2000). In the case of the unorganized sector however, the decline was slower from 2.24% to 1.04% during the same period.

As a consequence of labour shifting to the unorganized sector, its share in total employment has increased over a period of time. Conversely, the share of the organized sector has decreased (Chart I).

**Table II: Average Real Daily Casual Wage Growth Rate (% p.a)**

Activity	Males		Females	
	83-94	93-00	83-94	93-00
Manual work in Agriculture	2.74	2.77	3.09	2.93
Non-Manual work in Agriculture	4.51	3.47	2.69	3.18
Non-Maunal work in Non-Agriculture	2.82	3.07	4.12	4.57
Public Works	2.29	3.83	4.1	5.04

Source: NSSO Surveys

“Between 1991 and 2002-03 enrolment in primary education increased from 80.5% to 95%. In the case of secondary education, the proportion has risen from 42% to 61% in this period. Still, child labour continues to be major menace and its eradication poses a social challenge”.

Interestingly, the share of the unorganized sector in farm employment has declined from 74.4% in 1983 to 64.5% in 1999-2000. On the other hand, its share in non-farm employment particularly, in the areas of manufacturing, construction, trade, restaurant, transport and services, increased considerably during this period.

There has been a major decline in labour unrest in the recent past. The numbers of strikes and lockouts have decreased from 771 in 2000 to 404 in 2004. As a result, man-days lost have also reduced from 28.8 mn to 13.5 mn in this period. The growing unorganized sector could be one of the factors responsible for declining labour unrest in the country.

According to an employment survey by the Centre for Monitoring the Indian Economy (CMIE), **the total employment remains below the pre-pandemic levels by 7.8 million (between January 2020 and January 2022)**. iii Moreover, the labour force participation rate declined by close to 3.0 percentage points in the past two years.30-Mar-2022.

Labour market in India is also suffering from some imperfections such as **lack of adequate information regarding jobs, lack of suitable agency for the proper utilisation of labour force, child labour practices, lack of proper manpower planning** etc.

The central government of India revises the minimum wage rate twice a year, on April 1<sup>st</sup> and October 1<sup>st</sup>. The revision is based on the CPI for Industrial workers. In current scenario the wage rate declared by the government of India as under –

As of 1<sup>st</sup> October 2024, the minimum wage rate in India are –

1. Unskilled Rs. 783/day or Rs. 20358 for month.
2. Semiskilled Rs. 868/day or Rs. 2568 for month.
3. Skilled, clerical & watch & wards without arms Rs. 954/day or Rs. 24804 for month.
4. Highly skilled & watch & wards with arms Rs. 1035/day or Rs. 26910 for month.

### **Changes in the Employment Scene**

During the post-reforms period changes in the employment scene have occurred in the form of growth rates, sectoral changes in employment and inter-state disparity in employment.

In 2023-24, India employment increased to 64.33 crores, which is 17.19 crore increase from 2014-15. The employment growth rate was 6% in 2023-24, compared to 3.2% in 2022-23.

### **Unemployment by Area/Region:-**

**Rural** - Decreased to 5.3% (2017-18) to 2.5% (2023-24)

### **Growth of Employment and Unemployment**

Between 1980 and 1990 (the period of the second and third Economic Census) growth rate in total employment declined. The fall in employment was seen in both rural and urban areas. Decline in urban employment has been relatively sharper as compared to rural employment. This could be due to an increase in non-farm jobs in rural areas. However, during the same period, the overall

economic growth was higher. This implied that the higher growth was achieved without corresponding increase in employment - a jobless growth.

Conversely, the unemployment rate has been growing faster during the post-reforms period. Interestingly, during post-reforms period male unemployment has grown faster than female unemployment. For instance, between 1993-94 to 2004 male unemployment increased at a compound annual average rate of 3.1% as compared to 1.3% in 1983 to 1993-94. These growth numbers for females are 3.7% and 4.6% respectively. Open unemployment is more acute in urban areas as compared to rural areas. Along with unemployment, the problems of under-employment (both visible and invisible) also add to the problem. Rural visible under-employment shows greater increase among females than males. Invisible underemployment (reflected by the amount of workers seeking additional work) has declined more among males than females.

### **Sectoral Analysis**

Sector-wise annual growth in employment (labour absorption) during pre and post reforms shows a slowdown in employment growth in agriculture, electricity, gas and water supply both at rural and urban areas. On the other hand, sectors like manufacturing and construction reported an increase in labour absorption during the post-reforms period vis-à-vis the pre-reform period. Trade and transportation showed an increase in labour absorption in rural areas and a fall in urban areas.

### **Inter-state Disparity in Employment Generation**

Although, at the all-India level there has been a fall in the growth of employment during the post-reforms period, some states have reported an increase in employment growth. These include, Kerala, Tamil Nadu, U.P., Delhi and Dadra/ Nagar Haveli (Chart III).

Barring U.P., other states are relatively developed in the areas of industry and services. That may be the factor responsible for higher employment growth.

### **Imperatives**

While emphasizing the employment aspect of industry, one should not lose sight of the technological aspect of the industry, the factor which determines the competitiveness of industry.

The second imperative is Training and Development (T&D). In order to sustain the rapidly changing technological situation, constant T&D is essential. This helps in enhancing labour productivity and helps labour in getting absorbed quickly in the event of lay-offs. The third imperative is providing a safety net to take care of laid-off labour during the transition period by devising appropriate devices acceptable to all the stakeholders.

The fourth imperative is reviewing the age-old labour laws to make them more relevant to the current situation which is open and global in nature. Policy makers have expressed umpteen numbers of times the need to review and reform labour laws in order to enhance their effectiveness by providing labour flexibility. Labour flexibility does not necessarily mean only and hire and fire of labour. It includes a wide spectrum of laws, rules and regulations which will help in enhancing the welfare of labour while increasing their productivity and raising the competitiveness of the industry.

In India labour is also governed by state laws, which differ from state to state. States should formulate conducive labour laws for the overall development of industry while taking care of labour.

The eight major problems faced by labour market in India. Those are: 1. Surplus Labour Force 2. Unskilled Labour 3. Lack of Absorption of Skilled Labour 4. Imperfections 5. Work Culture 6. Militant Unionism 7. Unemployment 8. Lack of Labour Reforms.

#### **Problem 1. Surplus Labour Force:**

Labour market in India is suffering from surplus labour force. A huge number of labourers are rendered surplus due to lack of adequate demand arising out of both primary, secondary and tertiary sector. Due to high rate of growth of population, a huge number of labour forces is continuously being added with the existing labour force leading to a huge surplus in the labour market.

#### **Problem 2. Unskilled Labour:**

Another major problem of labour market in India is that there is a growing number of unskilled labourers in the country. In the absence of adequate vocational institutes, skill formation among the labour force in the country is very slow. This huge number of unskilled labourers find it difficult to become self employed and thus create a huge army of unemployed in the country.

#### **Problem 3. Lack of Absorption of Skilled Labour:**

In India the absorption rate of skilled labour force is also very poor. A huge number of technically educated youths after completing their technical education like engineering, vocational courses etc. are finding it difficult to get themselves absorbed in the secondary sector, leading to a huge problem of educated unemployment in India.

#### **Problem 4. Imperfections:**

Labour market in India is also suffering from some imperfections such as lack of adequate information regarding jobs, lack of suitable agency for the proper utilisation of labour force, child labour practices, lack of proper manpower planning etc. Such imperfections have been resulting in various hurdles in the path of absorption of labour force smoothly.

#### **Problem 5. Work Culture:**

Work culture among the Indian labour force is not at all good. Whatever work force is absorbed in various productive sectors it is not adhered to healthy work culture. This has been resulting in lesser economic surplus in the production system which restricts indirectly its absorption capacity in future.

#### **Problem # 6. Militant Unionism:**

Labour market in India is also facing the problem of militant unionism. In some productive sectors and that too in some particular states, trade unions are not adhering to healthy practices.

This has led to militancy in the union structure and its activities, which is detrimental for the greater interest of the nation.

### **Problem 7. Unemployment:**

Labour market is also facing a serious problem of unemployment. A huge number of work forces of our country remain partially or wholly unemployed throughout the year or some part of the season. This has led to the problems like disguised unemployment, seasonal unemployment, general unemployment and educated unemployment.

In the absence of adequate growth of employment avenues, unemployment problem in the country is gradually becoming much more alarming day by day.

Moreover, due to the policy of downsizing followed both in public and private sector and also in government administration and services sector, the problem of unemployment is becoming much more acute. This has also been putting much pressure on the labour market of the country.

### **Problem 8. Lack of Labour Reforms:**

Labour market in India is also suffering from lack of adequate labour reforms provision. Economic reforms introduced in the country during the 1990s have changed economic scenario of the country. But the country is lagging behind in adopting necessary labour reforms which are rational and important under the present context.

### **Challenges & Recommendations**

Considering the dire need to generate more than ten million jobs annually while keeping in mind the challenges and limitations discussed in the Liberal Budget 2008-09 recommends following.

1. The formulation and execution of policies to achieve 8-9% job-oriented growth on a sustained basis to take care of both the organized as well as unorganized sectors. We believe that only higher growth will provide
  2. greater and better quality employment opportunities.
  3. The appointment of an expert committee to look into the re-orientation of existing labour laws in a time bound manner. There is need for an all party debate on this committee's findings leading to consensual decision.
  4. Steps to bring about broad uniformity in labour laws across the states.
  5. Effective implementation of laws relating to Child Labour (minimization) and female workers
1. Simplifying labour rationalization and exit laws
  2. Emphasis on labour intensive manufacturing activities
  3. Measures to enhance investments in agriculture with a focus on dry-land and contract farming

We have seen that the labour market in Bharat has been suffering from the aforesaid serious problems. Thus the Government should chalk out proper policy for bringing necessary reforms in the labour market for the greater interest of the country as well as for the interest of labour force (both working and non-working) in general.

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# Transforming Education towards Sustainable Development Goal 4 in India

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## ABSTRACT

*Sustainable development goals are the forefront of government initiatives across the world. The SDGs are primarily concerned with promoting sustainable growth via ensuring wellbeing, economic growth, environmental legislation and academic advancement. One of the prominent goal of SDG is goal 4 which ensures inclusive and equitable quality education and promote lifelong learning opportunities for all. Understanding the importance of education as a cornerstone in human resource development, the government of India has introduced the New Education Policy 2020. It has undergone a consultative process in order to adapt to the evolving needs of quality education, innovation and research in today's world. NEP attempts to transform India into a center of knowledge by providing students with advanced opportunities and skill enhancement with help of vocation training and ICT. Various programs have been implemented to ensure the quality education for all. While there has been a significant improvement in achieving quality education but there are still some challenges that need to be tackled. This paper focuses on the current strategies adopted by India to align with goal 4 of the Sustainable Development Goal in the Indian context by incorporating them into the development of programs and policy of Government and their positive impact on achieving quality education as highlighted in SDG 4.*

**KEYWORDS:** *Sustainable Development Goals, Quality Education, Opportunities, Innovation.*

## INTRODUCTION

Education and literacy are the key indicators of a society that play a central role in enhancing overall socio-economic development of a country as a whole. Emphasising the education as the essence of human resource development, the Government of India is likely to finalise the New Education Policy (NEP) through consultative process. To meet the changing dynamics of the present-day requirement with regard to quality education, innovation and research, NEP aims to make India a knowledge hub by equipping its students with skill development and up gradation including ICT and vocational training. India has achieved significant progress towards the goal of Education for

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All. Constitutionally several key programmes and policies have been initiated to provide free and compulsory education to all children in the age group of six to fourteen years as a Fundamental Right. Initiatives such as SarvaSikshaAbhiyan (SSA) and Right to Education (RTE) have given much required impetus to education system in India. Though it has significantly improved the enrolment rates across the country in primary education, but the challenge of quality in terms of learning outcomes remains to be addressed. (GOI, Economic Survey 2016-17). One of the goals of the SSA has been to achieve universalisation of elementary education that addresses both out of school children during the primary school going age and the children who were forced to drop out before completion of primary grade classes due to social and economic compulsions. Accordingly, Twelfth Five Year Plan (2012-17) laid focus on expansion, improving quality and equal educational opportunities for all segments of society. As compared to the greying population worldwide, India has an added advantage with its young population, with an average age of 29 years, the demographic dividend can be harnessed with an improvement in health, education and skill development. In view of the above facts, the broad focus of the paper is on the current approaches adopted by India to contextualise SDG Goal 4 on education in the Indian context.

## LITERATURE REVIEW

Muff et al. (2017) in their work stated that the seventeen SDGs served as the foundation for the planet's long-term viability. These objectives directly target the difficulties and seek a constructive solution to the solution. Among the seventeen SDGs, SDG 4 is aimed at creating a sustainable education system for the people of the world. This SDG 4 contains seven objectives that address gender inequality in education, dropout rates in elementary, secondary and higher education and developing opportunities for the disadvantaged class such as individuals from scheduled castes, indigenous people and people with disability. It also includes three sub-objectives that can help accomplish the seven targets listed in SDG 4

Beena (2018) pointed out the work that India has promised to offer all children with inclusive and equitable quality education by 2030. Initiative such as the SarvaShikshaAbhiyan and the Right to education have been given India's education system a boost. However, significant progress towards universalizing primary education has been accomplished as seen by improvements in enrolment, retention and other physical infrastructure.

Maia, (2021), stated that the centre of attention of SDG - 4 is inclusive & equitable quality education, which emphasizes the importance of higher education in achieving this goal. Also, through collaborations between UN Agencies, governments, and the telecommunications industry, higher education institutions are working towards providing affordable and context-sensitive digital education to promote equal opportunities for all.

Krystal, (2022), exploring the role of higher education institutions in advancing Sustainable Development Goals (SDGs) through digital education and equitable services. It highlights the importance of local knowledge and perspectives from the Global South in shaping more effective and inclusive strategies for sustainable development, emphasizing the need for diverse perspectives in global sustainability initiatives.

## OBJECTIVES

- Analysing the perspectives of sustainable development goals for education.
- Strategies adopted by India to align with the sustainable development goal 4.

## OVERVIEW OF SDG 4

Of all the SDGs, education is the most vital component for sustainable development. All the seventeen goals of SDGs seem to be more exhaustive and ambitious with focus on it's relevant to all the people of the world to ensure that 'no one is left behind'. These SDGs aim to end poverty, zero hunger, and improve education and health standards, gender equality, clean water, sanitation and energy, and to combat climate change within stipulated time period. On issues pertaining to education (Goal 4), inclusive and equitable quality education for all is clearly viewed as the key to social progress in all the countries. Collaborative efforts in sharing the rich experience and expertise in diversified areas such as universal mass education, higher and professional education and open and distance education with special emphasis on quality and gender equality was agreed upon. As a signatory to the SDGs, India has committed to ensuring inclusive and quality education to all children by 2030. 8

Goal 4 of the SDGs on Education affirms that: Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for all, states that:

- By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes
- By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
- By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
- By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
- By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy
- By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
- Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all

- By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries
- By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states.

### **STRATEGIES ADOPTED BY INDIA FOR SDG 4**

India's economic planning since 1960 has placed significant importance on all seventeen Sustainable Development Goals, including the eradication of poverty, zero hunger, health, education, and clean energy. Recognizing the interconnection of these goals, it is very important to implement them in a holistic manner, ensuring quality, access, equity and inclusion at all stages of formal education. Goal 4 specifically focuses on various targets such as early childhood development and care, pre- primary education, learning outcomes, gender equality and vocational skills. For India to successfully achieve all the targets outlined in goal 4 of the Sustainable Development Goal within a timeframe, the quality, accessibility, equity and inclusion initiatives present a window of opportunity. These initiatives serve as pre-requisites for ensuring the quality and accessibility of education for India's young population, enabling them to attain a minimum proficiency level in reading and writing. Additionally, these initiatives aim to equip them with the necessary skills to become a productive and skilled workforce, contributing to the growth and development of a resurgent India.

It is important to note that even before the adoption of SDGs, India has already implemented a series of programs and policies focused on enhancing the quality and inclusiveness of education.

### **RIGHT TO EDUCATION**

Right to education introduced to provide free and compulsory education to all children between the ages of six and fourteen, recognizing it as a fundamental right. It also mandates that 25 percent of seats in private schools be reserved for children belonging to economically weaker sections of society.

### **MID-DAY MEAL**

Education development has been given significant importance in successive development policies and Five-Year national development plans. In order to increase enrolment, retention, and attendance rates, as well as improve the nutritional levels of children, the Centrally assisted National Programme of Nutritional Support to Primary Education was introduced on August 15, 1995. This program, commonly known as the Mid-Day Meal Scheme (MDM), ensures that a hot cooked nutritious meal is provided to every child studying in classes I to VIII on a daily basis, excluding holidays. Currently, India boasts the world's largest Mid-day Meal scheme, catering to the nutritional needs of 10 crore students in 11.5 lakh schools.

## **SARVA SHIKSHA ABHIYAN**

SarvaShikshaAbhiyan (SSA) initiative, known as the “Education for All Movement,” has been modified to guarantee that every child between the ages of 6 and 14 receives free and compulsory education. To enhance teacher availability, the SSA has allocated a significant amount of funds towards the recruitment of extra teachers in government schools.

## **RASHTRIYA MADHYAMIK SHIKSHA ABHIYAN**

It is a centrally sponsored scheme of the Ministry of Human Resource Development, Government of India, for the development of secondary education in public schools throughout India. It was launched in 2009. The implementation of the scheme has started from 2009–2010 to provide conditions for an efficient growth, development and equity for all. The scheme includes a multidimensional research, technical consulting, various implementations and funding support. The principal objectives are to enhance quality of secondary education and increase the total enrolment rate.

## **PADHE BHARAT BADHE BHARAT**

Padhe Bharat Badhe Bharat (PBBB) is a nationwide initiative under the SarvaShikshaAbhiyan (SSA) that aims to enhance the quality of education during the foundational years of schooling, specifically in classes I and II. These early years are crucial for the development of essential skills such as reading, writing with comprehension, and mathematics. It is imperative to ensure that children acquire these skills during this period, as failure to do so may result in falling behind and facing difficulties in learning other subjects and comprehend written information.

## **BETI BACHAO, BETI PADHAO**

The Beti Bachao, Beti Padhao (BBBP) initiative, which translates to “Save Girl Child, Educate Girl Child”, is a prominent and ambitious program introduced by the Government of India in 2015. Its primary objective is to tackle the issue of declining Child Sex Ratio (CSR) in 100 gender-critical districts across all States and Union Territories. The primary goal of BBBP is to combat gender-based sex selective elimination, safeguard the well-being and security of female children, and promote their education.

## **RASHTRIYA AVISHKAR ABHIYAN**

Rashtriya Avishkar Abhiyan (RAA) was introduced in 2015 with the aim of enhancing the learning of mathematics and science in upper primary classes. Its primary objective is to motivate and inspire children between the ages of 6 and 18 to develop an interest in science, mathematics, and technology. This initiative follows a two-pronged approach, focusing on both systemic improvements in the school system and the implementation of alternative strategies to promote science and mathematics. In certain states, educational institutions such as IITs, IISERs, and NITs have taken up the responsibility of mentoring schools, while students are provided with opportunities to visit factories and research hubs to gain exposure.

## ICT

Information and Communication Technologies (ICT) - Within the Digital Initiative holds immense promise in revolutionizing the education of students, enhancing the skills and knowledge of teachers and educators, and offering effective solutions to address the existing challenges within the Indian education system. In 2015, the Government of India embarked on various initiatives aimed at implementing ICT-based strategies to promote efficient governance within the school system. These initiatives encompass a range of measures and approaches designed to improve the overall quality and effectiveness of education in India.

## SARANSH

Saransh, an endeavour by CBSE, aim to provide schools with an online self-review tool. This tool enables schools to identify areas of improvement in students, teachers, and curriculum. By comparing results, schools can take necessary measures to implement changes and make informed decisions. Specifically designed for classes IX-XII, Saransh offers an analysis of results in relation to other schools, allowing for actionable decisions to be taken.

## SHAALA SIDDHI

Shaala Siddhi introduced by The National University of Educational and Planning Administration (NUEPA), an initiative that seeks to empower schools to assess their own performance and track their strengths and areas for improvement. This initiative is applicable to both elementary and secondary schools. The primary goal of Shaala Siddhi is to establish a standardized set of criteria and benchmarks for each school, focusing on key performance areas and their corresponding standards. Currently, approximately 9000 schools across 25 states and Union Territories have implemented Shaala Siddhi. In a departure from the previous practice of conducting the National Achievement Survey once every three years, it will now be conducted annually starting from 2017.

## E-PATHSHALA

e-Pathshala serves as a digital platform developed by the CIET and NCERT. It aims to exhibit and distribute a wide range of educational materials, including textbooks, audio and video resources, periodicals, and various print and non-print materials. This online platform caters to the needs of different stakeholders such as students, teachers, educators, researchers, and parents, providing them with access to a diverse array of digital resources.

## SWACHH VIDYALA

The Swachh Vidyalaya initiative, introduced by the Government as part of the Swachh Bharat Mission, aims to ensure the provision of separate toilets for both girls and boys in all government schools by the deadline of 15th August 2015. This objective was successfully accomplished, with the States and Union Territories reporting the construction or functionalization of 4,17,796 toilet blocks in 2,61,400 schools within the specified timeframe. In addition to the recent policy initiatives undertaken by the government to enhance the quality of education, several exemplary practices

have been implemented in various states by the state government, which can be replicated in other states as well.

#### **SAKSHAR BHARAT–Sustaining and Enhancing Efforts in Adult Education**

This program has effectively provided avenues for lifelong learning by expanding educational choices for adults who have either discontinued or never pursued formal education. By focusing on fundamental literacy, post-literacy, and ongoing education, this initiative promotes a seamless approach to adult education rather than dividing it into separate segments. The enrolment in the program has witnessed a significant rise, increasing from approximately 1.5 million to over 4.5 million between the years 2010-11 and 2012-13.

### **CONCLUSION**

Education is an expansive field, and in the 21st century, India is making significant progress through its innovative flagship programs to achieve the Quality, Access, Equity, and Inclusion factor in attaining the Sustainable Development Goal on education within a specified timeframe. In order to ensure that no individual is left behind, as emphasized by the SDG, it is imperative to establish adequate physical infrastructure and create safe and inclusive environments that foster learning outcomes for all, irrespective of gender, background, or disability status. Despite the existence of numerous flagship programs, their effective implementation and monitoring are crucial for yielding better outcomes. Given the substantial number and diversity of these programs, it is more justifiable to enhance the existing ones rather than initiating new flagship programs, as this approach would lead to more effective implementation.

The lack of proper coordination among various programs and the organizations or ministries involved in achieving the common goal has been identified as a primary cause for duplication of efforts, wastage of time and financial resources, loss of synergies, and ineffective division of labour, all of which ultimately contribute to subpar learning outcomes.

The SDGs agenda demonstrates a well-balanced approach in addressing the importance of both quality education and decent productive jobs. It recognizes the potential for regional cooperation in South Asia, as the sharing of best practices among neighbouring areas can effectively address challenges that span different domains.

As mentioned earlier, all the goals within the SDGs framework are interconnected, emphasizing the need to involve all relevant stakeholders in order to achieve these goals. It is crucial to coordinate the plans of both the State and Centre to ensure equal opportunities in education outcomes, while also prioritizing investments in quality learning and the significance of technical and vocational training within the education sector. Allocating sufficient funds to the education sector in India is a fundamental prerequisite for enhancing access, quality, and learning outcomes, as well as ensuring the safety and security of all children.

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# Benefits and Constraints Faced by Women in Pradhan Mantri Mudra Yojana: A Study with Special Reference to Self Employed Women in Jalaun District

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## ABSTRACT

*India is recognized as one of the fastest growing economies of the world. Our Banking and Financial services are a catalyst to this growth trajectory. Through PMMY, the Endeavour is to provide access to credit for all Indian Entrepreneurs. MUDRA Yojana is focus on micro lending and is poised to reach out to more and more micro borrowers. This scheme has been actively engaged with the micro finance sector, providing support in the ever-evolving financial landscape. As an institution, MUDRA is committed to supporting and nurturing an increasing number of last-mile channel partners, with special emphasis on lending in aspirational districts. Entrepreneurship is thriving in India. MUDRA loan scheme under PMMY intends to support the large number of aspiring entrepreneurs by bringing them into the formal financial system and extending affordable credit to them. Pradhan Mantri MUDRA Yojana (PMMY) the scheme was launched on April 8, 2015 and the main objective of this scheme is to give financial support for growth of Micro and Small Enterprises sector. PMMY was launched with the purpose of funding to the non-cooperate Micro and Small businesses. The scheme is available and open from all Indian bank branches.*

**Keywords:** women entrepreneurship, benefits, constraints, PMMY.

## INTRODUCTION:

For a nation like ours, which aims to achieve rapid and regionally balanced economic growth through rural industrialization, emergence of a large number of small entrepreneurs is of vital necessity. Government policies play an important role in the economic development of a nation. The main aim behind launching this **Pradhan Mantri MUDRA scheme** is to build a strong ecosystem for nurturing innovation and entrepreneurship in the country. The scheme was launched on

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April 8, 2015 and the main objective of this scheme is to give financial support for growth of Micro and Small Enterprises sector.

Table – 1: Credit Categories of MUDRA (Micro Units Development & Refinance Agency) Loan

Loan Type	Loan Amount	Loan Details
<b>Shishu Loan</b>	Covering loan amount up to 50,000	This stage caters to the needs of entrepreneurs who are yet to start their business or whose enterprises are at an early age.
<b>Kishor Loan</b>	Covering loan amount above 50,000 and up to 5 lakh	This stage helps the businesspersons who started their business but are in a need of funds to sustain it in the market.
<b>Tarun Loan</b>	Covering loan amount above 5 lakh and up to 10 lakh	This is the highest level of the scheme and an entrepreneur is eligible for a loan from Rs. 5 lakh and up-to Rs.10 lakh. These loans are meant for business owners who need to set up a large business or needs funds to expand the enterprise.

Source: Researcher's compilation from www.mudra.org

### OBJECTIVES OF THE STUDY:

1. To study the socio-economic status of women beneficiaries of this scheme in Jalaun district.
2. To examine the role of MUDRA loan in providing new employment opportunities among women beneficiaries of this scheme of Jalaun district.
3. To identify the problems and constraints faced by women during implementation of this scheme.

**METHODOLOGY:** The study is based on random sampling method and selected 100 samples. The primary method of data collection that is schedule was used to collect the required information. The questionnaire was designed in such a way that the beneficiaries were able to express their opinion and ideas freely and frankly. Statistical tools and LIKERT scale were used for systematic arrangement and analysis data. The collected data were coded and analyzed by using simple tools like tabulation, diagrams and percentage.

**AREA OF THE STUDY:** This is micro level study. The area selected for the present study was confined self-employed women in Jalaun district. All the data collected during the period of 2017-2022.

### REVIEW OF LITERATURE

**Anugrah Rohini Lall** throws light on performance of MUDRA scheme in India and also brings out the performance of the Mudra Yojana in Uttarakhand. The analysis reveals that people are getting encouraged to develop entrepreneurship by taking initiative to start their own work.

**Sandhya Ruhela** studied the role of MUDRA bank in refinancing and regulating MFIS in India and also discusses about the issues that needs to be address with the creation of MUDRA bank. She concluded that the inclusive growth and development of India, MUDRA is imperative to provide adequate financing to the SMEs, which is the growth engine of Indian economy.

The above studies are Comprehensive referred especially to understand collective impact of there and its phenomenon such as promoting a small business and evaluation of promotional agencies

as well in rural economy since we know that There be a dynamic synergy between agriculture in rural areas and micro, small and medium enterprises in urban centers which is a key to the development of local economies and poor economic growth for the country as a whole.

**DATA ANALYSIS AND INTERPRETATION:** The paper deals with the analysis and interpretation of collected data. The information is collected through schedule. All the data from primary survey is used for analysis.

The following table represents the categorization of employment among the respondents.

Type of employment of the Beneficiary	Frequency	Percentage	Cumulative %
Shop	58	58%	58%
Fruit & vegetable Vendor	12	12%	70%
Boutique / beauty parlour	19	19%	89%
Textile workers / artisans	11	11%	100%
Total	100	100%	

MUDRA yojana consists of three categories. Shishu, Kishore and Tarun. The following table represents the categorization of MUDRA scheme among the respondents.

Type of loan	Frequency	Percentage	Cumulative %
Shishu	65	65%	65%
Kishore	28	28%	93%
Tarun	7	7%	100%
Total	100	100%	

From the table, it is clear that majority of respondents about 65% are getting shishu loan. 28% of respondents getting kishore loan and only 7% of respondents getting the tarun loan.

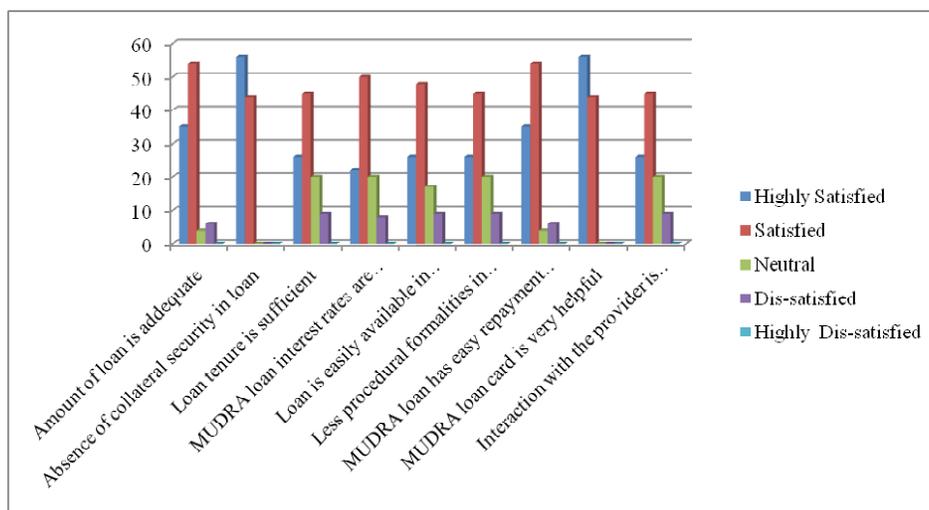
Utilisation of MUDRA loan for setting up new establishment table depicts utilization of MUDRA loan by beneficiaries.

Aim for taken MUDRA loan	Frequency	Percentage	Cumulative %
To Start new venture	65	65%	65%
To Expand old business	15	15%	80%
Technology expenditure	10	10%	90%
Others	10	10%	100%
Total	100	100%	

Among the beneficiaries, 65 % reported that MUDRA loan was availed for setting up new establishments and about 15% have taken MUDRA loan for expansion of existing establishments followed by technology expenditure 10% and 10% in other requirements of firms. Around 100 of estimated beneficiaries accounted for increase in employment.

**PERCEPTION OF WOMEN BENEFICIARIES TOWARDS MUDRA SCHEME-**

Statements	Highly Satisfied	Satisfied	Neutral	Dis-satisfied
Amount of loan is addequate	35	54	4	6
Absence of collateral security in loan	56	44	00	00
Loan tenure is sufficient	26	45	20	9
MUDRA loan interest rates are reasonable	22	50	20	8
Loan is easily available in MUDRA yojana	26	48	17	9
Less procedural formalities in MUDRA loan	26	45	20	9
MUDRA loan has easy repayment terms	35	54	4	6
MUDRA loan card is very helpful	56	44	00	00
Interaction with the provider is comfortable	26	45	20	9



**Suggestions -**

- 1) The PMMY loans sanctioned are mostly in shishu category. For wider development, loans to kishor and tarun category should be increased.
- 2) Though the share of women is very high, it is only in shishu category and the loan size is very small.
- 3) It is necessary to increase loans to open category economically backward class people. No mention of this category in the report of P M MUDRA Yojana.
- 4) In Jalaun District, there is need of more efforts to increase the size of loans.
- 5) The share of SC, ST and OBC categories is good but it is only in Shishu category, It should be increased to Kishorand Tarun categories.

## Conclusion

It can be concluded that the MUDRA is the recent scheme to focus exclusively on entrepreneurs. It is a very effective financial tool which makes a special change that will help in making a NEW India. India is a fast growing economy. There has been enormous improvement in the unemployment scenario since the time it was recognized as a challenge. The government is implementing various programs for increasing the employment rate with the help of finance and has succeeded to a great extent.

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# The Role of Social Security in Indian Economy with Special Reference to Manufacturing Sector

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## ABSTRACT

*A country's economic development does not only depend on economic infrastructure but also how its citizens are sharing and growing. While transport, power, and telecommunications are very important but the role of education, health, and social security of citizens of nations is of greater importance. Generally, countries spent in the earlier period on economic infrastructure and then on social infrastructure, but do not invest as much on social security as is required, especially in developing countries where resources are scarce. In fact economic infrastructure can be seen and felt; social infrastructure can only be experienced. One great problem in case of social security is globalization, privatization, and liberalization. As the dominance of the public sector has diminished and most industries, including manufacturing and services, are now provided by the private sector, who as per Keynes described have "animal spirits". They try to maximize profit at the cost of social welfare. In trying to reduce marginal private costs instead of marginal social costs, the workers' rights and security is often compromised. Social security is not only related to retirement benefits, maternal benefits, or for that matter compensation benefits but includes all those steps that help workers to feel secure at workplace.*

**Keywords:** Social Security, Organized Sectors, Manufacturing Industries

## OVERVIEW

Social security is an omnibus term. It includes all measures by a sovereign government to provide individuals, families, or some specific weaker section of society with financial support when due to any reason whatsoever the income source of the above-mentioned class of people is disrupted or terminated. It can be in the form of pensions to retired individuals or compensation to ill/ disabled employees or to those who do not have any source of livelihood due to old age, low income are not able to survive like old age, widows or disabled etc. One must remember that it is not necessary that central/state government themselves have to provide financial support but can make legislation/ acts for private sector to make such payments compulsory. Social security need not be

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in terms of cash but could be in terms of food, medicine, sources of employment, rehabilitation, etc. Courts can also provide social security by injunction.

## **MANUFACTURING SECTOR AND INDIAN ECONOMY**

Growth of the manufacturing sector is considered essential for a country especially a densely populated country like India as it can bring down the high rates of unemployment. The manufacturing sector in India has been relatively stable in terms of its share in GDP between 13.7% to 17.7% for more than 50 years. While another populated country like India, China has nearly 35% of GDP since the new millennium. If India could achieve the share of 25% of GDP by manufacture its twins problem of balance of trade and rising unemployment can be reduced to great extent. One must remember that India's aspirations of achieving a 7 trillion-dollar economy by 2030 mainly rest on the growth of manufacturing sector. In 2023-24 Index of Industrial Production was 4.2% but that of manufacturing year-on-year growth was only 2.6%. Although, India's focus on high-value manufacturing (e.g., mobile phones, sophisticated technology) has been quite significant. Government of India has begun many initiatives to transform India to become a global hub of manufacturing focusing specifically in areas of Defence, Electronics, Textiles, and Automobiles. "Make in India" initiative is being supported by a variety of programs such as digital manufacturing and Industry 4.0, Green Manufacturing, FDI, Skill Development and Workforce Readiness, MSMEs and local manufacturing; export promotion and entry to global supply chains. Public-private partnerships and the Production Linked Incentive (PLI). However the sector faces various challenges, the greatest challenge is from the shortage of skilled manpower and supply chain resilience. Textile sector is one on which India has focused the most as in this case there is no such problems. India is an important partner in the global supply chain and various missions like Mission Cotton, Technology Upgradation and Computer-Aided Designing have been included in its programs since 2000 when India made this sector a special initiative sector. But like all other manufacturing sectors this sector specifically lacks a social security scheme. In fact registered units of manufacture do provide some social security schemes but there are no such provisions for non-registered units. In this research paper authors have tried to analyze the problem of social security and whether it helps only workers or the other such as factory/producing units workers are also benefitted. The benefit to the firm always lies in retaining skilled workers which ultimately helps in reducing costs and mitigating uncertainty.

### **Following are the objectives of this research study**

1. To analyze the role of social security programs in the Indian manufacturing sector.
2. To assess the effectiveness of social security schemes (like EPF, ESIC, etc.) in improving worker welfare and productivity in the manufacturing industry

### **Review of Literature**

**D'Souza, E. (2008).** "Social Protection for India's Informal Sector Workers: The Missing Pieces" - *Indian Journal of Labour Economics* The paper emphasizes the urgency of extending

social security benefits to informal sector workers in manufacturing, suggesting that this could significantly reduce income inequality and poverty.

**Aggarwal, A., & Kumar, N. (2015).** “Social Security in India: Issues and Challenges” - *Journal of Social and Economic Development* The study emphasizes the need for reforms that extend social security benefits like health insurance, pension schemes, and provident funds to workers in unorganized sectors of the economy. Social security is crucial for the manufacturing sector, not only for worker welfare but also for improving productivity and ensuring labor retention.

**Srinivas, N.S., & Singh, S. (2017).** “The Impact of Social Security Policies on Industrial Growth: A Study of the Indian Manufacturing Sector” - *Economic and Political Weekly* This research explores the correlation between social security policies and industrial growth in the manufacturing sector. The authors find that firms offering better social security benefits experience less worker unrest and higher operational efficiency.

**Sharma, R., & Gupta, P. (2019).** “Social Security as a Catalyst for Sustainable Growth in India’s Manufacturing Industry” - *Indian Economic Review* This paper analyzes the role of social security as a tool for sustainable growth in India’s manufacturing industry.

**Joshi, H., & Verma, R. (2020).** “Manufacturing Sector and Social Security: Case Study of Textile Industries” - *International Journal of Development Economics* The study concludes that better social security coverage would increase labor retention and reduce exploitation in textile units, especially among women workers. Extending social security provisions, especially to women and low-income workers, could greatly improve labor conditions and contribute to the overall efficiency of the textile manufacturing sector.

**Raghavan, V. (2021).** “Economic Reforms, Social Security, and the Indian Manufacturing Sector: An Analytical Review” - *Journal of Industrial Relations*: The study concludes that balancing economic reforms with robust social security measures is crucial for long-term industrial growth. Economic reforms in India need to be accompanied by strong social security systems to ensure that the benefits of growth in the manufacturing sector are more equitably distributed.

**HYPOTHESIS:** in this research paper only one hypothesis has been taken on whose help true related problems are discussed. The Null hypothesis is:

**H<sub>0</sub>:** Social security schemes in the manufacturing sector do not have a significant impact on worker retention and productivity.

**H<sub>1</sub>:** Social security schemes in the manufacturing sector have a significant impact worker retention and productivity.

## RESEARCH METHODOLOGY

The study involves an empirical analysis based on secondary data collected from Annual reports of the Ministry of Labour and Employment from 2000 to 2023. A Social Security Index (SSIDX) has been created to measure the impact of social security schemes on the productivity of the manufacturing sector. The study analyzes the relationship between the SSIDX and key indicators of manufacturing productivity using robust regression models. This model helps control for

heteroskedasticity and ensures reliable estimates, allowing a comprehensive assessment of how social security measures influence productivity in the manufacturing industry.

## TESTING OF HYPOTHESIS

Robust Linear Regression Models							
Dependent Variable	Independent Variable	Coefficient	Std. Error	t-value	P-value	R-squared	Prob> F
pro_by_pr	ssidx_sum	1.0155	1.0221	0.99	0.002	0.8997	0.0000
num_wrkr	ssidx_sum	1.3871	0.4555	3.05	0.006	0.4220	0.0059
val_out	ssidx_sum	6.8924	1.1731	5.88	0.000	0.5953	0.0000

Here are the equations for the robust linear regression models without the specific values:

1. Relationship between Productivity (pro\_by\_pr) and Social Security Index (ssidx\_sum)

$$[{\text{pro\_by\_pr}} = \beta_1 \times {\text{ssidx\_sum}}]$$

2. Relationship between Number of Workers (num\_wrkr) and Social Security Index (ssidx\_sum)

$$[{\text{num\_wrkr}} = \beta_2 \times {\text{ssidx\_sum}} + \alpha_2 ]$$

3. Relationship between Output Value (val\_out) and Social Security Index (ssidx\_sum)

$$[{\text{val\_out}} = \beta_3 \times {\text{ssidx\_sum}} + \alpha_3 ]$$

In these equations

$(\beta_1, \beta_2, \beta_3)$  represent the coefficients for the independent variable (ssidx\_sum).

$(\alpha_2, \alpha_3)$  represent the intercepts for the respective models.

CATEGORISATION	SELECTED VARIABLES	
DEPENDENT	1.	Products and by-products
	2.	Number of employees
	3.	Total inputs
INDEPENDENT	1.	SOCIAL SECURITY INDEX

The results from the robust regression analyses offer valuable insights into the relationships among productivity, number of workers, output value, and the Social Security Index (SSIDX). First, the regression analysis examining the impact of the Social Security Index (ssidx\_sum) on productivity (pro\_by\_pr) reveals a high R-squared value of 0.8997, indicating that the model explains approximately 90% of the variation in productivity. The robust standard errors account for heteroskedasticity, enhancing the reliability of the results. Within this model, the coefficient for

output value (val\_out) is statistically significant ( $p < 0.001$ ), suggesting a strong positive influence on productivity. Specifically, a one-unit increase in output value results in an increase in productivity of approximately 0.76 units. However, the coefficients for the number of workers (num\_wrkr) and the Social Security Index (ssidx\_sum) are not statistically significant, implying that these variables do not exert a strong or consistent direct impact on productivity in this context. In the regression analysis of the number of workers (num\_wrkr) against the Social Security Index (ssidx\_sum), the model accounts for only 13.42% of the variation. Nevertheless, the relationship is statistically significant ( $p = 0.006$ ), indicating that the Social Security Index has a meaningful, albeit modest, effect on the number of workers. Specifically, a one-unit increase in the SSIDX is associated with an average increase of 1.39 workers. Similarly, the regression of output value (val\_out) on SSIDX (ssidx\_sum) demonstrates a highly significant relationship ( $p < 0.001$ ) and explains nearly 60% of the variation in output value. A one-unit increase in the SSIDX corresponds to an increase of approximately 6.89 units in output value. This underscores the strong correlation between the Social Security Index and higher output, suggesting that enhanced social security mechanisms may contribute to increased productivity levels in terms of output. Finally, when examining the relationship between SSIDX (ssidx\_sum) and product by product (pro\_by\_pr), the results indicate that the model explains about 61% of the variance. A statistically significant positive relationship is observed ( $p = 0.001$ ), indicating that a one-unit increase in productivity results in an increase of 0.096 units in the SSIDX. This finding illustrates that higher productivity is associated with improvements in the Social Security Index. In summary, these results highlight the critical role of output value in driving productivity while revealing a significant, though more modest, connection between social security measures and both labor and output levels. The impact of the Social Security Index on productivity appears less direct, suggesting that while improvements in social security correlate with better outcomes, other factors—such as the scale of output—may play a more dominant role in determining productivity levels. The robust linear regression model was chosen to effectively analyze the relationships between the dependent variables (Pro\_by\_pr, Num\_wrkr, and Val\_out) and the independent variable (SSidx\_sum) while accounting for potential heteroskedasticity in the data. This approach ensures reliable coefficient estimates and statistical inference despite variations in the error terms.

**Hypothesis Evaluation:** The null hypothesis (H0: Social security schemes in the manufacturing sector do not have a significant impact on worker retention and productivity) is rejected based on the significant p-values associated with **SSIDX\_SUM**. Conversely, the alternative hypothesis (H1: Social security schemes in the manufacturing sector have a significant impact on worker retention and productivity) is supported by the results, suggesting that social security schemes indeed exert a positive influence on these metrics.

1.	Various Schemes of Social security
2.	Secretariat Social Services
3.	National Labour Institute (NLI)
4.	National CareerServices
5.	LabourBureau

(Contd...)

6.	DGLabourWelfare (Establishment)
7.	LabourandEmploymentStatisticalSystem (LESS)
8.	Strengthening of Adjudication Machineryahdholding of LokAdalates
9.	MachineryforBetterConciliation,PreventiveMediation,EffectiveEnforcementofLabourLaws, ChiefLabour Commissioner
10.	Strengthening of Infrastructure facilities and core functions of Directorate General of Mines safety
11.	LabourWelfareSchemes
12.	Creation of National Platform of Unorganized Workersandallotmentofan Aadhaarseededidentification numbers
13.	BimaYojana for Unorganised Workers
14.	Employees' Pension Scheme, 1995
15.	Social Security for Plantation Workers in Assam
16.	PradhanMantriShram Yogi MandhanYojana
17.	PradhanMantriKaram Yogi MaandhanYojana
18.	National Child Labour Project including grantsinaid to voluntaryagencies and reimbursement of ssistance to bonded labour
19.	Pradhan Mantri Rozgar ProtsahanYojana

**SOURCE:** ANNUAL SURVEY OF INDUSTRIES, MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION, GOVERNMENT OF INDIA, ANNUAL REPORTS (2007 - 2024)

The Social Security Index has been created by utilizing various government schemes, which have consistently received government expenditure since 2000. These schemes continue to provide social security, and by calculating the percentage share of the total budget expenditure for each year, an index was formed. Each scheme is assigned a weightage based on its contribution, which varies from year to year. The method used involves multiplying real values and summing them up to determine the index. Depending on the analysis, either an average or sum of these values was used to analyze the relationship between the index and productivity in the manufacturing sector. Productivity is measured through the ratio of total inputs and the value of outputs, establishing a link between social security programs and their impact on workers' productivity. This index helps to demonstrate how social security schemes influence workers' productivity, providing valuable insights into the effectiveness of these schemes. Through this analysis, the study aims to highlight the significance of social security in improving worker welfare and its direct connection to productivity within the manufacturing sector. Based on the VIF results, multicollinearity does not pose a concern, as all VIF values are 1.00, indicating no correlation issues between independent variables. Additionally, the use of robust standard errors addresses potential heteroskedasticity, ensuring that the regression model is well-specified. The specification tests, such as the Ramsey RESET test, show no significant omitted variable bias, confirming the adequacy of the model for analysis in this context.

Variable	VIF	1/VIF
pro_by_pr	1.00	1.000
ssidx_sum	1.00	1.000
Mean VIF	1.00	1.000

## CONCLUSION

This study explored the relationship between social security schemes and their impact on worker retention and productivity within the Indian manufacturing sector. Through robust linear regression analysis, several key insights emerged that underscore the significance of social security in enhancing labor outcomes. Firstly, the analysis revealed a strong positive correlation between the value of output and productivity, with a substantial R-squared value indicating that nearly 90% of the variation in productivity could be explained by output value. This suggests that increasing output value is crucial for enhancing productivity in manufacturing. However, while the social security index (SSIDX) was associated with an increase in the number of workers, its direct impact on productivity was less pronounced. The findings indicated that the relationship between SSIDX and productivity, though statistically significant, points to the need for a more nuanced understanding of how social security measures interact with other factors influencing productivity. The statistical significance of the results supports the alternative hypothesis (H1), suggesting that social security schemes in the manufacturing sector indeed have a significant impact on worker retention and productivity. Strengthening these frameworks will not only enhance worker welfare but also drive overall economic growth, ensuring that the benefits of industrialization are more equitably distributed across the workforce. Future research should further investigate the specific mechanisms through which social security impacts productivity and explore the long-term effects of these programs on the manufacturing landscape in India.

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## APPENDIX

**TABLE 1: “Annual Data on Production, Employment, Inputs, Outputs, and Social Security Index in the Indian Manufacturing Sector (2000-2023)” (in ₹ crore)**

YEARS	PRO_BY_PR	NUM_WRKR	VAL_OUT	SSIDX_SUM
2000	40837.2	11994861.4	87094.2	53947.23
2001	45327.0	12345530.4	93814.1	54912.03
2002	50765.3	12696199.4	100533.9	55876.83
2003	56203.7	13046868.5	107253.7	56841.64
2004	61642.0	13397537.5	113973.6	57806.44
2005	67080.3	13748206.5	120693.4	58771.25
2006	72518.7	14098875.6	127413.3	59736.05
2007	17822.6	8137502.0	2408548.0	76041.85
2008	24707.2	8198110.0	27757.1	57137.25
2009	28631.5	8776745.0	32728.0	39061.12
2010	33061.4	9157802.0	37330.4	40471.82
2011	40837.2	9901970.0	46762.2	54908.06
2012	49598.8	10438156.0	57036.7	54037.80
2013	52855.8	10051626.0	60259.5	120480.89
2014	57034.5	10444404.0	65552.5	302653.77
2015	5992222.0	10755288.0	68838.1	387798.27
2016	5957802.0	11136133.0	6862354.0	336658.53
2017	6306800.0	11662947.0	7265514.0	351419.57
2018	7096177.0	12224422.0	8072173.0	471797.35
2019	8279444.0	12798588.0	9281799.0	374410.84
2020	7926328.0	13058156.0	8983301.0	490896.94
2021	7777407.0	12595000.0	8809214.0	1508743.50
2022	10650599.0	13610000.0	11927151.0	2009225.80
2023	10339361.2	13872367.6	10890699.1	776143.10

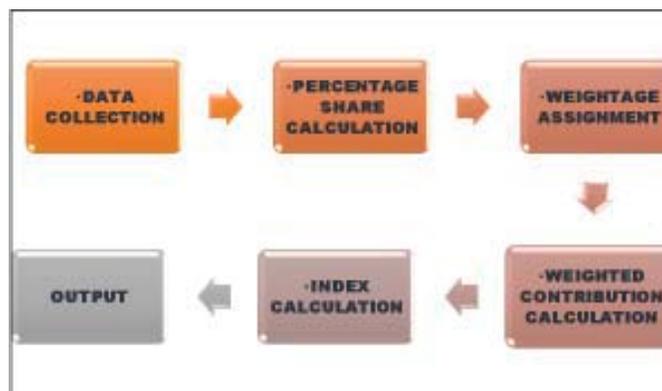
**SOURCE:** *Annual Survey of Industries, Ministry of Statistics and Programme Implementation, Government of India & RESERVE BANK OF INDIA (RBI), Annual Handbook of Statistics on Indian Economy*

**Descriptive Statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max
years	24	2011.5	7.071068	2000	2023
pro_by_pr	24	2959378	3975912	17822.6	1.07e+07
num_wrkr	24	1.16e+07	1849049	8137502	1.41e+07
val_out	24	3151991	4362990	27757.1	1.19e+07
ssidx_aver~e	24	31284.48	33723.08	3255.09	137158.5
ssidx_sum	24	327074.1	488392	39061.12	2009226

The creation of the Social Security Index (SSINDX) based on the provided variable names and their respective values, percentage shares, and weightage: The Social Security Index (SSINDX) was developed to quantitatively assess the effectiveness and contribution of various social security schemes in India. This index aims to encapsulate the significance of fifteen key social security programs that cater to different segments of the workforce, particularly focusing on labor welfare, pension schemes, and support for unorganized sectors. The schemes considered in this index include:

**CONSTRUCTION OF THE SSINDX (SOCIAL SECURITY INDEX)**



**To construct the SSINDX, the following methodology was employed:**

1. Data Collection: Each social security scheme was assigned a monetary value, measured in crores of rupees, representing its allocated budget for the year 2023-24. This data was critical for evaluating the relative importance of each scheme.
2. Percentage Share Calculation: The percentage share of each scheme was computed based on its total value relative to the grand total of all schemes. This step allowed for a clear understanding of the contribution of each program within the broader context of social security funding.

$$Percentage\ Share = \left( \frac{Scheme\ Expenditure\ Value}{Total\ Expenditure\ Value} \right) \times 100$$

3. **Weightage Assignment:** The derived percentage shares served as weights for each variable, signifying the relative importance of each scheme in the overall social security framework.
4. **Weighted Contribution Calculation:** The percentage share of each scheme was then multiplied by its actual monetary value, resulting in the weighted contributions to the index.

$$\textit{Weighted Contribution} = \textit{Percentage Share} \times \textit{Scheme Expenditure Value}$$

5. **Index Calculation:** The final step involved summing the weighted contributions of all schemes to derive the SSINDEX, providing a single composite measure that reflects the overall effectiveness of the social security initiatives. The resulting Social Security Index serves as a crucial tool for policymakers, researchers, and practitioners in the field of labor welfare and social security. It not only highlights the distribution of resources across various schemes but also aids in identifying areas that may require further attention or enhancement. By quantifying the impact of these social security measures, the SSINDEX contributes to a more informed dialogue around labor policies and their implications for worker welfare in India. In summary, the SSINDEX is designed to facilitate a comprehensive understanding of the contributions of different social security programs, emphasizing the importance of resource allocation and program effectiveness in promoting labor welfare and social security for various segments of the workforce.

# Social Sector Expenditure in India: Trends and Challenges

**Prof. Prashant Agarwal<sup>1</sup>**

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## ABSTRACT

*Economic inequality has increased rapidly along with economic growth in India in the last two decades. According to the World Inequality Report 2022, the share of the bottom 50 percent of the population in national income has declined to 13 percent. This increased economic inequality has become more significant in the context of the increasing share of expenditure on infrastructure by low-income households. After the implementation of the demographic transition theory in India, the share of working population and older dependent population has recorded a significant increase. According to the Economic Survey 2018-19, the dividend will peak around 2041 with a share of 59 percent as the working population in India. At the same time, the youth unemployment rate in 2022 was 12.4 percent, which was much higher than the previous decade due to lack of employment opportunities due to changes in the demand for skills required in industries and services. In the rapidly changing economic scenario, the economic burden on low, middle and high income families on education has increased significantly due to the demand for new skilled labor for employment under the service sector. The limited availability of quality education and skill development services in government institutions has forced most families to prefer private institutions. This trend has adversely affected the savings and other important expenditures of low-income families. Therefore, the government is expected to increase its contribution to the development of the social sector, especially education and skill development facilities for the low and middle-income groups, instead of the trend of low budget expenditure in the social sector in the last decade.*

**Keywords:** Education, employment, demmographic dividend, social sector expenditure

## Introduction

The demographic structure of India has undergone significant changes in the last decade due to the operation of the demographic transition theory. According to census data, the annual population growth rate of India was 1.3 percent in 1951, which increased to 2.2 percent during the period 1971 to 1991. After 1991, due to the impact of economic reforms on demographic indicators, the annual growth rate of population started declining and reached 1.6 percent in 2011, which is estimated to reduce to one percent in the year 2021. These changes in the annual growth rate of population have

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also affected the size and structure of the population. According to the 2011 census, 30.9 percent of the total population was in the age group of 0 to 14 years, while 60.7 percent was in the age group of 15 to 59 years. Due to increase in life expectancy, 8.4 percent of the population was in the age group of 60 years and above. According to the population projections for the year 2036 of the Ministry of Statistics and Programme Implementation, due to changes in fertility rate and life expectancy, the population in the dependent age group of 0 to 14 years and above 60 years will be 20.1 per cent and 14.9 per cent respectively, while the working age group in the age group of 15 to 59 years will account for 64.9 per cent of the total population. Further, the median age of the population which was 24.92 in 2011 is expected to be 34.48 years in the year 2036.

These projections about the change in population structure clearly indicate that the percentage of the working age group will increase in 2036 which is a good sign for an economy if it has the capacity to absorb its human resources in productive measures. But at the same time the share of elderly population will increase significantly due to improvement in median age and demographic transition effects. From an economic perspective, the population in the age group of 0 to 14 and the age group of 60 and above are classified as working age dependent population and the cost of liabilities of these age groups is increasing over time. At the present stage of economic development, India is grappling with the problem of a trend of unequal distribution of the benefits of economic growth which is reflected in the low values of the Human Development Index and the comparatively high values of the economic gap indicators.

### Literature Review

Notstein (1945) has done extensive research on the concept of demographic transition and has extensively studied the effects of high birth rate and low death rate on the size and structure of the population. Becker (1981) presented ideas in the context of education and gender equality as factors affecting population. According to the findings of Becker's study, women's education and birth related decisions have a far-reaching effect on family size and population growth. In a developing economy grappling with problems like gender discrimination, it takes more time to reach a situation of keeping the fertility rate stable at a low level due to gender inequality. Dress and Murthy (2001) in their study have explained the importance of fertility rate in the functioning of population transition theory and have given importance to the effect of women's education on fertility rate. Similarly, in the study of Sandhya and JijiBhai(2003), while studying the fertility rate in the context of women empowerment and women's education, it was concluded that the fertility rate is comparatively lower in families where women are educated and have an important role in family decision making. Das Gupta's (2005) research also made it clear that in areas where gender equality is high and women are provided equal opportunities to participate in decision making, not only is population growth favourable but it also has a positive impact on the composition of the population.

Certainly, as per the demographic transition theory, the continued functioning and the decline in fertility rate due to expansion of education and health facilities has affected the size and structure of the population. The percentage of working-age population has increased in developing countries, posing employment challenges for these economies. This age-related change in the population was developed by Bloom Canning (2007) as the concept of demographic dividend. According to the

concept of demographic dividend, as a result of changes in the structure of the population, the share of working-age population in the total population starts increasing comparatively. According to the demographic transition theory, in developing countries, due to less decline in fertility rate and increase in expected age in the period before and after reaching this stage, there may be an increase in dependent population (in the form of child population and number of elderly people).

Bhide and Kanitkar(2011) studied the effectiveness of population transition theory in India by defining population dynamics in terms of various factors affecting fertility rate. In their opinion, not only the share of working population in the total population is important but also the factors affecting the population have an important place. While formulating population policies, the Ministry of Health and Family Welfare in its reports of the year 2000 and the year 2013 has laid special emphasis on gender equality and women empowerment programs in the policies related to population management as human resource so that population control programs can be made successful. For the success of the population control program, there is also a great need to implement schemes to educate the population and make them more capable of working as human resources.

Ali Mohammad, Shabbir and Hina(2018) in their study on higher education and demographic change have tried to explain that there is a direct relationship between higher education and demographic change not only to provide employment opportunities to the working population but also to increase their economic productivity. Therefore, the Ministry of Education needs to make special efforts for education reforms as well as facilities related to employment-oriented training. Efforts should be made to push all students towards employment-oriented education, ignoring gender discrimination, especially at the graduate and postgraduate level.

### **Education and Employment Trends in India**

In the current competitive economic scenario, a skilled or technically skilled workforce is essential for employment. Keeping this in mind, there has been widespread awareness among the youth towards education and skill development. From the year 2000 to 2022, the participation of youth in economic activities decreased from 52 percent to only 37 percent and the share of unemployed youth in total unemployment increased to about 82.9 percent in the year 2022. According to the report of the Institute of Human Development, by the year 2022, the percentage of trained youth was only 16.2 percent, out of which only 4.02 percent have received formal technical training. The report further states that about half of the workers do not even get the minimum daily wage. The National Council of Vocational Education and Training was established in the year 2018 by the Ministry of Skill Development and Entrepreneurship of the Government. Skill development was linked to education and added as a compulsory course in higher education. The objective of PradhanMantriKaushalVikasYojana 4.0 is to develop coordination between employment skill training and industries. During 2017–18 to 2023–24, 1.01 crore people were trained by PM KV 2.0, of which 83 percent completed formal technical training but only 21.4 lakh people got employment. According to India Skill Report 2021, about 50 percent of graduates are not suitable for employment. Open unemployment which was around 2.01 percent in 2012 increased to 6.01 in 2018. Due to poor quality and jobless education, about 35.8 percent of graduates and 36.02 percent of postgraduate youth could not get employment in the year 2022-23. Through the Skill India Mission launched on

15 July 2015, various employment programs are being conducted under Scale Industrial Training Center ITI, the number of which increased by about 24 percent and the number of ITI across the country increased to 14747 in the year 2022. According to International Labour Organisation estimates, India will need around 29 million skilled working population in 2030 to meet the expanding market and growing demand of service sector due to increasing population.

### **Expenditure on Education in the Context of Unmet Needs for Employment**

Both private and public expenditure on education in India has increased over the last seven decades. Private expenditure on education which was Rs. 86.5 crores in 1951-52 has increased to Rs. 509961.6 crores in 2018-19 and is estimated to reach Rs. 728197.6 crores by 2022-23. It is not that only the private sector has seen a significant increase in the expenditure on education, but the public expenditure by the government on education has increased comparatively much more. Public expenditure on education increased from Rs. 64.5 crores in 1951-52 to Rs. 736581 crores in 2018-19, which is estimated to increase to Rs. 1098589.4 crores in 2022-23. In terms of per capita expenditure (per person) on education, private expenditure increased from 2.4 in 1951-52 to Rs. 3805.7 in 2018-19 and Rs. 5221.9 in 2022-23, while public expenditure on education per capita increased from Rs. 1.8 per capita to Rs. 5555.8 in 2018-19 and Rs. 7954.9 in 2022-23. The growth rate of private expenditure on education during the last seven decades at current prices has been 13.4 percent per annum, while the annual growth rate in terms of public expenditure on education during the same period has been 14.67 percent per annum.

In India, under the 'National Education Policy 2020', instructions have been made to provide compulsory vocational education at the graduate level in higher educational institutions for skill development along with formal education. Under this, new courses are being developed by various educational institutions for vocational education and skill development through 'Massive Open Online Course' and 'Swayam' portal. In the National Education Policy 2020, an attempt has been made to connect students to the mainstream through programs like training related agreements, startup ecosystem and e-commerce in educational institutions and local industries. In NEP 2020, an attempt has been made to develop innovation and research trend with a comprehensive, inclusive and holistic approach to include employment oriented education system. For this, skill development centers have been established to provide employment opportunities along with formal education at the graduate level to the youth in those areas where online education system has not spread much. Under this, more than 1.40 crore candidates have been trained by 2023 and more than 5000 new ITIs have been established in the last 9 years which provide skill training in various employment sectors. According to the report of All India Survey on Higher Education in India (AISHA 2020-21), the gross enrollment ratio in higher education in India was 27.01 percent, 29.3 percent for male students and 24.9 percent for female students. There is a lot of variation in the gross enrollment rate due to differences in infrastructure and awareness related to higher education in different states. During this period, the gross enrollment rate for higher education was recorded highest in Tamil Nadu at 49.3 percent and lowest in Bihar at 14.9 percent. The special thing is that even in higher education, more than half of the total enrollment at the undergraduate level, about 51.6 percent, has been seen only in undergraduate programs and only 26.02 percent in postgraduate programs. If we

look at the Gross Enrolment Ratio in higher education in India compared to developed countries, it is comparatively very low. India's Gross Enrolment Ratio at the higher education level is 38 percent lower than the global average. There are many reasons for the low Gross Enrolment Ratio in higher education in India, one of the major reasons is the limited availability of funds for higher education and the limited employment-oriented nature of higher education. According to the AISHA 2020-21 report, India has 1084 universities and 42343 colleges, out of which about 25 percent of higher education institutions still do not have basic facilities like their own building. Even more worrying is the fact that these higher education institutions have a shortage of 16.01 lakh teachers and about 40 percent of the teachers appointed in higher education institutions do not have a PhD degree and 24.5 percent have only a bachelor's degree. For India to develop its human resources, it becomes necessary to have a Gross Enrolment Ratio of more than 50 percent and make education more and more employment-oriented while meeting the shortage of infrastructure and teachers.

If the data of public expenditure on education is analyzed in the context of the Central Government and the State Government, then the share of the Central Government in the overall expenditure is seen to be continuously decreasing as compared to the State Governments. Especially during the year 2015-16 to 2022-23, the expenditure on education by the state governments has increased comparatively more. In the year 2015-16, the share of the Central Government in the total expenditure on education was 13.4 percent, which decreased to 10.7 percent in 2022-23. The National Education Policy 1968 and various commissions formed thereafter have recommended spending at least 6 percent of the GDP on education, but till date, the total expenditure on education in India has been only 2.8 percent to 3.1 percent of the GDP. In the budget for the year 2024-25 also, only 2.9 percent of the GDP has been provided for education. In such a situation when education, technical knowledge and skill development have become an indispensable condition for employment, it is extremely necessary to increase public expenditure on education.

## **Suggestions**

The way India is rapidly moving towards economic growth and development, it is necessary that along with formal education, skill development and value based practical education should also be included in the curriculum to motivate the youth towards service sector and self-employment. While increasing public expenditure on education, efforts should be made to increase better infrastructure, resources and efficiency of teachers so that the productivity of the students studying can increase. For this, the government should not only provide financial help to educational institutions but also motivate various industries and corporate sectors of service sector to prepare the students studying to face the economic challenges by providing proper guidance and resources from the beginning, keeping in view the current and future economic possibilities. A provision should be made in the expenditure on education that priority should be given to socio-economically backward classes and such areas where more returns can be expected through skill development with less investment in formal education. The return on investment made in education can be increased through practical application of technical knowledge under the inclusive scheme by the government in collaboration with various ministries in formal education and skill development for the deprived sections.

Education is not only a means of employment but it also develops a person's logical ability, innovation and practical knowledge related to optimal use of resources. Therefore, for the progress of the nation, it is necessary that skill development and technical awareness should be developed under the inclusive concept in education from primary to higher level.

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# Demographic Transition Model and Changing Compositional Pattern of Population in India: Challenges and Opportunities

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## ABSTRACT

*The Demographic Transition Model (DTM) is an effective model for understanding population dynamics. Introduced in the mid-20<sup>th</sup> century, it describes four stages of demographic transition appears as society develops and industrialization progresses (Notestein, 1945). These stages include high birth and death rates (Stage 1), a decline in death rates leading to population growth (Stage 2), a subsequent decline in birth rates (Stage 3), and eventually, low birth and death rates (Stage 4). The demographic dividend is a phenomenon which typically occurs during the third and early fourth stages of the Demographic Transition Model (DTM) where a country has a large, productive workforce and relatively fewer dependents, creating a potential boost to economic growth. India is one of the few countries in the world having a high proportion of its population in the age group of 15-59. This large young population creates large demand and provides incentives for large production and thus speeding up GDP growth of the country. However, to gain from this dividend, India needs to invest in human capital development, generate employment opportunities, and ensure sustainable resource management. This paper aims to conduct a detailed analysis of the DTM in the context of India's compositional pattern of population growth and to highlight the challenges taking employment and education as the key indicators of study and also opportunities related to this favourable transition.*

**Keywords:** Demographic transition, demographic dividend, human capital, human resource management.

## Introduction

The Demographic Transition Model is an effective model for understanding population dynamics. Introduced in the mid-20<sup>th</sup> century, it describes four stages of demographic transition appears as society develops and industrialization progresses (Notestein, 1945). These stages include high birth and death rates (Stage 1), a decline in death rates leading to population growth (Stage 2), a subsequent decline in birth rates (Stage 3), and eventually, low birth and death rates (Stage 4). The demographic

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dividend is a phenomenon which typically occurs during the third and early fourth stages of the Demographic Transition Model where a country has a large, productive workforce and relatively fewer dependents, creating a potential boost to economic growth.

## Review of Literature

The scholarly research on demographic transition, demographic dividend and its economic implications reveals profound insights into population dynamics and growth potential, opportunities and challenges.

Notestein (1945) and Chesnais (1992) explore the demographic transition, focusing on how countries transition from high birth and death rates to low ones over time. This shift profoundly influences economic development. During the early stages, with high fertility rates and declining mortality rates, population growth surges, which can place a strain on resources. However, as birth rates begin to decline, there is a potential for economic growth if the country can capitalize on the increasing proportion of working-age individuals.

Bloom, Canning, and Sevilla (2007, 2011) delves into the concept of the demographic dividend, highlighting the economic benefits that arise when the working-age population exceeds the dependent population. This phase provides an opportunity for countries to boost productivity and savings, provided they have the right investments in human capital and government policies that support economic growth.

Education, particularly female education, plays a pivotal role in regulating fertility rates. Drèze and Murthi (2001) show that higher levels of female education lead to lower fertility rates and better economic outcomes, reinforcing the link between education and development. Becker (1981) similarly notes that higher education levels influence decisions on family size, with better-educated women tending to have fewer children, contributing to population control.

Gender equality is a critical factor in population dynamics is advocated by Das Gupta (2005), he is of the view that greater gender equality through empowering women and providing them with opportunities, leads to a decline in fertility rates.

Bloom, Canning, and Sevilla (2003) suggest that the impact of population growth on economic development is not simply a matter of size but also the composition of the population.

This paper aims to conduct a detailed analysis of the Demographic transition model in the context of India's compositional pattern of population growth, it brings forward opportunities related to demographic dividend and to highlight the challenges taking employment and education as the key indicators of study. The government policies and programs run in the recent past to develop youth potentials through skill development and education are also covered and finally the paper is concluded with the suggestions as the future course of action.

## Examination of Demographic Transition Model in India

India's population growth trends over the past century have been significantly shaped by the transitions highlighted by the Demographic Transition Model. The country's population growth can

be broadly divided into three distinct phases: the pre-transition phase, the population explosion phase, and the slowing growth phase.

**Pre-Transition Phase (Early 20th Century):** In the early decades of the 20th century, India’s population growth was relatively slow due to high mortality and fertility rates, a characteristic of the DTM’s first stage. During this time the average annual growth rate was less than 1%, with the country’s population hovering around 300 million at the beginning of the 20th century (Visaria&Visaria, 1983).

**Population Explosion Phase Mid-20th Century - Late 20th Century):** As India transitioned in the second stage of the DTM, the country witnessed a ‘population explosion.’ From 1951 to 1981, India’s annual population growth rate Averaged around 2.2%, peaking at 2.22% during 1971-1981 (Registrar General of India, 2011). This phase saw significant Improvements in health and sanitation, leading to a rapid Decline in mortality rates while fertility rates remained high.

**Slowing Growth Phase (Early 21<sup>st</sup> Century – Present):** The Early 21<sup>st</sup> century marked the beginning of a slowing growth Phase for India, reflecting a shift towards the third stage of the DTM. The 2011 census indicated a growth rate of 1.64%, a decline from the previous decade (Registrar General of India, 2011). This phase is characterized by declining fertility rates due to urbanization, increased female education, and broader access to contraception.

Although the national trends give an overreaching picture, It’s crucial to note that population growth trends vary widely across India’s diverse regions and states. Some states have Fertility rates comparable to developed nations, while others Still grapple with high fertility rates, reflecting an uneven Demographic transition (Guilmoto & Rajan, 2001).

**Table 1: Recent and Projected Trends in India’s Population Size and Age Distribution**

Year	Population (in million)	Percentage of Population in Ages			Dependency Ratio
		0-14 years	15-64 years	65+ years	
2001	1,029	35.4	60.2	4.4	66.1
2011	1,211	30.9	63.7	5.5	57.1
2020	1,396	26.3	67.3	6.4	48.6
2030	1,514	22.3	68.9	8.8	45.2
2040	1,611	20.1	68.4	11.6	46.2
2050	1,670	18.0	67.0	15.0	49.3
2060	1,695	16.5	64.4	19.1	55.3
2070	1,690	15.6	61.2	23.2	63.5
2080	1,655	14.8	58.8	26.3	70.0
2090	1,598	14.2	57.6	28.2	73.7
2100	1,530	13.9	56.3	29.8	77.7

**Source:** 2001 and 2011 population census, Registrar general of India(2006)and national commission on population (2020),2020 onwards UN projections(UN 2022).

Table 1 shows the trends in demographic composition of India since 2001 which depicts that the population falling in the 15-64 years of age bracket, referred to as demographic dividend is consistently increasing from 2001 starting from 60 percent to 68.9 percent in 2030 and then dipping only marginally to 68.4 percent in 2040. After that also the fruits of demographic dividend is perceived to exist till 2100 to 56.3 percent but the last column brings out another startling fact that the dependency ratio was low till 2050 but after that the demographic dividend benefits will fade away by the rising elderly population burden unless social benefits policy of government renders protection to the growing elderly population. Thus there is an opportunity but a challenge too in this demographic transition witnessed by India.

### **Opportunities associated with the demographic dividend**

Opportunities associated with the demographic dividend can be summarized as follows:

**Boosted Economic Growth:** A higher working-age population and a lower dependent population drive increased economic activities.

**Increased Labor Force:** A larger labor force enhances productivity, directly contributing to economic growth.

**Expanded Fiscal Space:** Resources can be shifted from spending on child-related needs to investment in infrastructure and human capital.

**Higher Women's Workforce Participation:** A decline in fertility rates often leads to more women joining the workforce, opening new growth avenues.

**Increased Savings:** As the working-age population grows, so does the savings rate and so does the investments rates.

**Growth of the Middle Class:** The demographic dividend fosters a rise in the aspirational middle-class society, which drives consumption and investment.

**Historical Growth Contributions:** The demographic dividend has contributed to as much as 15% of overall growth in developed economies. Example, Japan's rapid growth from 1964 to 2004 serves as a prime example of the benefits of a demographic dividend.

**Industrialization and Urbanization:** With more people seeking employment, economic activities such as industrialization and urbanization accelerate.

**India's Potential:** With over 65% of its population in the working-age group, India is in all probability going to emerge as an economic superpower.

The demographic dividend, when well-managed, offers significant opportunities for economic development and social progress.

## CHALLENGES

Demographic dividend if left unutilized and unmanaged have great challenges which needs to be attended.

### Demographic dividend and employment trends

Table 2 bring out the fact that while labour force participation rate (LFPR) is showing an increasing trend in case of rural, urban and combined regions for all the three years, the worker population rate has also shown an increase indicating increase in employment leading to which the unemployment rate has fallen 4.2 percent in 2021 to 3.1 percent in 2023 in usual status. The fall in unemployment rate can be attributed to the government programs and policies which have been effectively run in the previous years for making India to become 5 trillion economy by 2027. The program and policies have been discussed later in the paper.

**Table 2: LFPR, WPR, and UR (in percent)in Usual Status for Jan to Dec 2021,2022 and 2023for persons of Age 15 years and above**

Indicator	Rural			Urban			Rural+Urban		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
			January	2021 -	December	2021			
LFPR	78.5	36.8	57.6	74.9	23.2	49.4	77.4	32.8	55.2
WPR	75.5	36.0	55.7	70.4	21.3	46.2	74.0	31.7	52.9
UR	3.8	2.1	3.3	6.0	8.2	6.5	4.5	3.4	4.2
			January	2022 -	December	2022			
LFPR	79.5	37.5	58.5	74.3	24.7	50.0	78.0	33.9	56.1
WPR	77.1	36.7	56.9	70.4	22.8	47.0	75.1	32.8	54.1
UR	3.1	2.1	2.8	5.3	7.7	5.9	3.7	3.3	3.6
			January	2023 -	December	2023			
LFPR	79.8	47.3	63.4	74.9	27.2	51.4	78.3	41.3	59.8
WPR	77.7	46.4	61.9	71.6	25.2	48.8	75.8	40.1	58.0
UR	2.7	1.9	2.4	4.4	7.5	5.2	3.2	3.0	3.1

**Source:** Source: NSSO, Periodic Labour Force Survey, Key Employment and Unemployment indicators for Jan 2023-Dec 2023, MOSPI, Govt. of India.

However, the most significant change has been witnessed in the pattern of employment .There has been a significant decline in regular employment which has been taken over by casual nature of employment.

Table 3: Trends in unemployment Rate in percentage

Year	Unemployment Rate (%)
2024	9.2 (June 2024)
2023	8.003
2022	7.33
2021	5.98
2020	8.00
2019	5.27
2018	5.33
2017	5.36
2016	5.42
2015	5.44
2014	5.44
2013	5.42
2012	5.41
2011	5.43
2010	5.55
2009	5.54
2008	5.41

**Source:** The Centre for monitoring Indian Economy report, by CMIE Pvt. Ltd., July 2024.

Another survey on unemployment rate conducted by CMIE reveals different picture altogether. Unemployment rate in India rose sharply to 9.2 per cent in June 2024 from 7 per cent in May 2024, according to CMIE's Consumer Pyramids Household Survey. The unemployment rate increased in urban India as well as in rural India.

Though the methodology differs, CMIE data calculates workers who do not get employed for the previous four week of survey while bringing out the unemployment rate.

### Demographic Dividend and Education

The growing young population increases demand for educational services. Achieving universal primary education is just the first step; expanding access to secondary and higher education is equally important. Additionally, ensuring that education quality is maintained and that disparities across regions and social groups are addressed is essential for balanced development.

**Table 4: Percentage of persons of age 15-35 years in formal and non-formal education and training during last 12 months**

Age groups (years)	Male			Female			Person		
	Rural	Urban	All	Rural	Urban	All	Rural	Urban	All
15 – 24	48.8	56.3	51	40.9	54.1	44.5	45	55.3	47.9
15 – 29	36.4	41.2	37.8	29.5	37.4	31.7	33	39.4	34.9
15 – 35	28.3	31.2	29.2	22.7	27.9	24.3	25.6	29.6	26.8

Source: NSSO 78<sup>th</sup> round, Multiple indicators survey of India, 2020-2021, MOSPI, Govt. of India

Table 4 shows percentage of persons of age 15-35 years in formal and non-formal education and training during last 12 months. The table reveals that a very small percentage of population belonging to the workforce are seeking education, training or acquiring skill. This is a disturbing scenario firstly because the policies and programs run by the government are not reaching to the concerned population secondly, the need of the hour is to develop a skilled workforce which is enabled to make India a global economy.

**Table 5: Percentage of persons reported not in education, employment or training (NEET)**

Gender	15-24 years			15-29 years		
	Rural	Urban	All	Rural	Urban	All
Male	15.7	17.2	16.1	14.7	16.9	15.4
Female	45.9	38.3	43.8	52.4	50	51.7
Person	30.2	27	29.3	33	32.6	32.9

Source: NSSO 78<sup>th</sup> round, Multiple indicators survey of India, 2020-2021, MOSPI, Govt. of India

Another table 5 depicts percentage of persons reported not in education, employment and training (NEET) belonging to the age group of 15-29 years. This is a worrisome situation as our demographic dividend which is in the prime age bracket of working or seeking education to reap the benefits for future is unemployed forcibly or voluntarily. It is almost 30 percent in age group of 15-25 years and 33 percent in 15-29 years age bracket.

Table 6: Percentage of persons of age 15-24 years 15-29 years with ICT skills

Persons able to		15-24 years			15-29 years		
		Rural	Urban	All	Rural	Urban	All
(a) Copy or move a file or folder	Male	41.9	66.7	48.9	41	65.8	48.3
	Female	28.4	59	36.7	26.1	55.9	34.6
	Person	35.4	63.1	43.1	33.8	61.1	41.7
(b) Use copy and paste tools to duplicate or move information within a document	Male	39	64.7	46.3	38.2	63.8	45.7
	Female	26.2	57.1	34.6	24.1	54.1	32.7
(c) Send e-mails with attached files (e.g documents, pictures and videos)	Person	32.9	61.1	40.7	31.4	59.2	39.4
	Male	24.2	49.1	31.3	23.7	48.8	31.1
	Female	15.9	43.3	23.3	14.4	41.3	22.1
	Person	20.2	46.4	27.5	19.2	45.2	26.7
(d) Use basic arithmetic formulae in a spreadsheet	Male	6.6	21.2	10.8	6.9	22.2	11.4
	Female	4.9	18.6	8.7	4.5	18.2	8.4
	Person	5.8	20	9.8	5.7	20.3	10
(e) Connect, install new devices	Male	9.7	26.4	14.4	10.2	27.6	15.3
	Female	6	21.4	10.2	5.5	20.9	9.9
	Person	7.9	24.1	12.4	7.9	24.5	12.7
(f) Find, download, install, configure software	Male	19.3	37.3	24.5	19.3	37.8	24.7
	Female	12.6	30.8	17.5	11.5	29.8	16.8
	Person	16.1	34.3	21.2	15.5	34	20.9
(g) Create electronic presentation with presentation software (including text, images, sound, video or charts)	Male	5.7	18.2	9.3	5.9	19.1	9.8
	Female	4.2	15.9	7.4	4	15.6	7.3
(h) Transfer files between a computer and other devices	Person	5	17.2	8.4	5	17.5	8.6
	Male	17.2	39.4	23.5	17.1	39.3	23.6
	Female	10.9	32.4	16.8	10	30.8	15.9
(i) Write a computer program using a specialised programming language	Person	14.2	36.1	20.3	13.7	35.3	19.9
	Male	1.5	5.2	2.6	1.7	6.1	3
	Female	0.9	3.9	1.7	0.9	4.3	1.8
	Person	1.2	4.6	2.2	1.3	5.2	2.4

Source: NSSO 78<sup>th</sup> round, Multiple indicators survey of India, 2020-2021, MOSPI, Govt. of India

## Government programs and policies

Here's a summary of the key initiatives by the government that focus on youth empowerment, education, and skills development:

1. Youth-Centric Policy
2. Investing in Education
3. Building a Skilled Workforce
4. Creation Of More Jobs

These policies and programs reflect the government's commitment to harnessing the potential of India's youth, improving literacy, and creating a skilled workforce that meets the demands of a growing economy.

## Conclusion and Suggestions

To reap the benefits of demographic dividend multi-faceted approach to be developed which is the need of the hour, focus should be on education, skills development, employment generation, and inclusive growth with gender equality:

### Education and Skills Development

- **Enhance Education Access:** Improve the quality and reach of education for all, with special attention to marginalized communities.
- **Vocational Training:** Promote industry-aligned vocational training to increase employability.
- **Digital Literacy:** Invest in digital skills and technological literacy to align with the demands of a growing digital economy.

### Employment Generation

- **Foster Business Environment:** Attract investments and promote job creation through a conducive business climate.
- **Support Entrepreneurship:** Encourage entrepreneurship with support for startups and innovation.
- **Gig Economy:** Address the rise of gig and platform workers, projected to grow from 7 million in 2020 to over 20 million by 2030, and integrate them into the formal sector with social security benefits.

### Inclusion Growth and Gender Equality

- **Gender Equality:** Implement policies that ensure equal access to education and employment opportunities for women and promote empowerment.

- **Workforce Participation:** With only 24% of women participating in the workforce in 2022, there is a need for increased female participation for sustainable growth.
- **Reduce Inequalities:** Support social cohesion and efforts to reduce inequalities across various group based on caste or class
- **Regional balance:** To bridge the difference prevailing between states and rural-urban areas.

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# Financial Inclusion the Road to Socio-Economic Security of Women's: An Analysis

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## ABSTRACT

*Financial inclusion is essential for socio-economic development and sustainable development for women; it is a pathway to economic and social empowerment of women. Only through financial inclusion can the strengthening of social and economic security of women be achieved. The holistic development of an economy requires it to have an inclusive financial services system that facilitates the socio-economic upliftment of the underprivileged in a country by giving them access to financial products and services and extending credit facilities. Financial inclusion facilitates everyday living, and, when people can use the available financial products and services, such as savings, loan, credit, and insurance, they can pursue long-term goals, such as starting and expanding a business, investing in education and health, and saving money. If we talk about the social and economic empowerment of women as a means of financial inclusion, then it is not just a matter of providing loan facilities; its other aspect is also paving the way for the social and economic empowerment of women. And they should be given importance in the family and their participation in the decisions taken in the family should be ensured, apart from this the woman should be free to take decisions for herself and her children.*

**Keyword:** Financial Inclusion, Socio-Economic Security, Financial Awareness. Decision making,

## Introduction

Financial inclusion removes financial deprivation by providing a link between people and the financial mainstream of the economy. In addition, it also brings people from low-income groups into the fold of the organised banking sector and protects their assets and other resources in times of need. Financial inclusion also protects vulnerable groups from exploitation by making it easier to access credit in the government system. There is consistent evidence that as more and more women opt for employment, their families' living standards have improved. **Women** taking up jobs has not only improved the financial condition of their families, but also improved expenditure on **children's education and health**. Availability of loans at reasonable interest rates boosts **women's entrepreneurial potential**. Women can join self-help groups and start businesses with the help of microfinance institutions. At the unorganised level, it is easy to raise loans from moneylenders. But

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for this they have to pay a very high rate of interest. In such a situation, they often get caught in the debt trap and they also have to sell their mortgaged property. In such a situation, women often mortgage their jewellery. If we talk about women Socio-Economic Security and Empowerment as a means of financial inclusion, it is not just a matter of providing credit facilities. Another aspect of this is to provide a **safe, easy** and practical opportunity for **savings and social inclusion**. After a long effort, the attention of the government and policy makers has been able to be drawn towards this aspect. Unorganized means include buying jewellery (although it may not fetch a fair price when sold in difficult circumstances) and keeping cash at home for no purpose. Keeping cash at home also leads to loss of interest and also increases the risk of robbery. It has been seen in many households that when the salary is received at the beginning of the month, it is spent on many unnecessary things. Due to this, these households face **cash crunch** at the end of the month. Especially for women-headed households, organized savings options can be vital in better managing consumption throughout the month and taking advantage of the many savings schemes and products available. **Pradhan Mantri Jan Dhan Yojana** is also like this. This is the latest policy, whose objective is to connect all the people with banking facilities. Access and availability of insurance is another parameter to measure financial inclusion which has been emphasized in India. Policies like protection insurance plan and health insurance plan are very helpful in case of health and disability related contingencies. Pension plans complement these plans.

For example, recently **Atal Pension Yojana** has been implemented. In such a situation, women can become self-reliant and save for their old age without coming under the pressure of children or husband's wishes. This can reduce gender inequality and provide women with a stronger base for meaningful savings. Besides, it also provides insurance protection in case of any kind of emergency. Women (especially those at the bottom) will benefit from these policies. In fact, in view of the announcement of major decisions like demonetization by the Prime Minister in November 2016, various types of policies were introduced with the objective of greater financial inclusion, increasing the reach of **e-banking** through point of sales machines, **Bank Mitra** and **E-wallet** and **e-banking** were to be promoted. Financial inclusion in India really gained momentum in 2005-2006. At that time, the Reserve Bank of India in its annual policy underlined the banking practices which were hindering the financial inclusion of the people. The Reserve Bank India has initiated a number of reforms and requested banks to promote financial services among the low income groups. Additionally, to promote financial inclusion, the Reserve Bank has also asked all banks to provide no-frills banking accounts

with zero balance or very low balance for these income groups. In 2006, the Reserve Bank took another important step in this direction by allowing banks to deploy Bank Mitras and Business Coordinators as contact units to provide financial services, especially in rural areas. With the help of Bank Mitra model, banks have been successful in providing **door-to-door** services in rural areas.

According to Dr. C. Rangarajan, Chairman, Financial Inclusion Committee (2008)

“Financial Inclusion can be defined as the process whereby it is ensured that viable financial services and products are provided to the weaker sections at prices that are affordable, through a transparent and just institution”.

## Review of Literature

**Jaiswal and Vishwakarma**(2023)Concluded and analyzed that urbanand rural areas and finding shows that financial inclusion is positively and significantlyimpacts the financial well-being of women. Demographic variables education,Monthly income, and occupation significantly affect the financial well-being of women.

**Rao and Balammal** (2021) concluded that rural areas women face greater challenges in terms Financial inclusion Infrastructural insufficiency, low literacy rates, and lack of awareness about financial products are some of the main barriers.

**Barik& Sharma**(2019) concluded by taking the data from financial access survey andglobal findex and RBI bulletin after the implementation Scheme in August 2014, much improvement has happened in opening of bank deposit Accounts and digitalization of banking process despite high digital growth transactions, digital payments among the women, rural people, elderly people, and less Educated people have much less than other groups of people and still provisions.

**Bhatia and Singh** (2019) concluded that financial inclusion and women empowerment is closely related also analyzed the awareness regarding government schemes related to women empowerment.

**Nigam and Thakur** (2012) studied about the historical background of financial inclusion and recent developments and government initiatives taken for financial inclusion in India.

## Objectives of the Study

1. To study the Socio-Economic security of women
2. To study the factors which influence the Socio-Economic empowerment of the women.
3. To evaluate the changes in socio-economic status of women in recent years.
4. To identify the dimensions of financial inclusion.

## Methods

The present study is based on the secondary sources.The methodology used in this study is a descriptive method with a qualitative approach. This is qualitative research that uses a descriptive approach. Qualitative research offers a more holistic understanding.Secondary data has been collected from books, journals, related bulletins, articles, magazines, newspaper and other reports, Centre for monitoring Indian economy, planning and development documents, census and internet and other data is carried out by gathering documents and information from reports published by the RBI, various reports from financial institutions and other reports relating to financial service providers.

## Gender Gap in Financial Inclusion

Women's empowerment is an effort to promote women's sense of self-worth, their ability tomaking their own choices and their right to influence social change for themselves and others.

One form of women's empowerment can be done through economic empowerment. The RBI has implemented a strategy to decrease the gender gap in credit access to improve financial stability. This access allows them to contribute to the economy growth and increase their chances of taking benefit of the opportunities that the future will bring employment.

### Policy Suggestions

During 2011-17, 77% of women above 15 years of age had a bank account. This figure has increased by 51% compared to 2011 (Global Findex News 2017). The main reason for this increase is the nationwide scheme launched by the present government - PradhanMantri Jan DhanYojana, whose objective is to provide financial assistance to all the citizens of the country to be connected with banking facilities. It makes services like direct benefit transfer mandatory and is also linked to various social security and insurance schemes. However, the main problem with the above figures is that a large number of such accounts are zero balance accounts, which means there is a decline in the usage of these services.

#### The current problems with the policies introduced so far are as follows-

**Bank Mitra:** Bank Mitra was introduced with the objective of providing a link between banks and people in remote areas. However, due to loose branding of Bank Mitras, efforts made in this regard have not yielded effective results. Actually, this has happened due to low incentives and wages of Bank Mitra and due to rural economy giving importance to traditional branches of banks.

**Post Offices:** While post offices have played an important role in providing financial services, the potential benefits from its existing infrastructure have not yet been realised. The biggest obstacle in this is the severe shortage of manpower. In fact, post offices do not have the staff required to provide the services they are intended to provide. Moreover, out of the total 1.54 lakh post offices, 1.39 lakh post offices are in rural areas, but the rural population still depends on unorganized means to get loans, as post offices do not provide such services. At present, there is no mechanism through which post offices can provide core banking services, including providing loans.

**Literacy Programme:** Money lending is an important issue even today. According to Global Findex 2017 data, 30 percent of girls and women (above 15 years of age) took loans from friends and relatives. This clearly indicates that there is no change in the attitude of the people. It shows that the performance of various programs of financial literacy through audio-visual mediums (Doordarshan Lam etc.) and credit counselling centers has not been satisfactory.

Now we talk about some policy suggestions that should be implemented to promote financial and socio-economic inclusion among women.

**Anganwadi System:** According to an estimate, there are 10.53 lakh Anganwadi centres in India. Adding another dimension related to financial needs under this will have a huge impact. This will have a broader impact of adding another dimension related to financial needs. Women can be made financially independent by providing them necessary education related to banking services. Anganwadi workers can be given basic banking training. This can give them a chance to work as a bank mitra. In this way, the challenge of lack of bank branches at the grassroots level can be addressed by further utilizing the existing infrastructure and personnel of the bank. Also, as per the promise of

Bank Mitra Scheme, it will reach all the people. Its service can be provided. Opening an account desk will save women from the hassle of running around too much. This will help them get information about the use of loans, avail subsidies and insurance policies offered by the government from time to time and take decisions on this basis.

**Innovation in Credit Score Model:** One aspect often overlooked when we talk about financial access for women. In fact, women are not fared well in terms of the traditional model of obtaining credit points. This model of obtaining credit score is based on credit history (past details of taking loans and other transactions) etc. New methods should be used to assess the risk appetite of the woman borrower. A similar experiment is being conducted in Africa, under which to assess the capability, the process of psychological testing is being adopted by analyzing the intellectual capacity and character traits. (CGAP report)

**Role of preference rule in lending to priority sectors:** There have been many shortcomings in meeting the needs of rural people. There is a need to provide more and more quality loans of different types through banks to save small enterprise owners (potentially women) from the trap of high interest rates from moneylenders. Also, people need to be helped to move to new locations such as industries, self-employment businesses, retail businesses, export activities etc.

**Make products according to women's needs:** In a country like India, where sons generally have a share in parental property and daughters are excluded from it, gender differences obviously emerge in property ownership. Men usually own property such as land, while women keep jewelery and other valuables. The Reserve Bank may also suggest formulation of credit products keeping in mind such disparities and the practice of ownership.

**Financial Literacy and Demographics Benefits:** India is taking advantage of its demographic advantage standing at the cusp and majority of the country the population will get involved in work. More women's share of the workforce exceeds giving them financial freedom and a future. Funds, Insurance Cover and Direct Benefit Transfer. Also about related services like planning. Need to educate. So, once they are employed, they will be aware of the importance of bank accounts and will be able to transact without any external help. This is very important. Because lack of technical information related to it and myths about banking services are major obstacles in opening a bank account in India.

**Mobile Money New Dimension:** India has been quite successful in bringing people under the ambit of mobile handset usage on a large scale. Private players play a great role in this. Transactions through mobile applications, SMS banking for non-smart phone users, etc. can be very helpful in carrying out transactions with a single click and utilising the potential of mobile phones. This is especially important as there is less gender disparity in mobile access. Thus, it provides an opportunity for women who find it difficult to go to a bank or ATM. This can be especially useful in areas where travelling can take a day or a full day's work.

Rural women need to be made aware of such innovations and be provided basic information about their operation. This will increase their trust in these mobile wallets. Information sessions in panchayats and fair price shops can help in providing such necessary information. Help should also be taken from mobile companies and operators in measures like pre-installing the necessary digital

banking applications in all mobile handsets and preparing the system in such a way that they can run even without the use of internet data.

**Importance of further research and gender data:** Further policy making is possible when disaggregated data is available at the household level and addresses why women are less likely to access organized financial services. Advanced and learning models are needed to fully understand the reasons behind low levels of financial inclusion. The advanced model includes gender issues, behavioural aspects etc. Through the above steps, policy makers will be able to come forward to deal with it effectively and present plans keeping in mind specific issues instead of a comprehensive policy.

## Conclusion

Economic empowerment is the individual aspect of women development. The Economic Empowerment Means Greater Access to Financial Resources Inside and Outside the Household, Reducing Vulnerability of Poor Women are in crisis situation. Education is the milestone of women Empowerment is empowering, first respond to challenges, then confront.

Their Traditional Role and Change Their Lives. Swami Vivekananda had said “That nation which doesn’t respect women will never become great now and nor will ever in future” The farmer committing suicide due to debt, the poor woman not being able to operate a bank account, the worker being unable to keep his savings in the right place and other such examples point to a common nature of needs: the need for money, The need for organized institutions and obviously the dire need for financial inclusion in India. The priority sector lending system has played an important role in expanding the scope of financial coverage. In fact the nature of this system is to cater to the needs of the financially weakest group in the economy. Southern states have increased focus on credit related to this sector, which has helped in providing small business opportunities to women and freeing them from the debt trap. Therefore, the assessments made in this regard will be based on Anganwadi and priority this points to a strong need to increase access to financial services through credit to the sectors. Appropriate awareness campaigns in this regard will also help in moving towards a cash-free lifestyle. Promoting mobile banking and related infrastructure are effective policy instruments to ensure secure online transactions. Various schemes just extended the financial services and became a medium of empowering women.

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# A Study based on the Institutional Infrastructure of Primary Schools of Uttar Pradesh: Gender Based Enrolment and Dropout Rate

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## ABSTRACT

*This study examines the relationship between school infrastructure, enrolment rates and dropout rates in primary education in Uttar Pradesh. It adopts a mixed-method approach, combining quantitative data analysis and qualitative insights from community engagement. The key findings reveal a strong negative correlation between the number of schools and enrolment of both boys and girls, suggesting that simply increasing the number of schools does not guarantee higher enrolment. The analysis also shows that dropout rates are significantly influenced by the number of schools, raising concerns about systemic issues. In addition, the quality of school infrastructure – which is characterised by inadequate facilities, limited resources, and poor sanitation – emerges as an important factor influencing educational outcomes. The study emphasises the need for a holistic policy approach, increased investment in infrastructure and enhanced community participation to improve educational quality and retention rates in the region.*

**Key words:** *Enrolment, Dropout Rate, Education, Primary Schools & Infrastructure*

## Introduction

Education serves as a cornerstone for individual empowerment and societal development. It is a critical instrument for reducing poverty, enhancing economic opportunities, and fostering social equity. However, disparities in access to education persist, particularly in rural regions of India. In Uttar Pradesh, presents a microcosm of the challenges faced in achieving universal education, especially concerning gender-based enrolment and dropout rates. This study aims to explore the infrastructure of primary schools in the Uttar Pradesh, investigating how it affects gender dynamics in education.

This study aims to explore the Institutional Infrastructure of primary schools of Uttar Pradesh, focusing specifically on gender-based enrolment and dropout rates. By analysing the existing school

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facilities, resources, and support systems, this research seeks to identify the factors contributing to the gender gap in education.

## **Background of the Study Area**

Uttar Pradesh is characterized by its socio-economic diversity and a complex tapestry of cultural norms that influence educational access and retention. Despite governmental initiatives like the SarvaShikshaAbhiyan (SSA) aimed at promoting universal education, significant gaps remain in infrastructure, which directly impacts school enrolment and retention rates for boys and girls.

The state has a population that comprises various socio-economic backgrounds, with many families still dependent on agriculture and informal labour. These economic conditions play a crucial role in shaping educational priorities, often favouring boys over girls. Cultural attitudes and gender norms further exacerbate these disparities, creating barriers to girls' education.

## **Gender-Based Enrolment Trends**

Gender-based enrolment trends in Uttar Pradesh reflect the overall effectiveness and inclusiveness of the education system. This study is particularly important to understand the enrolment of boys and girls in primary schools and their education status. The importance of this topic can be understood through the following points:

### **1. Overview of the current situation**

There is a difference in the enrolment of girls and boys in primary schools in Uttar Pradesh. This difference is due to the influence of social, economic, and cultural factors. Despite government schemes and policies, at times girls are less enrolled, which is due to family responsibilities or economic constraints.

### **2. Social and economic factors**

Family attitudes towards education and economic status play an important role in the enrolment of boys and girls. In many families, boys are given priority, which affects the enrolment of girls. Lack of resources available for education is also an important reason, which creates variation in gender-based enrolment.

### **3. Government Initiatives and Schemes**

The government has implemented various schemes to promote gender-based enrolment, such as the 'BetiPadhao, BetiBachao' scheme. These initiatives aim to encourage girls' education and link them to social literacy.

### **4. Analysis of Dropout Rate**

There are many challenges to girls' education, including the dropout rate. Many girls drop out of school due to reasons such as family financial pressure or marriage. To address this problem, awareness needs to be raised not only at the school level but also at the social level.

## 5. Future Prospects

If concrete steps are taken to improve enrolment, it is possible to improve the status of girls' education in Uttar Pradesh. Local communities and schools need to work together to ensure gender equality.

### Dropout Rates: A Growing Concern

Understanding dropout rates is crucial for assessing the effectiveness of educational policies and infrastructure. Dropout rates can be influenced by various factors, including:

**1. Family Dynamics:** Changes in family circumstances, such as financial strain or parental education levels, can lead to higher dropout rates among both genders.

**2. School Climate:** A negative school environment, characterized by bullying, inadequate teacher support, or lack of engagement, can push students away from school, particularly girls who may already face additional societal pressures.

**3. Transportation and Accessibility:** Geographic barriers can also contribute to dropout rates. In rural areas, long distances to schools without proper transportation can be a significant hurdle, disproportionately affecting girls.

**4. Academic Performance:** Students who struggle academically may be more likely to drop out. Support systems, such as tutoring or mentoring, are essential in helping students, especially those at risk, to stay in school.

### Objectives of the Study

This study aims to address the following objectives:

1. To analyse the relationship between number of schools and enrolment of boys.
2. To analyse the relationship between number of schools and enrolment of girls.
3. To examine how the dropout rate influenced by total enrolment and number of schools.
4. Evaluating the quality of infrastructure.

### Hypothesis

1. There is no significant relationship between institutional infrastructure and dropout ratio of boys.
2. There is a no significant relationship between institutional infrastructure and dropout ratio of girls.
3. There is no significant relationship between number of schools and total enrolment of students.

## Review of Literature

Visscher 2001; BeataMerickova et al., 2020 A substantial body of research explores the performance and condition of public schooling by examining various parameters of school profiles. However, most of this literature is centered outside of India.

Atuahene et al., 2019 Many studies highlight significant disparities in academic performance between public and private schools, largely due to insufficient teaching and learning resources in public institutions.

Singh and Sarkar (2015) also found that students in private unaided schools significantly outperform those in government schools.

(Muralidharan and Sundararaman, 2013 In the Indian context, evidence indicates notable differences in the quality of inputs—such as teacher qualifications, classroom infrastructure, and time utilization—between private and public schools.

Gouda et al. (2013) Disparities directly affect student learning outcomes and test scores. corroborates these findings at the primary school level using IHDS data. Their factor analysis demonstrates that private schools excel in infrastructure, cost of schooling, and student performance, with the first two factors significantly influencing academic outcomes.

## Research Methodology

To achieve these objectives, a mixed-methods approach will be employed. This will include:

- 1. Quantitative Data Collection:** Gathering enrolment and dropout statistics from primary schools within the Uttar Pradesh to analyse trends and patterns.
- 2. Field Surveys:** Observational surveys of school facilities will help assess the condition of physical infrastructure, including classrooms, sanitation, and available resources.
- 3. Focus Group Discussions:** Engaging with community members to understand societal attitudes towards education, particularly for girls, will provide valuable context for the quantitative data.

## Significance of the Study

The significance of this study lies in its potential to inform policy decisions and interventions aimed at improving educational outcomes in Uttar Pradesh. By focusing on the interplay between infrastructure, gender, enrolment, and dropout rates, the findings can contribute to a more nuanced understanding of the educational landscape.

## Analysis of Data

Year	Total number of						Indicators		
	Schools	Teachers	Pupil Teacher Ratio	Enrolments			Dropout Ratio		
				Boys	Girls	Total	Boys	Girls	Total
2015-16	113947	533928	23	5576655	5689315	11265969	9.08	8.04	8.58
2016-17	113927	588857	37	5900350	6007518	11907868	10.22	11.4	10.9
2017-18	113976	579928	41.5	5962345	6046410	12008755	7.2	7.1	7.2
2018-19	113847	410091	31	5981886	6156878	12138764	9.5	9.9	9.7
2019-20	88532	317184	30.6	5953222	6179135	12132357	2.8	2.5	2.7
2020-21	87895	342277	29	6302882	6361392	12664274	2.3	2.1	2.2
2021-22	87811	349074	28	6864206	6723539	13587745	2.4	3	2.7

Source: UDISE+ Report

### 1. To analyse the relationship between number of schools and enrolment of boys.

Year	No. of Schools	Boys		Column 1	Column 2
2015-16	113947	5576655		Column 1	Column 2
2016-17	113927	5900350	Column 1	1	
2017-18	113976	5962345	Column 2	-0.69127	1
2018-19	113847	5981886	<b>Correlation: -0.69127</b>		
2019-20	88532	5953222			
2020-21	87895	6302882			
2021-22	87811	6864206			

The relationship between the number of schools and the enrolment of boys over several years.

### Interpretation of Correlation

- **Negative Correlation:** A correlation of -0.691 suggests that as the number of schools increases, the enrolment of boys tends to decrease. This is counterintuitive, as one might expect more schools to lead to higher enrolment due to increased access.
- **Strength of the Correlation:** The value of -0.69127 indicates a moderate to strong correlation. This suggests that while the two variables are related, other factors may also influence boys' enrolment.

### Yearly Analysis

1. **2015-16 to 2018-19:** The number of schools remained relatively stable (around 113,000), but boys' enrolment fluctuated slightly.

2. **2019-20:** A significant drop in the number of schools (to 88,532) coincided with a slight decline in boys’ enrolment, followed by an increase in the next two years.
3. **2020-21 to 2021-22:** Enrolment of boys increased significantly even as the number of schools remained lower than in earlier years.

**Implications**

- **Educational Policy:** The strong negative correlation raises questions about the effectiveness of simply increasing the number of schools. It suggests that merely having more schools does not guarantee higher enrolment, especially for boys. Factors such as school quality, local socio-economic conditions, and community engagement might play more critical roles.
2. **To analyse the relationship between number of schools and enrolment of girls.**

Year	No. of Schools	Girls		Column 1	Column 2
2015-16	113947	5689315			
2016-17	113927	6007518	Column 1	1	
2017-18	113976	6046410	Column 2	-0.7519	1
2018-19	113847	6156878	<b>Correlation= -0.7519</b>		
2019-20	88532	6179135			
2020-21	87895	6361392			
2021-22	87811	6723539			

The relationship between the number of schools and the enrolment of girls over several years.

**Key Statistic: Correlation**

- **Correlation Coefficient (r): -0.7519**  
 The correlation coefficient of -0.7519 signifies a strong negative relationship between the number of schools and the enrolment of girls. This means that as the number of schools increases, the enrolment of girls tends to decrease. This counterintuitive result suggests that simply adding more schools does not automatically lead to higher enrolment for girls, indicating that other factors—such as school quality, socio-economic conditions, or community attitudes—may play a more significant role in influencing girls’ education.

**Interpretation of Correlation**

- **Negative Correlation:** A correlation of -0.7519 suggests that as the number of schools increases, the enrolment of girls tends to decrease. This counterintuitive result warrants further exploration.
- **Strength of the Correlation:** The value of -0.7519 indicates a strong correlation, meaning that there is a notable relationship between the two variables. However, it also suggests that other factors may influence girls’ enrolment rates.

**Yearly Analysis**

1. **2015-16 to 2018-19:** The number of schools remained stable around 113,000, while girls’ enrolment steadily increased.
2. **2019-20:** There was a significant reduction in the number of schools (to 88,532), which coincided with a modest increase in girls’ enrolment.

3. **2020-21 to 2021-22:** The number of schools stayed lower than in previous years, but girls' enrolment continued to rise significantly, reaching over 6.7 million by 2021-22.

### Implications

- **Educational Policy:** The strong negative correlation suggests that simply increasing the number of schools does not automatically lead to higher enrolment of girls. This indicates a need to investigate other factors that may impact girls' educational access and retention.
3. **To examine how the dropout rate influenced by total enrolment and number of schools.**

Year	Drop out	Total Enrol	Schools
2015-16	8.58	11265969	113947
2016-17	10.9	11907868	113927
2017-18	7.2	12008755	113976
2018-19	9.7	12138764	113847
2019-20	2.7	12132357	88532
2020-21	2.2	12664274	87895
2021-22	2.7	13587745	87811

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.952527743
R Square	0.9073091
Adjusted R Square	0.860963651
Standard Error	1.373886976
Observations	7

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	73.90608	36.9530406	19.577091	0.008591603
Residual	4	7.550262	1.88756542		
Total	6	81.45634			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-24.87645072	18.58621	-1.33843557	0.2517666	-76.4800553	26.7271539	-76.4800553	26.72715385
X Variable 1	3.1378E-07	1.12E-06	0.27951594	0.7937067	-2.80301E-06	3.4306E-06	-2.803E-06	3.43057E-06
X Variable 2	0.000265611	5.87E-05	4.52568968	0.0106122	0.000102662	0.00042856	0.000102662	0.000428559

RESIDUAL OUTPUT			
<i>Observation</i>	<i>Predicted Y</i>	<i>Residuals</i>	<i>Standard Residuals</i>
1	8.924123557	-0.34412	-0.30676727
2	9.120226228	1.779774	1.58657068
3	9.164897446	-1.9649	-1.75159828
4	9.171427853	0.528572	0.47119307
5	2.445482748	0.254517	0.22688817
6	2.4431935	-0.24319	-0.21679366
7	2.710648669	-0.01065	-0.0094927

PROBABILITY OUTPUT	
<i>Percentile</i>	<i>Y</i>
7.142857143	2.2
21.42857143	2.7
35.71428571	2.7
50	7.2
64.28571429	8.58
78.57142857	9.7
92.85714286	10.9

The relationship between dropout rates, total enrolment, and the number of schools over a period from 2015-16 to 2021-22. Here is a brief explanation of the statistics:

### Key Components

1. **Data Overview:** The dataset includes dropout rates, total student enrolment, and the number of schools for seven academic years.

## 2. Regression Analysis:

- o **Multiple R (0.9525)**: The Multiple R value of 0.9525 indicates a strong positive correlation between the independent variables (total enrolment and number of schools) and the dependent variable (dropout rate). This means that as total enrolment and the number of schools increase, the dropout rate tends to rise as well. A strong correlation suggests that these independent variables are closely related to the dropout rate, highlighting a significant relationship that may warrant further investigation to understand the underlying factors driving this trend.
- o **R Square (0.9073)**: R Square (0.9073) indicates that approximately 91% of the variance in dropout rates can be explained by the model, which includes total enrolment and the number of schools. This high value suggests that the model fits the data well, meaning that these independent variables account for a significant portion of the changes observed in dropout rates. It implies that the model is effective in capturing the relationship between the predictors and the outcome, although 9% of the variance remains unexplained, potentially due to other factors not included in the analysis.
- o **Adjusted R Square (0.8610)**: Adjusted R Square (0.8610) accounts for the number of predictors in the model, providing a more accurate measure of its explanatory power. It adjusts the R Square value downward if unnecessary predictors are included, ensuring that only meaningful variables contribute to the model's effectiveness. A value of 0.8610 still indicates a strong fit, suggesting that even after considering the number of predictors, the model effectively explains a significant portion of the variance in dropout rates. This reinforces the reliability of the findings.

## 3. ANOVA Table:

- o **F-statistic (19.5771) and Significance F (0.0086)**: The low p-value ( $< 0.05$ ) indicates that the regression model significantly predicts dropout rates, meaning at least one of the predictors is related to the response variable.

The F-statistic (19.5771) and the low p-value (0.0086) suggest that the regression model is statistically significant. This means that at least one of the independent variables (total enrolment or number of schools) has a meaningful relationship with the dropout rates. Since the p-value is less than 0.05, we can confidently reject the null hypothesis, indicating that the predictors together provide a reliable explanation for variations in dropout rates.

## 4. Coefficients:

**Intercept (-24.8764)**: This value represents the expected dropout rate when both independent variables (total enrolment and number of schools) are zero. However, this scenario is not realistic in the context of this analysis, so the intercept may not have practical significance.

**X Variable 1 (Total Enrolment)**: The coefficient (3.1378E-07) suggests a very small positive relationship between total enrolment and dropout rates. However, the high p-value (0.7937) indicates that this relationship is not statistically significant, meaning total enrolment does not reliably predict dropout rates.

**X Variable 2 (Number of Schools):** The coefficient (0.0002656) shows that as the number of schools increases, the dropout rate tends to increase as well. The p-value (0.0106) confirms this relationship is statistically significant, suggesting that more schools may be associated with higher dropout rates.

#### 5. Residual Analysis:

- o **Residuals:** Show the difference between observed and predicted values, helping to check the model's accuracy. Most residuals are small, suggesting that the predictions are relatively close to the actual dropout rates.

#### 4. Evaluating the quality of infrastructure.

The quality of infrastructure in government primary schools in Uttar Pradesh involves several factors, including physical facilities, availability of resources, and overall environment. Here is a structured analysis:

1. Physical Infrastructure
2. Learning Resources
3. Accessibility
4. Government Initiatives
5. Impact on Education Quality
6. Community Engagement

**Role of Local Communities:** Community involvement in school management can lead to improvements in infrastructure. Programs that engage parents and local organizations have shown promise in enhancing school facilities.

#### Conclusion

This study delves into the intricate relationships between school infrastructure, enrolment rates, and dropout rates in primary education in Uttar Pradesh. It finds that strong negative correlations exist between the number of schools and boys' and girls' enrolment rates, indicating that simply increasing school numbers does not guarantee higher enrolment. This complexity suggests that other factors, such as the quality of education and community conditions, play significant roles. The regression analysis also uncovers a significant link between dropout rates and the number of schools, highlighting a counterintuitive trend where more schools might correlate with increased dropout rates, pointing to systemic issues that need exploration. The quality of school infrastructure is identified as a key determinant of educational outcomes, with poor conditions, inadequate resources, and sanitation issues adversely affecting student performance and retention. Despite government initiatives to improve access and infrastructure, challenges in fund utilization and effective implementation remain, emphasizing the necessity for enhanced accountability and community engagement to improve the impact of these programs. Ultimately, this research aims to provide a comprehensive overview of the educational landscape in Uttar Pradesh, identifying actionable

strategies to enhance educational access and quality, and ensuring that all children, regardless of gender, can achieve their full potential.

## Recommendations

To enhance educational quality in Uttar Pradesh, a multifaceted approach is essential. Educational policies should not only aim to increase the number of schools but also prioritize improving the overall quality of education by investing in infrastructure, teaching resources, and fostering community engagement. Comprehensive research is needed to better understand the factors affecting enrolment and dropout rates, considering socio-economic conditions, community attitudes, and the distribution of educational resources. Significant investment in school infrastructure is crucial, particularly in areas like sanitation facilities, classroom conditions, and learning resources. Regular assessments of school infrastructure should be conducted to identify areas needing upgrades, and there should be advocacy for increased funding with a focus on transparent allocation. Strengthening community involvement in school governance and improvement efforts can enhance accountability and effectiveness. Finally, developing plans to ensure schools are accessible for all children, including those with disabilities, will promote inclusivity and support equitable educational opportunities.

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# The Economic Revolution of Uttar Pradesh: A Journey towards a \$1 Trillion Milestone

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## ABSTRACT

*Welcome to a discussion that aims to explore the roadmap towards achieving a remarkable milestone - a \$1 trillion economy. The state of Uttar Pradesh in India has embarked on a remarkable journey of economic transformation. With its immense potential and strategic location, Uttar Pradesh has emerged as a key player in India's growth story. At a time when global economies are striving to attain sustainable growth, this article delves into the strategies and initiatives required to propel our state's economy towards this ambitious target. By examining the current economic landscape, identifying key challenges and opportunities, and focusing on crucial areas such as infrastructure development, innovation and entrepreneurship, skill development, trade and investment, and policy reforms, we can pave the way for a prosperous and resilient future. Join us on this journey as we unravel the components of a roadmap that will shape our path to a \$1 trillion economy.*

**Keywords:** \$ 1 Trillion economy, Economic transformation, Growth Trajectory, Skill Development, Opportunities and challenges.

## INTRODUCTION

Uttar Pradesh, one of the largest states in India, holds immense economic potential that has the capacity to propel it into the league of trillion-dollar economies. With a rich historical legacy and a diverse range of resources, Uttar Pradesh offers a promising landscape for economic growth and development. The point is if India is to become a five trillion dollar economy, UP will have to become a one trillion dollar economy. So soon or later, UP will. The question that matters here is 'when' and that will decide the future growth trajectory. A lot of it will depend on the coordinated and sustained efforts of all stakeholders, combined with adaptability to changing global economic dynamics.

Strongly believing that UP has made some significant strides to improve its economy. The biggest indicator of UP's growth comes from the ease of doing business ranking. From being at the 12<sup>th</sup> slot about a decade ago, it now ranks number two<sup>1</sup>. The credit goes to UP's improved law and order situation for complimenting efforts to build infrastructure. The perception about UP has changed.

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It is seen as a rising economy in not just in India but also in the world. A few improvisations here and there in specific policies are fine but any overhaul of the existing policy framework may act as a speed breaker. So, UP must stick to its policy framework for it provides the structural basis for brand UP.

Uttar Pradesh Chief Minister Yogi Adityanath in Jan 2024, has projected confidence that the state will achieve the USD 1 trillion target with the right policy and precise implementation as its goals are well defined. The Honourable Chief Minister, had previously instructed officials to concentrate their efforts on ten pivotal sectors to enable the state to achieve its goal of becoming a trillion-dollar economy by 2027<sup>2</sup>. The plan aims to leverage the state's potential as India's largest consumer market, with a network of expressways and airports to facilitate growth. To achieve the goal of a \$1 trillion economy for Uttar Pradesh, the corresponding Gross State Domestic Product (GSDP) will have to expand over threefold from the current estimated GSDP of Rs 24.39 trillion in the fiscal year 2023-24.

The blueprint covers various sectors, with a focus on agriculture due to the state's status as an agrarian economy. The government plans to link farming directly with the market to increase rural incomes and boost the economy. The administration is additionally enthusiastic about taking advantage of novel investment propositions adding up to approximately Rs 35 trillion, which were exhibited at the mammoth UP Global Investors Summit (GIS) in February of 2023. In point of fact, enterprises adding up to Rs 10 trillion gathered at the GIS will be commenced in the ensuing months. The administration has distributed funding in diverse segments via a yearly budget of Rs 6.9 trillion for 2023-24 to situate the state as a favored investment location not exclusively in India but also in South Asia

This article delves into the various aspects of Uttar Pradesh's economy, highlighting its historical evolution, key sectors driving growth, infrastructure development, government initiatives, challenges, and opportunities. Furthermore, it explores the socio-economic impact of Uttar Pradesh's trillion-dollar economy and discusses future prospects and recommendations for sustainable development. Through this comprehensive analysis, we aim to shed light on the remarkable potential of Uttar Pradesh as a dynamic economic powerhouse in India and beyond.

### **Current economic status and growth trajectory**

Uttar Pradesh has been experiencing steady economic growth in recent years. According to the State Gross Domestic Product (SGDP) figures, the state's economy surpassed the \$300 billion mark in 2020. With a growth rate consistently outpacing the national average, Uttar Pradesh is on track to become a trillion-dollar economy in the near future.

### **Early economic developments in Uttar Pradesh**

The roots of Uttar Pradesh's economic growth can be traced back to ancient times. The state has a rich history of trade and commerce, with cities like Kanpur and Varanasi serving as major centres of business and cultural exchange. The flourishing trade routes that crisscrossed the state played a significant role in shaping its economic landscape.

## **Key sectors driving Uttar Pradesh's growth**

### **Role of agriculture and rural economy**

Agriculture has long been the backbone of Uttar Pradesh's economy. Blessed with fertile land and a favorable climate, the state produces a wide range of crops including wheat, rice, sugarcane, and potatoes. The rural economy, heavily reliant on agriculture and allied sectors, contributes significantly to the state's overall GDP. The government's focus on agricultural reforms and rural development has further boosted the sector's growth.

### **Agriculture and agro-based industries**

Despite industrialization and urbanization, agriculture remains a crucial sector in Uttar Pradesh's economy. The state's favorable agro-climatic conditions support a diverse range of agricultural activities. Apart from traditional farming, Uttar Pradesh is witnessing a rise in agro-based industries like food processing, dairy farming, and horticulture. These industries not only provide employment but also contribute to the state's export potential.

Representatives of Deloitte India, the consultant hired by the government for the mega project, informed the World Bank delegates that first step would be to establish UP as the food basket of India.

An official from Deloitte said a 'super app' would be developed for agriculture. There will also be a concerted push for start-ups based on agricultural technology.

Besides, dairy farmer produce organisations (FPOs) will be encouraged while economically sustainable 'gaushala' model will be adopted. There is also a plan to establish poultry production clusters.

According to the official, in the second part of the strategy the government would work towards developing world-class industrial infrastructure in the state. Four special investment regions, GIS-based land bank, a logistic hub and multi-modal connectivity will be developed in UP. The government will also focus on dry ports and raw material banks.

### **Impact of industrialization on Uttar Pradesh's economy**

The Industrial Revolution in the 19th century brought a wave of industrialization to Uttar Pradesh. Cities like Kanpur, Agra, and Lucknow became hubs of textile manufacturing, attracting both domestic and foreign investments. The establishment of industries not only created job opportunities but also fueled economic growth, leading to a rise in per capita income and improved living standards.

### **Manufacturing and industrial sector**

The manufacturing and industrial sector is a major driver of Uttar Pradesh's economic growth. The state is home to thriving industries such as textiles, leather, chemicals, automotive, and engineering. The government has implemented several policies and initiatives to promote ease of doing business, attracting investments from both domestic and international companies.

With around 95 lakh MSME units in the state, the highest in the country, this sector is promising to yield results with the right kind of attention. The government will develop industrial parks, create pledge parks, and set up export facilities. There will be special emphasis on linking items under One District, One Product Scheme with e-commerce platforms for a wider market.

Sunrise sectors give the government huge scope for development, therefore, emerging fields like semiconductors and chips, aerospace and defence, green energy, clean mobility, and drone technology will be promoted by the government to push start-ups which can provide opportunities for both employment and self-employment.

### **Information Technology, Software Development and Emerging Tech Clusters**

Uttar Pradesh is emerging as a significant player in the Information Technology (IT) and software development sector. Cities like Noida and Lucknow are witnessing a rapid rise in IT parks and technological innovation hubs. With a growing pool of skilled IT professionals and supportive government policies, the IT sector is poised to contribute significantly to the state's economy.

Under emerging tech clusters, different districts will be developed with distinct work. Lucknow will be developed as an AI city, Kanpur will focus on drones and robotics, Prayagraj and Varanasi will create research and development hotspots while GautamBudh Nagar, which is already a developing data centre hotspot, will transform into an emerging tech and data centre hub.

### **Tourism and Hospitality**

Uttar Pradesh is renowned for its rich cultural heritage and historical landmarks. Cities like Agra, Varanasi, and Lucknow attract millions of tourists every year. The government will also focus on developing tourist destinations. Special tourism investment regions will be identified and developed, along with sites of spiritual tourism. Work will also be carried out on digitising tourist assets and routes. The government's focus on promoting tourism and improving infrastructure has given a significant boost to the hospitality sector. The hospitality industry, including hotels, restaurants, and travel agencies, plays a vital role in generating employment opportunities and driving economic growth.

### **Infrastructure Development: Catalyst for economic transformation**

#### **Transportation and connectivity**

Efficient transportation and connectivity infrastructure are vital for driving economic growth. Uttar Pradesh is investing in improving road networks, building new expressways, and expanding railway connectivity. These initiatives not only facilitate the movement of goods and people but also attract investment and promote trade and commerce.

#### **Power and energy infrastructure**

A Clean and quality power and energy infrastructure is crucial for industrial growth and development. Uttar Pradesh has been focusing on increasing power generation, improving distribution

networks, and promoting renewable energy sources. The state aims to provide uninterrupted and affordable power supply to meet the growing demands of industries and households.

### **Urban development and smart cities**

The development of urban areas and the creation of smart cities are key components of Uttar Pradesh's economic transformation. The government will work to accelerate urbanisation, which includes beautification and development of cities. Around 100 townships will be built, and the infrastructure for water, garbage and solid waste management will be increased and improved. Municipal performance awards and mobility planning will also be introduced.

As Uttar Pradesh continues to harness its economic potential, the state is poised to become a trillion-dollar economy, driving growth not only in India but also on a global scale. With its diverse sectors, abundant resources, and ambitious development plans, Uttar Pradesh is set to play a pivotal role in shaping India's economic future.

### **Government initiatives and policies for promoting investment**

#### **Make in India and Invest UP Campaign**

The government of Uttar Pradesh has been buzzing with excitement over the Make in India and Invest UP campaigns. These initiatives aim to attract both domestic and foreign investments by highlighting the state's potential as a manufacturing and business hub. With a focus on sectors like automobiles, textiles, pharmaceuticals, and information technology, Uttar Pradesh is rolling out the red carpet for investors looking to set up shop.

#### **Ease of doing business reforms**

In recent years, Uttar Pradesh has been working hard to improve its ease of doing business rankings. The state government has implemented various reforms to simplify procedures, reduce paperwork, and speed up approvals. From setting up single-window clearances to digitizing processes, they are leaving no stone unturned to make Uttar Pradesh a hassle-free place to do business.

#### **Sector-specific policies and incentives**

To further incentivize and boost investment, Uttar Pradesh has introduced sector-specific policies and incentives. These policies target key industries, offering benefits like tax exemptions, land allocation, and subsidized utilities. From agribusiness to renewable energy, the government is providing tailor-made support to attract investments in sectors aligned with the state's strengths.

### **Challenges and opportunities in Uttar Pradesh's economic growth**

#### **Infrastructural bottlenecks and solutions**

While Uttar Pradesh holds great economic potential, it also faces some challenges. One of the key areas that need improvement is infrastructure. The state needs better roads, transportation

networks, power supply, and logistics to support its growing economy. Addressing these infrastructural bottlenecks will not only enhance connectivity within the state but also attract investors who rely on efficient networks.

### **Skill development and human capital**

Another challenge Uttar Pradesh faces is the need for skilled labor and human capital. To fully leverage its economic potential, the state must invest in quality education and vocational training to equip its workforce with relevant skills. By focusing on skill development, Uttar Pradesh can create a strong and diverse talent pool that meets the requirements of various industries.

### **Environmental sustainability and resource management**

As Uttar Pradesh experiences economic growth, it must also prioritize environmental sustainability and resource management. Industries need to adopt eco-friendly practices, and the state must ensure the responsible use of resources to prevent degradation and depletion. By balancing economic development with environmental consciousness, Uttar Pradesh can ensure long-term prosperity.

### **Socio-economic impact of Uttar Pradesh's trillion-dollar economy**

#### **Employment generation and poverty alleviation**

The trillion-dollar economy of Uttar Pradesh has the potential to significantly impact employment generation and poverty alleviation. With increased investments and business opportunities, new jobs will be created across various sectors, providing livelihoods to the state's population. This economic growth can play a vital role in reducing poverty and improving the standard of living for the people of Uttar Pradesh.

#### **Income distribution and inequality**

However, while economic growth can be a catalyst for socio-economic development, it is essential to address income distribution and inequality. The government must ensure that the benefits of a trillion-dollar economy are not concentrated in the hands of a few. By implementing inclusive policies and social welfare programs, Uttar Pradesh can strive for a more equitable distribution of wealth.

#### **Education, healthcare, and social welfare**

The socio-economic impact of Uttar Pradesh's trillion-dollar economy should also be measured by its contribution to education, healthcare, and social welfare. The increased revenues can be channeled towards improving public services, building better schools and hospitals, and strengthening social welfare programs. By investing in these vital areas, Uttar Pradesh can build a brighter future for its citizens.

## **Future prospects and recommendations for sustainable development**

### **Potential for innovation and technology-driven growth**

Looking ahead, Uttar Pradesh has immense potential for innovation and technology-driven growth. By nurturing a supportive ecosystem for startups, fostering research and development, and promoting entrepreneurship, the state can embrace the digital revolution and become a hub for technological advancements. Leveraging technology will not only drive economic growth but also create opportunities for employment and innovation.

### **Public-private partnerships for balanced development**

For sustainable development, Uttar Pradesh needs to foster strong public-private partnerships. By collaborating with private entities, the government can leverage their expertise, resources, and innovation to accelerate growth and ensure balanced development across the state. This synergy will help create a conducive environment for investment, address infrastructure gaps, and provide better services to the people of Uttar Pradesh.

### **Strengthening governance and transparency**

To support sustainable development, Uttar Pradesh must focus on strengthening governance and ensuring transparency. By promoting accountability, reducing corruption, and streamlining administrative processes, the state can create a business-friendly environment and instill investor confidence. Good governance practices will not only attract investments but also improve the overall functioning of the government, benefiting the citizens of Uttar Pradesh.

In conclusion, Uttar Pradesh's journey towards becoming a trillion-dollar economy is a testament to its resilience, potential, and determination. With its diverse sectors, robust infrastructure, and supportive government policies, Uttar Pradesh has positioned itself as a key player in India's economic landscape. However, challenges remain, and it is crucial to address them effectively while seizing the abundant opportunities for growth. By leveraging innovation, fostering inclusive development, and promoting sustainable practices, Uttar Pradesh can continue to thrive and contribute significantly to India's overall economic progress. With careful planning and concerted efforts, Uttar Pradesh's trillion-dollar economy can serve as a catalyst for positive change, bringing prosperity and opportunities to its people and the nation as a whole.

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# Employment Status of Handicraft Industry in Uttar Pradesh

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## ABSTRACT

*The handicraft industry in Uttar Pradesh plays a pivotal role in the state's economy, contributing significantly to employment generation, particularly in rural areas. As one of the largest sectors in terms of employment, it supports artisans, weavers, and craftsmen, many of whom are part of marginalized communities. The state's rich cultural heritage in crafts such as carpets, brassware, textiles, and leather products continue to be recognized globally, ensuring steady demand for its products. Despite the large workforce, the employment status in the industry faces several challenges. Key issues include informal employment practices, lack of social security benefits, seasonal work fluctuations, and insufficient government support for modernizing tools and techniques. Moreover, competition from machine-made goods and the impact of global market trends have led to a decline in traditional crafts, affecting employment stability.*

*There are approximately 9,29,509 artisans situated in all the districts of Uttar Pradesh State. Some of them are registered and some of them are not registered (informal/unregistered). Registered Handicraft Industries contribution is measurable in the economy. Informal/Unregistered Handicraft Industries and their artisan's contribution is not being measured in the economy due to non-availability of data.*

*Government initiatives like the One District One Product (ODOP) scheme aim to revive and boost specific crafts from various districts, ensuring the preservation of traditional skills while creating new employment opportunities. Additionally, skill development programs, financial incentives, and market linkages are being strengthened to improve artisans' incomes and overall livelihoodsustainability. However, to fully harness the potential of this industry, there is a need for better infrastructure, enhanced marketing strategies, and stronger collaboration between stakeholders, including the private sector. Addressing these challenges could significantly improve the employment conditions and socioeconomic status of the artisans in Uttar Pradesh.*

**Keywords:** Handicraft Industry, Employment, ODOP, Uttar Pradesh Economy, Artisans

## Introduction

The handicraft industry in Uttar Pradesh (UP) holds a significant place in both the state's economy and India's cultural heritage. Known for its rich diversity in traditional crafts, including textiles,

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pottery, woodwork, metalwork, and leather goods, Uttar Pradesh has emerged as a hub for artisans and craftsmen. With its centuries-old traditions, the state is a key contributor to the country's handicraft exports, making it an important sector for employment generation, especially in rural areas. The employment landscape of the handicraft industry in Uttar Pradesh is characterized by a mix of small-scale, home-based artisans and organized sectors. This industry offers livelihood opportunities to millions, including marginalized groups such as women, rural workers, and minorities. Many of these artisans work in informal settings, often facing challenges like low wages, lack of formal recognition, and limited access to markets.

Uttar Pradesh has one of the largest concentrations of artisans in India. The state's handicraft sector employs over 2 million people, directly and indirectly, making it one of the largest sectors for employment generation in the state. These artisans specialize in crafts such as carpet weaving, pottery, textiles (e.g., Chikankari, Zari work, Banarasi silk), woodwork, metalwork, and leather goods. Many of these artisans are home-based workers or operate in small-scale, family-run units. A majority of the artisans in Uttar Pradesh come from rural areas, where handicrafts offer a vital source of non-agricultural employment. The industry helps alleviate poverty by providing jobs in regions where industrial development is minimal. Handicrafts also help to reduce rural-urban migration by generating employment opportunities within villages Uttar Pradesh Handicrafts Development and Marketing Corporation (2021).

Women form a significant part of the workforce in the handicraft industry, particularly in textile-related crafts like Chikankari (Lucknow), Zari work, and carpet weaving. These jobs offer women the flexibility to work from home or engage in community-based workshops, contributing to household income while balancing family responsibilities. In this way, the handicraft sector plays a key role in women's empowerment. A large portion of the workforce in the handicraft industry is engaged in the informal sector. Artisans often work without formal contracts, social security, or health benefits. Due to the informal nature of employment, workers face challenges like irregular incomes, exploitation by middlemen, and limited bargaining power. In addition, the lack of training and access to modern technology prevents many artisans from improving their skills or increasing their productivity.

Employment in the handicraft industry can be seasonal, especially for those involved in products that are in demand during specific times of the year (festivals, wedding seasons, export seasons). Artisans may face periods of underemployment or unemployment during off-peak times. Government Support for Employment: The government has implemented several initiatives to support employment in the handicraft sector, including the "One District, One Product" (ODOP) scheme. This initiative aims to promote region-specific crafts and provide artisans with better market access, skill development, and financial support. Additionally, programs like the Pradhan Mantri Mudra Yojana (PMMY) offer financial assistance to small and micro-entrepreneurs, including those in the handicraft sector. The international demand for Uttar Pradesh's handicraft products, especially carpets, textiles, and metalware, has created opportunities for employment in the export market. Bhadohi, for example, is known as the "Carpet City" of India and has generated thousands of jobs linked to global exports. However, artisans are often at the mercy of fluctuating global demand and market trends, which can impact their job security. The state and central governments, along with non-governmental

organizations, have launched skill development programs aimed at upskilling artisans to meet modern market demands. These initiatives seek to modernize traditional crafts without compromising their authenticity. However, a lack of widespread access to such training programs remains a challenge.

### **Employment Status of Handicraft Sector**

The employment status of the handicraft industry in Uttar Pradesh is characterized by vast potential for livelihood generation but also marred by challenges like informal employment, low wages, and lack of access to resources. Government initiatives, focused on skill development and market access, are crucial in helping artisans achieve better economic stability and growth. Strengthening these efforts and improving working conditions will further enhance the sector's role in generating sustainable employment in the state (Ministry of Textiles, Government of India, 2021).

The employment status of the handicraft industry in Uttar Pradesh (UP) has been the subject of several studies and reports over the years. These studies focus on aspects such as employment generation, socio-economic conditions of artisans, challenges faced by the workforce, and the impact of government policies. Below is a review of key literature related to this topic, providing an overview of the employment dynamics within the handicraft industry in Uttar Pradesh. Singh and Bansal (2015) examine the informal nature of employment in Uttar Pradesh's handicraft sector. They highlight that the majority of artisans in this sector are engaged without formal contracts, which leads to job insecurity, irregular income, and limited social protection. The authors also point out that despite the cultural and economic importance of handicrafts, artisans often struggle with poverty, low wages, and exploitation by intermediaries. They recommend improving access to markets and financial resources for artisans to stabilize employment and income levels. Sharma (2018) explores the role of the handicraft industry in rural employment generation. The study focuses on how traditional crafts provide non-agricultural employment, especially for marginalized communities such as women and minorities. The author emphasizes that while the industry offers significant employment opportunities, artisans often face challenges like low wages and lack of access to modern technology. Sharma calls for enhanced government interventions in skill development, improved market access, and increased financial support for artisans in rural areas.

Rastogi (2020) highlights the significant role of women in Uttar Pradesh's handicraft sector. Women artisans, particularly in textile crafts such as Chikankari and Zari work, form a substantial part of the workforce. The study shows how handicraft work provides women with an opportunity to earn income, often from home, which helps them balance work and household responsibilities. Despite this, women artisans face low pay, limited career growth, and social barriers. Rastogi advocates for stronger policies to promote gender equality in the handicraft sector, such as equal pay initiatives and targeted skill development programs. Khan (2021) analyzes the impact of government schemes such as the "One District, One Product" (ODOP) initiative on employment in Uttar Pradesh's handicraft sector. The study finds that ODOP and similar initiatives have had a positive impact on employment by promoting region-specific crafts and improving access to domestic and international markets. However, the study also notes that many artisans remain unaware of these initiatives or lack the resources to fully benefit from them. Khan suggests the need for better dissemination of information, along with more accessible financial and infrastructural support, to

maximize the benefits of government policies for employment generation. Mishra (2019) discusses the connection between the handicraft industry’s employment status and its role in global markets, focusing on regions like Bhadohi, which is known for carpet exports. The study examines how fluctuations in global demand affect employment stability and wages in the sector. While Uttar Pradesh’s handicrafts are in high demand globally, Mishra identifies key challenges such as competition from machine-made products, inadequate marketing, and dependence on middlemen. To address these issues, the author recommends greater support for direct export initiatives and digital marketing strategies that could help artisans secure better-paying jobs in the global marketplace. Nair and Prasad (2020) explore the connection between sustainable practices and employment in the handicraft sector. They argue that the use of eco-friendly materials and traditional production methods can create long-term employment opportunities while promoting sustainable development. The study highlights the potential of Uttar Pradesh’s handicraft industry to contribute to both employment generation and environmental sustainability, but it also points out the need for investment in sustainable raw materials and training for artisans.

**Analysis**

**Table -1: District wise Total Number of Handicraft in Uttar Pradesh**

District	Outside HH with fixed structure	Outside HH without fixed	Inside HH	Total	% of establishments outside HH with Fixed structure
01 - Saharanpur	2148	635	1450	4233	50.7
02 - Muzaffarnagar	1057	116	1640	2813	37.6
03 - Bijnor	1887	421	6789	9097	20.7
04 - Moradabad	1384	291	9684	11359	12.2
05 - Rampur	2819	560	10891	14270	19.8
06 -Jyotiba Phule Nagar	423	134	994	1551	27.3
07 - Meerut	1503	283	4191	5977	25.1
08 - Baghpat	281	29	546	856	32.8
09 - Ghaziabad	1007	201	2172	3380	29.8
10 -Gautam Buddha Nagar	244	13	225	482	50.6
11 -Bulandshahr	1160	609	5359	7128	16.3
12 -Aligarh	885	113	1763	2761	32.1
13 - Mahamaya Nagar	469	20	1596	2085	22.5
14 - Mathura	288	53	813	1154	25.0
15 - Agra	1403	464	4449	6316	22.2
16 - Firozabad	233	37	1020	1290	18.1

(Contd...)

17 - Mainpuri	362	49	423	834	43.4
18 -Budaun	431	300	4125	4856	8.9
19 - Bareilly	4226	1998	44973	51197	8.3
20 - Pilibhit	124	154	4637	4915	2.5
21 - Shahjahanpur	574	355	4835	5764	10.0
22 - Kheri	286	158	822	1266	22.6
23 - Sitapur	1158	424	5421	7003	16.5
24 - Hardoi	655	324	5326	6305	10.4
25 - Unnao	193	101	1761	2055	9.4
26 - Lucknow	1554	830	14844	17228	9.0
27 -Rae Bareli	194	187	510	891	21.8
28 -Farrukhabad	679	175	4313	5167	13.1
29 - Kannauj	341	45	1191	1577	21.6
30 - Etawah	204	104	1050	1358	15.0
31 - Auraiya	46	16	129	191	24.1
32 -Kanpur Dehat	136	26	203	365	37.3
33- Kanpur Nagar	733	294	1458	2485	29.5
34 - Jalaun	373	57	720	1150	32.4
35 - Jhansi	117	72	1425	1614	7.2
36 - Lalitpur	373	89	1541	2003	18.6
37 - Hamirpur	230	34	441	705	32.6
38 - Mahoba	135	43	485	663	20.4
39 -Banda	332	106	1324	1762	18.8
40- Chitrakoot	56	12	479	547	10.2
41 - Fatehpur	1006	181	2553	3740	26.9
42 - Pratapgarh	250	107	1068	1425	17.5
43 - Kaushambi	98	49	355	502	19.5
44 - Allahabad	1235	681	4295	6211	19.9
45 - Bara Banki	583	375	8907	9865	5.9
46 - Faizabad	228	74	376	678	33.6
47 - Ambedkar Nagar	258	69	903	1230	21.0
48 - Sultanpur	478	229	1904	2611	18.3
49 -Bahraich	118	70	268	456	25.9

(Contd...)

50 - Shrawasti	45	30	192	267	16.9
51 - Balrampur	200	80	349	629	31.8
52 - Gonda	256	75	271	602	42.5
53 -Siddharthnagar	359	190	767	1316	27.3
54 -Basti	278	94	347	719	38.7
55- Sant Kabir Nagar	87	33	496	616	14.1
56 - Mahrajanj	215	201	420	836	25.7
57 - Gorakhpur	909	366	1416	2691	33.8
58 - Kushinagar	267	357	526	1150	23.2
59 - Deoria	300	138	441	879	34.1
60 - Azamgarh	543	388	11381	12312	4.4
61 -Mau	1029	159	10276	11464	9.0
62- Ballia	166	76	287	529	31.4
63 - Jaunpur	1374	204	2779	4357	31.5
64 - Ghazipur	436	156	1865	2457	17.7
65 -Chandauli	266	61	2910	3237	8.2
66- Varanasi	1622	370	25021	27013	6.0
67 - Sant Ravidas Nagar (Bhadohi)	1563	322	5580	7465	20.9
68 - Mirzapur	1003	120	3981	5104	19.7
69 - Sonbhadra	64	15	211	290	22.1
70 - Etah	362	74	724	1160	31.2
71 - Kanshiram Nagar	650	74	809	1533	42.4
All Districts	46951	15350	247696	309997	15.1

**Source:** 6<sup>th</sup> Economic Census 2012-13

Table presents district wise handicraft enterprises in all district of Uttar Pradesh. 50.70 percent of establishments outside HH with Fixed structure found to be Saharanpur district which is the highest among the districts in the state. However, only 2.5 percent of establishments outside HH with Fixed structure found to be Pilibhit district which is the lowest among the all 71 districts.

**Table -2: District wise total number of persons employed in Handicraft / Handloom Establishments for all broad activity in Uttar Pradesh**

District	Outside HH with fixed structure	Outside HH without fixed structure / Inside HH	Total	% of establishments outside HH with Fixed structure
01 - Saharanpur	7235	4760	11995	60.3
02-Muzaffarnagar	2709	3543	6252	43.3
03 - Bijnor	5846	16285	22131	26.4
04 - Moradabad	7874	24085	31959	24.6
05 - Rampur	8121	23593	31714	25.6
06 -Jyotiba Phule Nagar	2154	2082	4236	50.8
07 - Meerut	5259	9713	14972	35.1
08 - Baghpat	1091	1081	2172	50.2
09 - Ghaziabad	2919	5158	8077	36.1
10 -Gautam Buddha Nagar	1958	532	2490	78.6
11 -Bulandshahr	2666	11909	14575	18.3
12 -Aligarh	2859	4498	7357	38.9
13 - Mahamaya Nagar	1485	5290	6775	21.9
14 - Mathura	843	1881	2724	30.9
15 - Agra	6079	13986	20065	30.3
16 - Firozabad	2520	3659	6179	40.8
17 - Mainpuri	648	854	1502	43.1
18 -Budaun	1053	10811	11864	8.9
19 - Bareilly	12737	110670	123407	10.3
20 - Pilibhit	380	9379	9759	3.9
21 - Shahjahanpur	1754	12380	14134	12.4
22 - Kheri	1620	1827	3447	47.0
23 - Sitapur	5069	12524	17593	28.8
24 - Hardoi	1878	15315	17193	10.9
25 - Unnao	433	4380	4813	9.0
26 - Lucknow	4944	36860	41804	11.8
27 -Rae Bareli	617	1202	1819	33.9
28 -Farrukhabad	3361	11250	14611	23.0
29 - Kannauj	787	2412	3199	24.6
30 - Etawah	741	2420	3161	23.4

(Contd...)

31 - Auraiya	76	245	321	23.7
32 -Kanpur Dehat	322	487	809	39.8
33- Kanpur Nagar	2818	3602	6420	43.9
34 - Jalaun	952	1277	2229	42.7
35 - Jhansi	203	2385	2588	7.8
36 - Lalitpur	803	2718	3521	22.8
37 - Hamirpur	456	784	1240	36.8
38 - Mahoba	278	923	1201	23.1
39 -Banda	720	2460	3180	22.6
40- Chitrakoot	117	802	919	12.7
41 - Fatehpur	2634	4590	7224	36.5
42 - Pratapgarh	562	1921	2483	22.6
43 - Kaushambi	413	679	1092	37.8
44 - Allahabad	2454	8863	11317	21.7
45 - Bara Banki	1621	22433	24054	6.7
46 - Faizabad	540	739	1279	42.2
47 - Ambedkar Nagar	740	2079	2819	26.3
48 - Sultanpur	1686	3850	5536	30.5
49 -Bahraich	458	717	1175	39.0
50 - Shrawasti	71	404	475	14.9
51 - Balrampur	489	764	1253	39.0
52 - Gonda	441	663	1104	39.9
53 -Siddharthnagar	949	1430	2379	39.9
54 -Basti	618	759	1377	44.9
55- Sant Kabir Nagar	265	1205	1470	18.0
56 - Mahrajanj	816	1027	1843	44.3
57 - Gorakhpur	3209	3126	6335	50.7
58 - Kushinagar	675	1470	2145	31.5
59 - Deoria	681	1006	1687	40.4
60 - Azamgarh	1489	28511	30000	5.0
61 -Mau	2931	25164	28095	10.4
62- Ballia	465	817	1282	36.3
63 - Jaunpur	3761	5657	9418	39.9
64 - Ghazipur	1220	3727	4947	24.7

(Contd...)

65 -Chandauli	868	6119	6987	12.4
66- Varanasi	5889	60820	66709	8.8
67- Sant Ravidas Nagar (Bhadohi)	19314	20523	39837	48.5
68 - Mirzapur	4655	9442	14097	33.0
69 - Sonbhadra	207	442	649	31.9
70 - Etah	1077	1707	2784	38.7
71 - Kanshiram Nagar	1729	1619	3348	51.6
All Districts	167312	602295	769607	21.7

Source: 6<sup>th</sup> Economic Census 2012-13

Table reveals district wise employment status of handicraft enterprises among all district of the Uttar Pradesh. In the Bareilly district total 123407 person employed in handicraft sector which is the highest among all districts. However, total 321 person person employed in Auraiya District which is the lowest among all districts in the State.

## Conclusion

The employment status of the handicraft industry in Uttar Pradesh reveals that this sector is a critical source of livelihood for millions, particularly in rural areas. However, the industry faces challenges such as informal employment, low wages, and limited access to technology and markets. Government initiatives like ODOP and skill development programs have made progress in addressing some of these issues, but more needs to be done to ensure fair wages, better working conditions, and sustainable growth. Future research should focus on evaluating the long-term impacts of these initiatives on employment and addressing the gaps in policy implementation.

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# Assessing Women Health and Educational Disparities in Uttarakhand through National Family Health Survey (N.F.H.S.)

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## ABSTRACT

*Uttarakhand, a mountainous state with challenging terrain and harsh climatic conditions, faces significant barriers to women's health and education, contributing to widespread disparities across its districts. The objective of this paper is to utilize data from the National Family Health Survey (NFHS) to analyze key indicators related to women's health, education, and empowerment in the state. By comparing the results from NFHS-4 (2015-16) and NFHS-5 (2019-21), the research evaluates the progress and setbacks in various socio-economic indicators such as women's access to healthcare, fertility rates, vaccination coverage, literacy levels, and health insurance enrolment across different regions.*

*The methodology involves a district-wise analysis of data to assess the extent of disparities in women's health and educational outcomes. Special focus is placed on women's access to reproductive health services, immunization, nutrition, and the role of education in improving their overall well-being. The study also highlights gaps in health insurance coverage and the participation of women in decision-making processes within households and communities.*

*The findings reveal substantial inter-district variations, especially between hilly and plain districts, with certain regions lagging behind in key health and educational indicators. The paper concludes with policy recommendations aimed at improving resource allocation, ensuring equitable access to healthcare, and strengthening educational initiatives for women in the state.*

**Keywords:** *NFHS, Healthcare, Education, Fertility rates, Immunization, Literacy levels, health insurance.*

## Introduction

Uttarakhand is a mountainous state with challenging terrain and harsh climatic conditions. The terrain of Uttarakhand state poses a formidable challenge to the people and makes basic amenities and reach of infrastructure difficult. This fundamental factor is responsible for the lack human development in the state. Basic amenities such as education and health care are severely impeded,

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particularly because of the difficult terrain (**Dreze et. al.**) and reach of public welfare schemes. This limits the pace of development in the state as well as leads to various economic and social disparities. More particularly significant barriers are associated with women's health and education who are very significant in driving the development of the household.

The National Family Health Survey (**NFHS-5**) is one of the largest household surveys in the world that provides comprehensive information about the state of population, health and nutrition of each state and district of India. This survey provides key data on the social and economic determinants of health. This information is essential for estimating the state of public health facilities as well as helps policy makers in efficient implementation of public welfare schemes. NFHS-5 was released in December 2021 and the data can be compared with previous 4 NFHS versions. The NFHS data plays a key role in directly assessing the state of public health, education, and women empowerment in the state (**Dadona et. al.**). Furthermore, the data can also help us correlate to unemployment, human development index (**Human Development Report**) and poverty alleviation in the state. It can also provide us with the ability to forecast the future economic growth based on the demographics and changing family behavior patterns in the state (**UK Vision-2018**). Furthermore, it can act to assess socio economic disparities.

In this paper, we particularly focus on women centric disparities in Uttarakhand such as Health and Education.

## Objectives

This study has the following objectives: -

- To analyse key indicators related to women's health and education.
- To assess the level of disparities under those indicators.
- To judge the performance of each district by comparing NFHS-4, NFHS-5 data.
- Provide conclusions with suggestions for policy makers.

## Methodology

The National Family Health Survey (NFHS-5) is the 5<sup>th</sup> edition of the NFHS series which provides data on health and nutrition in each state and district of India. The survey is undertaken under the stewardship of the Ministry of Health and Family Welfare (MoHFW) which designated the International Institute of Population Studies (IIPS) in Mumbai to conduct the survey.

The survey is based upon four survey questionnaires – household, woman's, man's, and biomarker. All women aged 15-49 and men aged 15-54 were selected for interviewing. In the household questionnaire, basic information was collected on all usual members of the household and visitors who stayed in the household the previous night, as well as socioeconomic characteristics of the household, water and sanitation, health insurance, and number of deaths in the household in the three years preceding the survey. Two versions of the woman's questionnaire were used in NFHS-5. The first version (district module), which collected information on women's characteristics, marriage, fertility, contraception, reproductive health, children's immunizations, treatment of

childhood illnesses, and nutrition was fielded in the entire sample of NFHS-5 households. Information on these topics is available at the district, state, and national levels. In the second version of the questionnaire (state module), four additional topics, namely, sexual behaviour, HIV/AIDS, husband's background and women's work, and domestic violence, were also included. This version was fielded in a subsample of NFHS households designed to provide information only at the state and national levels. The man's questionnaire covered the man's characteristics, marriage, number of children, contraception, fertility preferences, nutrition, sexual behaviour, attitudes towards gender roles, HIV/AIDS, and lifestyle. The biomarker questionnaire covered measurements of height, weight, and haemoglobin levels for children; height, weight, waist and hip circumference, haemoglobin levels, and finger-stick blood for additional CAB testing in a laboratory for women age 15-49 and men age 15-54; and blood pressure and random blood glucose for women and men age 15 years and over. Questionnaire information and biomarkers were collected only with informed consent from the respondents. (NFHS-5)

NFHS fieldwork for Uttarakhand was conducted in all 13 districts of the state. Due to the Covid-19 situation and the imposition of lockdown, NFHS fieldwork in phase 2 States/UTs was conducted in two parts. NFHS fieldwork for Uttarakhand was conducted from 7th January 2020 to 21st March 2020 prior to the lockdown and from 5th December 2020 to 31st March 2021 post lockdown by Research and Development Initiative (RDI) Pvt. Ltd. Information was gathered from 12,169 households, 13,280 women age 15-49 (including 1,192 women interviewed in PSUs in the state module), and 1,586 men age 15-54.

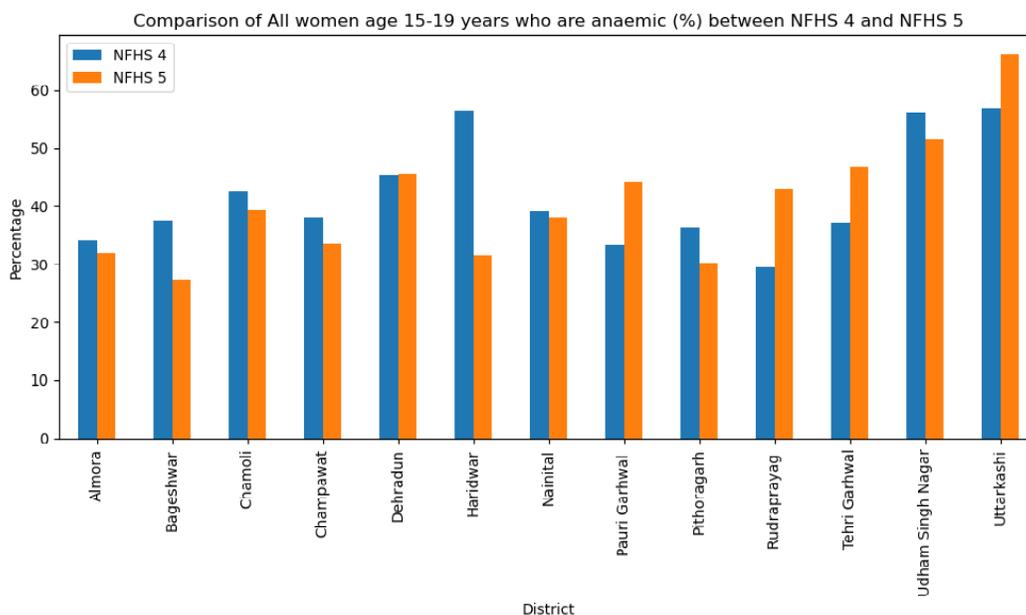
The relevant data pertaining to Uttarakhand from NFHS-5 as well as NFHS-4 is compiled and analyzed for different districts of the state. The data sets presented are specifically under the categories of women's health and education.

## Results and Discussion

Nutrition is an essential factor that determines the health and well-being of an individual. Anaemia is a problem of not having enough healthy red blood cells or haemoglobin to carry oxygen to the body's tissues. Haemoglobin is a protein found in red cells that carries oxygen from the lungs to all other organs in the body. Having anaemia can cause tiredness, weakness and shortness of breath. Many women in Uttarakhand can be anaemic due to insufficient nutrition, especially due to socio economic conditions. Anaemia at a young age or during formative years can not only cause physical disabilities but also mental issues.

**Figure 1** shows a comparison of anaemic girls in several districts of UK between NFHS-4 and NFHS-5. It can be seen that in several districts the percentage of anaemic girls has increased as compared to the past: such as Pauri, Rudraprayag, Tehri and Uttarkashi. Whereas considerable reduction can be observed in Bageshwar, Haridwar and Pithoragarh. Infact, Haridwar has noted the highest percentage reduction in anaemic women, so much that as per NFHS5 this district has the lowest percentage of anaemic women in the state. At the same time several disparities emerge when comparing hilly and plain districts. Hilly districts like Uttarkashi, Pauri, Rudraprayag and Tehri show a high percentage of anaemia. On the contrary Nainital, Haridwar, Dehradun show lower percentages. Still, this cannot be attributed to the geographic terrain of the districts but rather on the

type of nutrition, diet as well as access to nourishing food produce. Therefore, it is anomalous that Dehradun and Udham Singh Nagar show a consistent high percentage of anaemic women. Clearly this trend shows that even rich districts can suffer severely from the problem of anaemia.



**Figure 1: Comparison of women 15-19 who are anaemic.**

Improper food habits can also lead to obesity. This fact is highlighted if one considers the rise in obesity in the state, which is also very alarming. **Figure 2** shows the distribution of obese women in different districts. It is worrying that all districts are showing a substantial rise in obesity amongst women. The most alarming rise is observed in Tehri, Almora, Uttarkashi, Dehradun and Rudraprayag, where an almost two-fold increase is observed as compared to NFHS4. This alarming rise is clearly linked to overconsumption of food and inadequate physical movement. However, this is surprising as many of the districts are hilly and it should be expected that physical movement in the terrain should aid in physical fitness. This can be attributed to the ease of access of resources, roads and better connectivity in the hilly regions as well. While, many of these amenities have increased the diets of women may still would have remained the same as in the past, which could explain the current trends. Nevertheless, obesity is linked to several cardio vascular diseases as well as diabetes, therefore it can also be forecasted that in the future we may see an alarming rise in obesity linked diseases in the state.

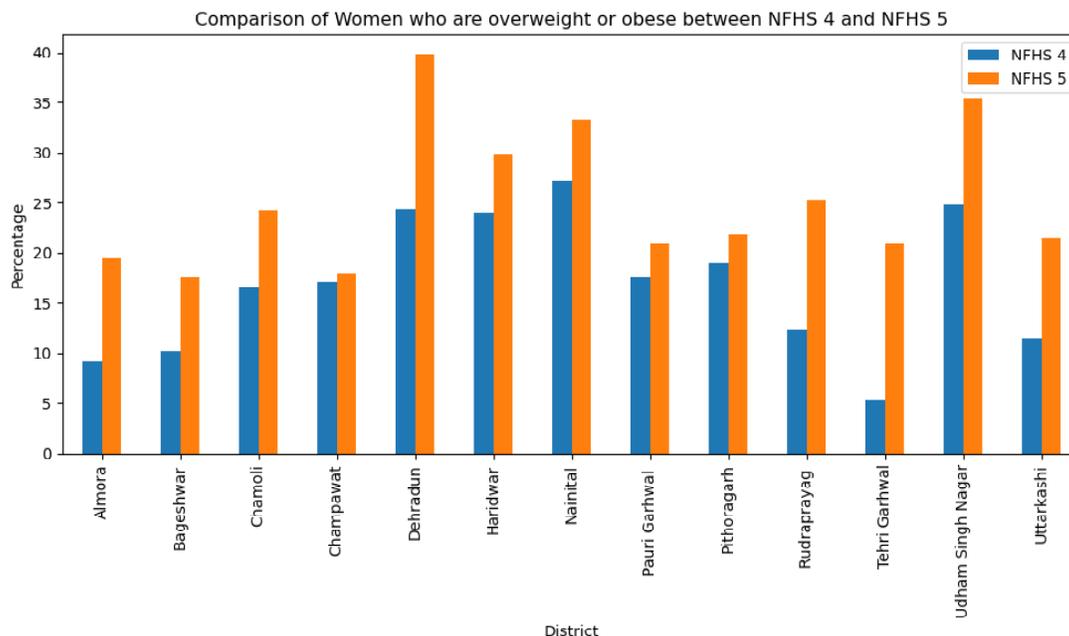


Figure 2: Comparison of women who are overweight or obese.

Apart from proper nutrition and food hygiene is an essential measure to assess the state of women development in Uttarakhand. While there are several parameters that can be linked to this, the most essential with respect to women is the hygiene during menstruation.

Comparison of Women age 15-24 years who use hygienic methods of protection during their menstrual period (%) between NFHS 4 and NFHS 5

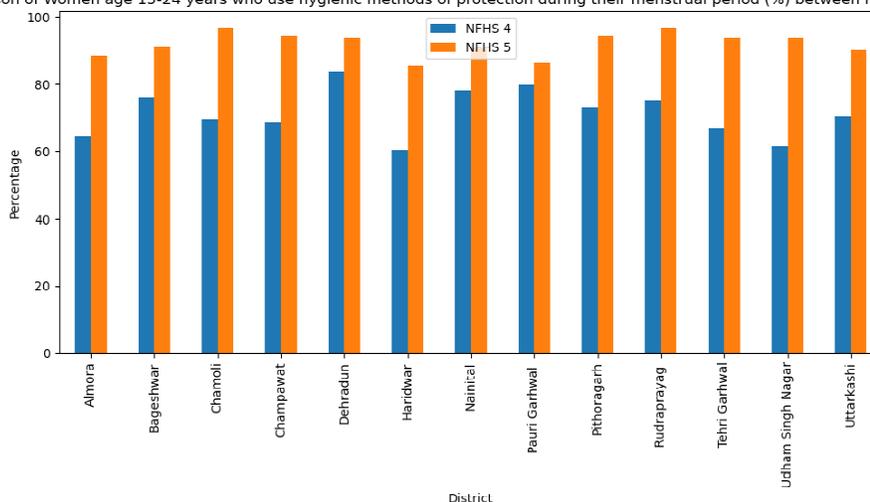
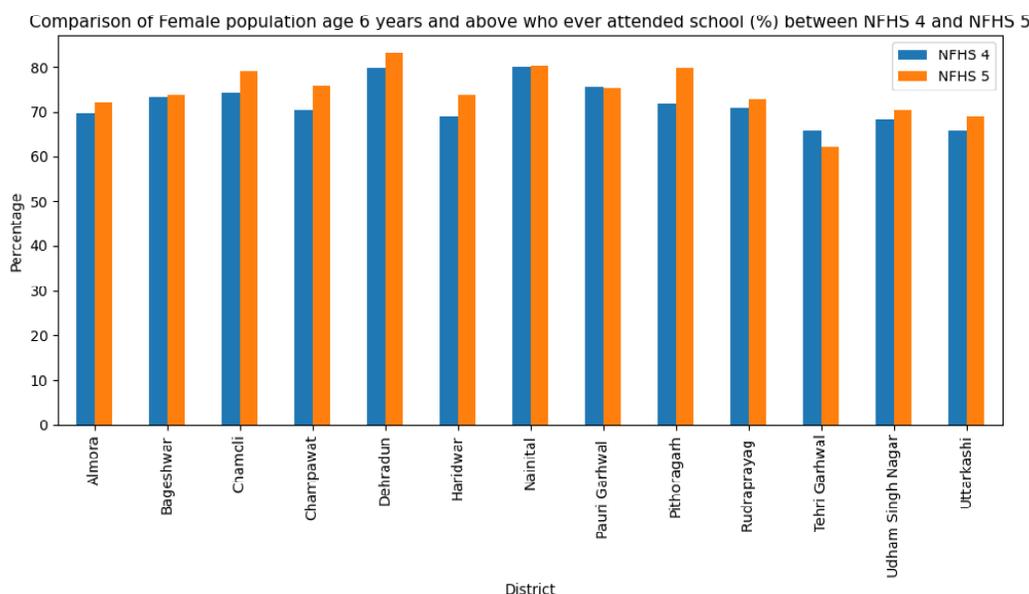


Figure 3: Comparison of women using hygienic methods during menstruation.

**Figure 3** shows the use of hygienic methods such as sanitary pads by women in different districts of Uttarakhand. Most districts have positively shown a rise in use of sanitary pads from the past, irrespective of hilly or plain. A drastic increase can be observed in Almora, Chamoli, Champawat, Haridwar, Tehri and Udham Singh Nagar. This indicates a rise in awareness amongst women about basic hygiene as well as ease of access to menstrual hygiene products. It is appreciable that all districts now show more than 80% women using such methods, which will contribute towards their well-being in the future.

Another major indicator of women's well-being is education. Education not only empowers women, but also gives them more opportunities and means of sustenance. **Figure 4** shows a comparison of females aged 6 years or above who have ever attended school. Clearly, the overall percentage of women going to school remains high, however, there is a huge scope of improvement. Compared to NFHS-4 every district has shown a rise in percentage except Tehri and Pauri. This is a major drawback for performance of the Tehri district in particular, which performs poorly even in the previously assessed indicators. On the other hand, Pithoragarh has shown a substantial increase in percentage compared to the past, indicating a positive impact of educational policies in the district. In terms of disparities Dehradun, Nainital, Pithoragarh and Nainital show a high percentage of female education. Whereas Almora, Tehri, Haridwar, Uttarkashi are the tail enders in performance. Clearly the fact that a hilly district showing a high education percentage as compared to a plains district such as Haridwar, shows that geography is not playing a role in this metric.



**Figure 4: Comparison of females age 6 years or above, who ever attended school**

Infact, many hill districts show an impressive performance that highlights the impact of education in the state. Furthermore, underperforming districts should be given special attention and separate studies must be done to understand the reasons for low performance.

The more direct consequence of education in women, is changes in marriage patterns. A better educated women is less likely to marry very early and aims for an equivalent career. Figure 5 shows this comparison of women who are married before the age of 18. As can be seen, all districts of Uttarakhand show a drastic decrease in early marriages in women. Most striking of all are Almora, Chamoli, Pithoragarh, Champawat and Uttarkashi.

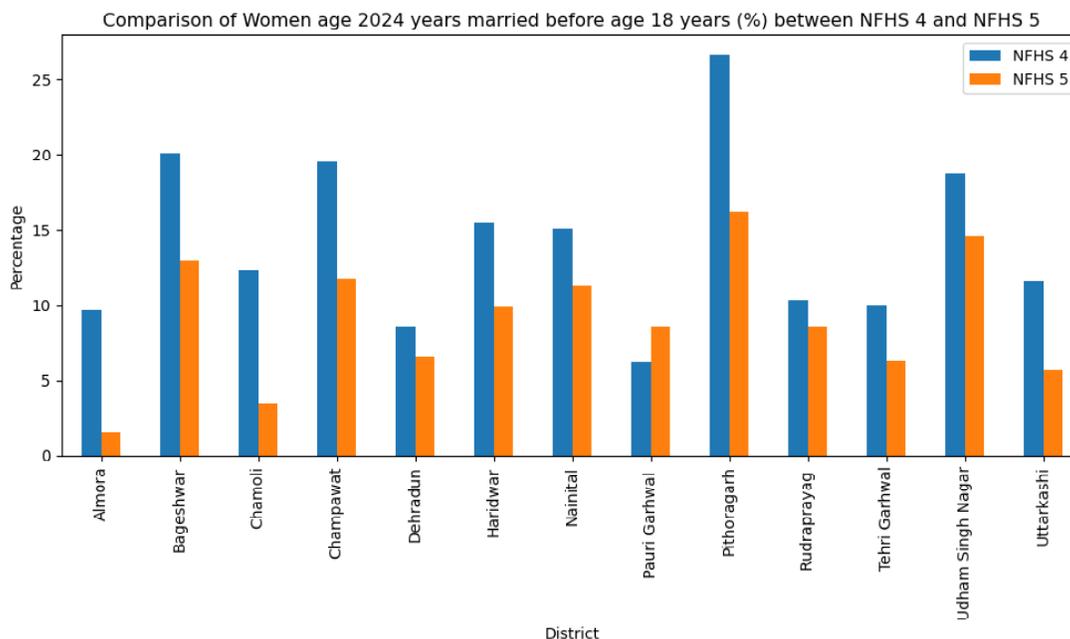


Figure 5: Comparison of women who are married before the age of 18 years.

The district of Pauri however underperforms once again in this metric. The sharp decline in early marriages is a welcome sign and may directly be attributed to women’s education which is a consistent observation. The impact of this observation is that the fertility rate can decline and less number of children per women are born. Nevertheless, the quality of life and well-being of a women is clearly getting better due to education and many other factors.

**Conclusion & Suggestions**

In conclusion, we have analysed and compared the data of NFHS-4 and NFHS-5 to assess the disparities in women’s health and education, in various districts in Uttarakhand. Various indicators of health and education show that many districts have performed very well as compared to the past. Moreover, we could not see an obvious hilly and plain district divide and therefore can conclude that in these indicators the geographical terrain does not play a role. Many districts in the state perform poorly on many different metrics which is alarming. We can also forecast the possibilities of health problems in poorly performing states.

We provide the following suggestions to policy makers:-

1. Reward the high performing districts for their performance and continue to incentivize the ground workers.
2. Conduct special studies on underperforming districts to assess why they behave in such a manner.
3. Identify trends in NFHS data in order to better predict and forecast the future trends for policy planning.
4. Based on health data as well as education allocate proper resources in a pragmatic manner, especially considering the impending obesity pandemic in the state.
5. Arrive at a disparity metric which can conclusively measure the change in human development in the districts.

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# Demographic Dividend and Educational Development in India

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## ABSTRACT

*The demographic dividend refers to the potential economic growth that can arise from shifts in a country's age structure, particularly when the working-age population is larger than the dependent population. India, since its independence in 1947, has undergone significant demographic changes, transitioning from high birth and death rates to lower ones, resulting in an increased share of the working-age population. Since gaining independence in 1947, India has made significant strides in developing its education system, recognizing that education is crucial for economic growth, social equality, and the empowerment of its citizens. Despite significant progress in expanding access to education since independence, there remain major challenges in ensuring equitable and high-quality education for all.*

*India, with its large and young population, is experiencing a demographic dividend, which can offer significant economic growth opportunities. However, to fully harness this potential, the development of human capital, primarily through education, is essential. This paper explores the relationship between the demographic dividend and educational development in India. It highlights the opportunities, challenges, and necessary policy interventions required to transform India's demographic advantage into sustainable economic development through enhanced educational infrastructure, equitable access to education, and skill development. Regarding educational development, India's Gross Enrolment Ratio (GER) has increased over the years, and the country's population growth has slowed down. The GER is the percentage of people aged 18–23 who are enrolled in higher education. India's population growth rate has been slowing down for decades, and by the early 2020s, it was estimated to be below the world average.*

**Keywords:** *Demographic Dividend, Education, Educational Development and Quality Education*

## I. Introduction

India's journey since independence has been characterized by profound social, economic, and demographic changes. As one of the most populous nations, India's demographic structure plays a critical role in shaping its development trajectory. After gaining independence in 1947, India faced

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high fertility and mortality rates, contributing to rapid population growth. Over the decades, these rates declined, leading to a demographic transition that has opened up opportunities for a demographic dividend.

India is currently in the midst of a demographic transition where the working-age population (15-64 years) is larger than the dependent population (children and elderly). This phase, known as the “demographic dividend,” presents a potential window of opportunity for accelerated economic growth. However, for India to capitalize on this dividend, the country must invest in human capital, particularly in education and skill development, to create a productive and capable workforce. This research aims to explore the role of educational development in unlocking India’s demographic dividend. It discusses how improvements in educational quality, access, and equity can lead to enhanced productivity, higher economic participation, and sustainable development. This paper will also discuss the policies implemented to harness this dividend and the potential challenges India faces in leveraging its demographic advantage for sustainable economic development.

## II. Understanding the Demographic Dividend:

The demographic dividend refers to the economic growth potential that result from shifts in a country’s population structure, particularly when a large proportion of the population enters the workforce. This potential arises because a higher ratio of workers to dependents can result in higher per capita income, increased savings, and investments in economic development.

India’s demographic dividend presents several economic opportunities:

1. **Economic Growth:** A growing workforce can increase productivity and economic output, leading to higher GDP growth.
2. **Higher Savings and Investment:** As the working-age population grows, household savings increase, leading to higher investments in infrastructure, education, and healthcare.
3. **Increased Consumption:** A younger workforce typically leads to increased consumption of goods and services, spurring economic activity.
4. **Innovation and Entrepreneurship:** A large, young population can contribute to innovation and entrepreneurship, particularly in sectors such as technology and services.

India’s demographic transition can be broadly divided into three phases:

1. **Pre-Independence Era (before 1947):** This phase was marked by high birth and death rates, resulting in slow population growth.
2. **Post-Independence (1947-1980):** The initial years post-independence saw continued high fertility rates but significant improvements in healthcare, leading to a decline in mortality rates. This resulted in a population explosion.
3. **1980s-Present:** From the 1980s onward, fertility rates began to decline, due to increased access to family planning, rising educational levels, especially among women, and urbanization. This shift has led to a demographic structure where the proportion of the working-age population (15-64 years) has steadily increased.

## Demographic Indicators

India's demographic indicators have improved significantly since independence:

1. **Fertility Rate:** India's total fertility rate (TFR) has declined from over 5.9 children per woman in the 1950s to 2.0 in 2020, approaching replacement level fertility.
2. **Life Expectancy:** Life expectancy at birth has increased from around 32 years in 1947 to over 69 years in 2020.
3. **Mortality Rates:** Infant mortality rates and maternal mortality rates have shown a sharp decline, contributing to improved health outcomes.
4. **Population Growth:** Despite the decline in fertility, India's population has continued to grow, primarily due to demographic momentum, and is projected to surpass China as the world's most populous country in the coming decade.

## III. Educational Development in India:

### Historical Overview of Educational Policies

Since independence, India has implemented several educational policies aimed at improving human capital, which is crucial for leveraging the demographic dividend. Key milestones include:

1. **University Education Commission (1948):** The first commission post-independence, which laid the foundation for higher education in India.
2. **National Policy on Education (1968, 1986, 2020):** These policies have sought to improve access to education, particularly at the primary and secondary levels, with the most recent policy (NEP 2020) focusing on holistic, inclusive, and multidisciplinary education.
3. **Sarva Shiksha Abhiyan (2001):** A flagship program to universalize primary education and improve the infrastructure and quality of schools across the country.

Human capital, defined by the skills, knowledge, and experience possessed by individuals, is central to economic development. In the context of the demographic dividend, the focus is on maximizing the potential of the young, working-age population. Education is the most critical factor in enhancing human capital, particularly when aligned with the needs of a modern, knowledge-based economy.

India has made significant strides in expanding educational access, particularly in primary education. The Right to Education Act (2009) ensures free and compulsory education for children aged 6-14 years. However, challenges remain, particularly in terms of quality, dropout rates, and educational outcomes at higher levels of education.

### Key Indicators of Educational Development

1. **Literacy Rate:** India's literacy rate has improved over the decades but still lags behind many developed and emerging economies. According to the 2011 Census, India's literacy rate was

- 74%, with significant disparities between urban and rural areas, and between genders.
2. **Gross Enrolment Ratios (GER):** The GER for primary education is high (over 95%), but it declines significantly for secondary and tertiary levels.
  3. **Dropout Rates:** Dropout rates are particularly high at the secondary level, due to factors such as economic necessity, social norms, and the perceived lack of relevance of the curriculum.
  4. **Quality of Education:** Studies such as the Annual Status of Education Report (ASER) show that even in primary education, learning outcomes are poor. Many students lack basic reading and arithmetic skills even after several years of schooling.

### Skill Development Initiatives

A critical component of harnessing the demographic dividend is the development of a skilled workforce. To address this, India has launched several skill development programs:

1. **National Skill Development Mission (2015):** Aims to train over 400 million people by 2022 in various vocational skills to meet the demands of a rapidly growing economy.
2. **Skill India Campaign:** Focuses on creating job-ready youth by providing vocational and technical training aligned with the needs of different industries.
3. **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** A scheme launched to provide industry-relevant skill training to youth, enabling them to secure employment in emerging sectors.

### IV. Educational Leverage and Demographic Dividend:

Gross Enrolment Ratio (GER) is a crucial indicator used to measure the level of participation in higher education within a given population. GER in Indian higher education system has tremendous improvement. The access to higher education is measured in terms of GER, which is a ratio of persons enrolled in higher education institutions to total population of the persons in the age group of 18 to 23 years. The Government of India aims to increase enrollment in higher education by 50% by 2035.

**Table: Relation between Gross Enrollment Ratio and Population Growth**

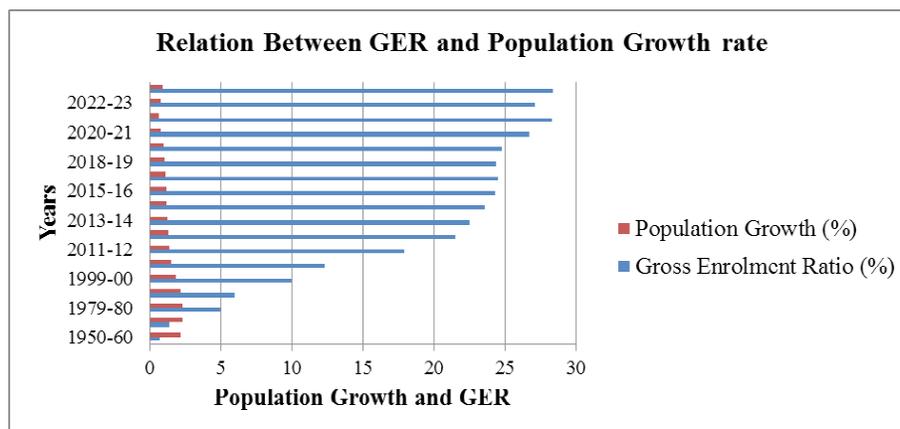
S. No.	Years	Gross Enrolment Ratio (%)	Population Growth (%)
1	1950-60	0.7	2.21
2	1960-61	1.4	2.33
3	1979-80	5	2.29
4	1989-90	6	2.16
5	1999-00	10	1.84
6	2006-07	12.3	1.54
7	2011-12	17.9	1.37
8	2012-13	21.5	1.31
9	2013-14	22.5	1.25

(Contd...)

10	2014-15	23.6	1.19
11	2015-16	24.3	1.19
12	2017-18	24.5	1.09
13	2018-19	24.4	1.03
14	2019-20	24.8	0.96
15	2020-21	26.7	0.80
16	2021-22	28.3	0.68
17	2022-23	27.1	0.81
18	2023-24	28.4	0.91

Source: Author own calculation from 12<sup>th</sup> FYP report (2012-17) and AIHES report

Diagram: Relation between Gross Enrollment Ratio and Population Growth



### 1-Quality versus Quantity in Education

To harness the demographic dividend, India must move beyond merely increasing enrolment and focus on improving the quality of education. This includes enhancing teacher training, curriculum relevance, use of technology, and fostering critical thinking skills in students.

### 2-Vocational and Skill-Based Education

One of the most significant challenges is aligning education with the needs of the labor market. India’s economy is undergoing structural changes, with sectors such as information technology, biotechnology, and services growing rapidly. Yet, the education system continues to be overly focused on theoretical knowledge, with little emphasis on vocational training and skill development. The government’s “Skill India” initiative, which aims to train 400 million people by 2022, is a step in the right direction but requires significant scaling and integration with mainstream education.

### 3-Equity in Education: Gender and Rural-Urban Divide

To fully realize the demographic dividend, India must address inequalities in access to education. Gender disparities, although improving, continue to limit the participation of women in the workforce. Moreover, rural populations often lack access to quality education, perpetuating cycles of poverty. Ensuring equitable access to quality education is crucial for creating an inclusive workforce that can drive sustained economic growth.

### V. Challenges of Educational Development in India:

1. **Quality of Education:** While access to education has improved significantly, the quality of education remains a concern, particularly in rural areas, where infrastructure is inadequate and teacher absenteeism is high.
2. **Mismatched Skills:** There is often disconnecting between the skills taught in educational institutions and the needs of the labor market, resulting in underemployment and unemployment among graduates.
3. **Gender and Social Inequality:** Educational and skill development outcomes vary significantly by gender and social background, with women and marginalized communities often having less access to quality education and training.
4. **Inadequate Infrastructure:** Many schools in rural areas lack basic infrastructure, including electricity, drinking water, and sanitation. Poor learning environments negatively impact student attendance and performance.
5. **Teacher Shortage and Training:** India faces a shortage of qualified teachers, especially in rural areas. Moreover, many teachers lack adequate training and resources, which hampers the quality of education delivered.
6. **Policy Implementation:** Although numerous policies and programs have been introduced to improve education, implementation remains a challenge due to bureaucratic inefficiencies, corruption, and lack of coordination among various stakeholders.
7. **Technology and Digital Divide:** The digital revolution has transformed education globally, but India faces a significant digital divide, particularly in rural areas. The COVID-19 pandemic highlighted these challenges, as many students were unable to access online education due to the lack of internet connectivity and digital devices.

### VI. Policy Implications and Recommendations:

#### Enhancing Job Creation

1. **Industrial Growth:** Focus on sectors such as manufacturing and services, which have the potential to create large-scale employment.
2. **Entrepreneurship Support:** Promote entrepreneurship through access to credit, training, and innovation hubs.

### **Improving Education and Skills**

1. **Quality Education:** Improve the quality of education through better infrastructure, teacher training, and curriculum reform.
2. **Vocational Training:** Align vocational training with market needs and integrate it into the formal education system to improve employability.

### **Promoting Gender Equality**

1. **Female Participation:** Implement policies to increase female labor force participation by providing child care, maternity benefits, and promoting gender equality in the workplace.

### **Enhancing Education Quality**

1. **Curriculum Reform:** Modernize the curriculum to make it more relevant to the needs of the 21st-century economy, focusing on skills such as problem-solving, creativity, and digital literacy.
2. **Teacher Training:** Invest in teacher training programs to improve pedagogical methods and ensure continuous professional development.

### **Strengthening Vocational Education**

1. **Integration of Skills Training:** Integrate vocational training and technical education into the school and college curricula to bridge the gap between education and employment.
2. **Public-Private Partnerships:** Encourage partnerships between educational institutions and industries to ensure that training is aligned with market needs.

### **Promoting Equity and Inclusivity**

1. **Focus on Girls' Education:** Implement targeted programs to increase female enrolment and retention at all levels of education.
2. **Rural Education Development:** Invest in infrastructure and digital connectivity in rural schools to reduce the urban-rural divide in educational outcomes.

### **Leveraging Technology**

1. **Digital Education:** Expand access to digital learning tools and platforms, particularly in rural and underserved areas. Initiatives like Digital India must focus on reducing the digital divide by improving access to internet and affordable devices.
2. **Online and Hybrid Learning Models:** Develop and promote hybrid learning models that combine online and in-person education, especially in higher education and skill development programs.

## VII. Conclusions

India's demographic dividend presents a unique opportunity for economic transformation, but this window of opportunity is not indefinite. To fully leverage the demographic dividend, India must address challenges in education, skill development, employment generation, and gender equality. Only through comprehensive and inclusive policies India can convert its demographic advantage into sustainable economic growth.

India stands at a critical juncture where its demographic dividend could potentially transform its economy and uplift millions from poverty. However, this opportunity can only be fully realized if the country invests in its human capital through a robust, inclusive, and quality-driven educational system. Addressing the challenges in the educational sector, including infrastructure, teacher quality, skill development, and digital access, is essential for converting the demographic advantage into sustainable economic growth. India's Gross Enrolment Ratio (GER) has increased over the years, and the country's population growth has slowed down. India's population growth rate has been slowing down for decades, and by the early 2020s, it was estimated to be below the world average.

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# Unpaid Work and Time Use Survey in Uttar Pradesh

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## ABSTRACT

*The Time Use Survey is part of a larger initiative to capture time use patterns across India, with Uttar Pradesh India's most populous state providing critical data for understanding regional variations in time use behavior. TUS measures how individuals, over the age of six, allocate their time among different activities in a 24-hour period. It categorizes time spent into economic and non-economic activities, covering paid work, unpaid work (such as domestic chores and caregiving), education, leisure, personal care, and other daily activities. The 2019 survey in Uttar Pradesh highlights significant gender disparities in time allocation, particularly in unpaid domestic and caregiving work. Women in the state spend a disproportionate amount of time on domestic chores, caregiving for children and elderly relatives, and other unpaid activities, which often go unrecognized in traditional economic measures. On average, women in Uttar Pradesh spend over five hours a day on household work, compared to less than one hour for men. This reflects entrenched gender roles that limit women's participation in the formal labor market and contribute to gender inequality in both time use and economic opportunity.*

*Time spent on paid economic activities in Uttar Pradesh also reveals important patterns. Men are predominantly engaged in paid employment, with average work hours ranging between 7-8 hours per day. In terms of age-specific time use, younger individuals (aged 6-14) spend a substantial portion of their time on education and related activities, although participation rates in educational activities are lower in rural areas compared to urban ones. This indicates disparities in access to education, particularly for girls, and underscores the need for policy interventions aimed at improving educational outcomes. The Time Use Survey 2019 in Uttar Pradesh provides a detailed understanding of how time is allocated across gender, age groups, and urban-rural divides. It highlights key areas for policy intervention aimed at promoting gender equality, improving access to education, and recognizing the economic contribution of unpaid work, all of which are essential for the state's socio-economic development.*

**Key Words:** *Unpaid Care Work, Time Use Survey 2019, Uttar Pradesh*

## Introduction

The Time Use Survey (TUS) 2019 in Uttar Pradesh is a pioneering initiative conducted by the Ministry of Statistics and Programme Implementation (MoSPI) as part of a nationwide effort to

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understand how individuals allocate their time across various activities in a typical day. Time Use Surveys, widely recognized as important tools for gathering data on non-market activities, provide a comprehensive look at both economic and non-economic activities that people engage in throughout the day. In particular, these surveys capture the time spent on unpaid domestic work, caregiving, education, leisure, and personal care—areas often overlooked in conventional economic measures.

Uttar Pradesh, the most populous state in India, offers a unique case study in time use patterns due to its vast population, diversity, and significant urban-rural divide. The TUS 2019 data from Uttar Pradesh helps policymakers and researchers understand the socio-economic dynamics of the state through the lens of time allocation. The survey aims to capture how men, women, and children spend their time on paid employment, unpaid household duties, education, and recreation, and how these patterns differ across demographic segments such as age, gender, and geographic location.

Moreover, the survey offers important insights into age-related time use patterns, particularly for children and adolescents who may spend their time on education or labor, and the elderly, who may allocate more time to personal care and social activities. The data collected on these different demographic groups provides a holistic picture of how time is managed across life stages and socio-economic strata. The TUS 2019 in Uttar Pradesh provides an invaluable dataset for understanding the daily lives of its residents. It highlights the invisible, yet critical, contributions of unpaid labor, offers insights into the socio-economic challenges of rural households, and underscores the importance of time allocation for sustainable development and gender equality.

### **Review of Literature on Time Use Surveys in India**

Time Use Surveys in India have emerged as a critical tool for understanding how individuals allocate their time across various activities, especially in the context of gender disparities and socio-economic factors. The National Sample Survey Office (NSSO) has conducted several rounds of TUS, with the 2019 survey being particularly significant in capturing detailed data on time spent in paid and unpaid work. Gender Disparities Research has consistently highlighted gender disparities in time allocation. Chaudhary and Gupta (2020) found that women in India engage in significantly more unpaid domestic work compared to men, often leading to implications for their economic participation and well-being. The study emphasizes the need for policies that recognize and redistribute unpaid labor. Rural vs. Urban Dynamics Studies by Kumar and Singh (2021) examined differences in time use patterns between rural and urban populations. Their findings indicate that rural women spend more time on agricultural work and domestic chores, whereas urban women have greater access to formal employment opportunities. This disparity underscores the impact of location on gender roles and economic participation.

Economic Contributions of Unpaid Work Research by Nussbaum (2019) highlights the significant economic contributions of unpaid work, arguing for its inclusion in national accounting measures. The study uses data from TUS to illustrate how unpaid labor, particularly by women, supports both households and the economy at large. The NSSO's TUS findings were utilized by Basu and Dutta (2020) to explore the intersection of time use and child care. Their analysis showed that women's time is disproportionately consumed by caregiving activities, affecting their ability to engage in paid employment. The study calls for enhanced support systems for working mothers. Literature

emphasizes the need for policy interventions based on TUS data. Chakraborty et al. (2021) argue that understanding time use patterns is essential for designing effective labor and welfare policies that promote gender equality and enhance economic development in India. The Time Use Survey 2019 has opened new avenues for research. Studies like those by Reddy and Raghavan (2022) have begun to utilize this data to assess the implications of the COVID-19 pandemic on time use patterns, particularly in relation to work-from-home arrangements and shifts in domestic responsibilities.

### Objectives

1. To analyze comprehensive data on how individuals allocate their time across different activities over a 24-hour period.
2. To capture gender-based differences in time allocation, especially in unpaid work.
3. To analyze data on unpaid work, including household chores, caregiving, and voluntary work, which are typically excluded from traditional economic measures like GDP.
4. To analyze the urban-rural divide in time use patterns in Uttar Pradesh .
5. To understand how time is spent on education, employment, caregiving, and personal care throughout the different stages of life.
6. To suggest policies related to gender equality, labor market participation, work-life balance, social welfare programs, and infrastructure development aimed at reducing time burdens in rural areas.

### Methodology

The TUS 2019 was a cross-sectional survey conducted by the National Statistical Office (NSO) under the Ministry of Statistics and Programme Implementation (MoSPI). The survey was designed to capture the time spent on different activities by individuals aged 6 years and above, across both rural and urban areas. The study covered all districts in Uttar Pradesh, including both urban and rural regions, ensuring representation of various socio-economic groups across the state. A stratified multi-stage sampling design was employed, where Uttar Pradesh was divided into strata based on rural and urban classifications. A statistically significant number of households were selected to ensure reliable estimates at both the state levels. The sample included individuals from different socio-economic backgrounds, age groups, and genders.

The survey classified activities into three broad categories, following the International Classification of Activities for Time-Use Statistics (ICATUS) 2016, which is standardized to allow comparability with other countries:

- **Primary activities:** This included both economic and non-economic activities. Economic activities refer to time spent on work that generates income (such as paid employment, business, or farming). Non-economic activities refer to unpaid domestic work, caregiving, volunteer work, etc.
- **Secondary activities:** Time spent on secondary or passive activities, such as simultaneous care work while engaging in primary activities.

- **Personal care activities:** These include activities related to personal care and self-maintenance, such as eating, sleeping, and other essential activities.

## Data Analysis

The Time Use Survey (TUS) 2019 in Uttar Pradesh provides several data tables that categorize time use across different demographics, focusing on gender, age groups, rural-urban divisions, and economic status. Below are some key tables commonly provided in TUS reports that help analyze the findings for Uttar Pradesh.

### 1. Time Spent on Economic Activities by Gender and Location

This table captures the average time spent by individuals on economic (paid) work, categorized by gender and rural-urban location. Women, especially in rural areas, continue to spend more time on unpaid domestic work and caregiving than men, limiting their participation in the formal economy.

Activity	Men (Urban)	Women (Urban)	Men (Rural)	Women (Rural)
<b>Paid Employment</b>	6.5 hours	2.5 hours	7.0 hours	3.0 hours
<b>Unpaid Economic Work</b>	0.8 hours	1.2 hours	1.0 hours	2.5 hours
<b>Unpaid Domestic Work</b>	1.0 hours	5.5 hours	0.8 hours	6.0 hours
<b>Caregiving Activities</b>	0.5 hours	2.8 hours	0.6 hours	3.2 hours
<b>Leisure Activities</b>	2.8 hours	1.7 hours	3.0 hours	1.3 hours

### 2. Time Spent on Domestic and Caregiving Work by Gender

This table highlights the disparity in unpaid domestic and caregiving work between men and women. People in rural areas, especially women, spend more time on agricultural and informal economic activities, while urban residents have more time for leisure and formal economic activities.

Type of Work	Men	Women	Total (Avg)
<b>Unpaid Domestic Work</b>	0.9 hours	5.8 hours	3.35 hours
<b>Caregiving (Children)</b>	0.4 hours	2.5 hours	1.45 hours
<b>Caregiving (Elderly)</b>	0.3 hours	0.8 hours	0.55 hours

### 3. Time Spent on Education by Age and Gender

This table focuses on time spent on educational activities by children, adolescents, and young adults in different age groups, with a breakdown by gender.

Age Group	Boys	Girls	Total (Avg)
<b>6-10 years</b>	5.3 hours	5.0 hours	5.15 hours
<b>11-15 years</b>	6.0 hours	5.6 hours	5.8 hours
<b>16-18 years</b>	5.2 hours	4.5 hours	4.85 hours

#### 4. Time Spent on Leisure and Social Activities by Gender

This table presents data on time spent on leisure, socializing, and entertainment by men and women in rural and urban areas. Rural girls, especially in the 6-14 years age group, spend less time on education compared to boys, suggesting a need for policy interventions to bridge this gap.

Activity	Men (Urban)	Women (Urban)	Men (Rural)	Women (Rural)
Leisure and Socializing	2.5 hours	1.6 hours	2.8 hours	1.2 hours
Watching TV/Entertainment	1.5 hours	1.3 hours	1.4 hours	1.0 hours

#### 5. Time Spent on Personal Care and Maintenance

This table captures time spent on personal care activities such as eating, sleeping, and personal hygiene. Time spent on personal care is relatively consistent across genders, but rural women still face constraints due to higher unpaid work burdens.

Activity	Men	Women	Total (Avg)
Sleeping	8.0 hours	7.8 hours	7.9 hours
Eating and Drinking	1.5 hours	1.4 hours	1.45 hours
Personal Hygiene	0.7 hours	0.7 hours	0.7 hours

#### 6. Time Use for Economic and Non-Economic Activities (Urban vs. Rural)

This table breaks down time use across economic and non-economic activities for both rural and urban populations. Men generally have more leisure time than women, reflecting the unequal distribution of household responsibilities, which affects women’s well-being.

Activity	Urban (Avg)	Rural (Avg)	Total (Avg)
Economic Activities	5.0 hours	6.2 hours	5.6 hours
Non-Economic Activities	3.2 hours	4.8 hours	4.0 hours
Unpaid Domestic Work	2.7 hours	4.5 hours	3.6 hours

#### 7. Time Spent on Work, Education, and Caregiving by Age Group

This table breaks down time use patterns by age group, providing insights into how individuals across different life stages allocate their time to work, education, and caregiving.

Age Group	Work	Education	Caregiving
6-14 years	0.2 hours	5.5 hours	0.3 hours
15-24 years	4.2 hours	4.0 hours	0.6 hours
25-59 years	7.0 hours	0.5 hours	2.2 hours
60+ years	2.8 hours	0.0 hours	1.5 hours

The Time Use Survey (TUS) 2019 in Uttar Pradesh provides a comprehensive look at how individuals in the state allocate their time across various activities, including economic, domestic, caregiving, and personal care activities. The survey offers critical insights into the socio-economic

dynamics of time use, with a particular focus on gender disparities, rural-urban differences, and the value of unpaid work. Below is an analysis of the key findings and trends observed in the TUS 2019 data for Uttar Pradesh.

**1. One of the most striking findings from the TUS 2019 in Uttar Pradesh is the significant gender disparity in time use, particularly in unpaid work:**

- **Unpaid Domestic Work:** Women in Uttar Pradesh spend a disproportionate amount of time on unpaid domestic chores compared to men. On average, women spend over 5 hours per day on household tasks such as cooking, cleaning, and caregiving, while men spend less than 1 hour on these activities. This gender gap highlights the traditional roles assigned to women, which limit their time for paid employment and leisure.
- **Paid Work:** Men, on the other hand, spend considerably more time in paid employment. On average, men in Uttar Pradesh spend around 7-8 hours per day on economic activities, compared to 3-4 hours for women. The gendered division of labor means that women often engage in informal or part-time work, which may go unrecognized in formal economic statistics.
- **Caregiving:** Women also take on the bulk of caregiving responsibilities, including caring for children, the elderly, and sick family members. This unpaid caregiving work limits women's ability to participate in the labor market and perpetuates gender inequality in both time use and economic opportunities.

**2. The survey reveals notable differences in time use patterns between rural and urban populations in Uttar Pradesh:**

- **Economic Activities:** In rural areas, a significant portion of the population is engaged in agricultural work and other informal sector jobs. Men and women in rural areas often combine domestic responsibilities with farming or other labor-intensive activities, leading to long working hours, especially for women. Urban residents, by contrast, tend to have more structured time for economic activities, often in formal employment sectors.
- **Access to Education and Services:** Urban residents tend to spend more time on education and leisure activities due to better access to infrastructure, educational institutions, and recreational facilities. Rural residents, especially women, have fewer opportunities for leisure and self-development, as a larger share of their time is spent on domestic and agricultural tasks.
- **Personal Care:** Time spent on personal care activities, such as sleeping, eating, and health-related tasks, is relatively consistent between rural and urban areas. However, women in rural areas may have less time for personal care due to the higher burden of unpaid work.

**3. A significant portion of the population, particularly women, is involved in unpaid domestic and caregiving work. The TUS 2019 quantifies this work, which is often invisible in traditional economic measures. By assigning a value to the hours spent on unpaid work, policymakers can better understand the economic contribution of household and caregiving labor:**

- The survey estimates that if the time spent on unpaid domestic work by women were monetized, it would represent a substantial contribution to the economy. However, this contribution is

- largely unrecognized in GDP calculations, leading to an underestimation of women's role in the economy.
4. **The TUS 2019 also provides insights into time use patterns across different age groups in Uttar Pradesh:**
    - Children and Adolescents (6-14 years): A significant amount of time for younger individuals is spent on education-related activities. However, rural children, especially girls, are more likely to be involved in household chores or informal work, reducing the time available for education and recreation.
    - Working-Age Adults (15-59 years): This group shows the largest disparity in time use between men and women, particularly in terms of economic activities and unpaid domestic work. Working-age women in rural areas often juggle multiple roles, including farming, household work, and caregiving.
    - Elderly (60+ years): Older individuals spend more time on personal care and leisure activities, though elderly women may continue to be engaged in caregiving for grandchildren or other family members.
  5. **The TUS 2019 data shows that time spent on leisure and personal care activities, such as watching television, socializing, and resting, varies significantly by gender and location:**
    - Leisure Time: Men in Uttar Pradesh tend to have more leisure time than women, as the latter are often burdened with domestic and caregiving tasks. This difference in leisure time has implications for overall well-being and mental health, especially for women.
    - Personal Care: Time for essential activities like sleeping, eating, and hygiene is relatively similar across genders, though women's personal care time may be interrupted by household duties.
  6. **The findings from the TUS 2019 in Uttar Pradesh have important policy implications:**
    - Gender Equality: The gender gap in unpaid work calls for policies that promote shared household responsibilities, such as gender-sensitive labor laws, affordable childcare, and support for women's participation in the labor force.
    - Rural Development: The time burdens faced by rural residents, especially women, highlight the need for infrastructure improvements, such as better access to water, electricity, and transportation, to reduce the time spent on household tasks and increase opportunities for economic participation.
    - Education and Leisure: Ensuring equal access to education for girls and boys, particularly in rural areas, and creating more opportunities for leisure and personal development can improve overall well-being and promote balanced time use.

## Conclusion

The data from the Time Use Survey 2019 in Uttar Pradesh reveals significant differences in time use patterns based on gender, age, and location. The gender disparity in unpaid domestic and

caregiving work, the rural-urban divide in economic activities, and the limited time for education and leisure for women, particularly in rural areas, highlight critical issues that need policy attention. By recognizing and addressing these gaps, the survey provides a strong foundation for designing more equitable and inclusive policies aimed at improving the quality of life for all citizens in Uttar Pradesh.

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# Factors affecting on Employment Inequality in Sagar Block of Madhya Pradesh: Using Cobb Douglas Regression Model

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## ABSTRACT

*Present Research paper is based on primary data of Sagar district of Madhya Pradesh. Employment model with suitable explanatory variables has been run by using multivariate regression analysis. Cobb Douglas (Double Log) Mathematical Equation has been employed. The Log-Linear Regression was finalized at second stage running the production function after running the linear Equation and Cobb Douglas equation at first stage applied. The value of regression coefficient (R<sup>2</sup>) and correlation coefficients of explanatory variables were positive associated with dependent variables and Statistically Significant at 1%, 5% and 10 % level of significance. The conclusion of the paper is that in case of urban areas explanatory variable i.e. Working Force of the family and Wage Rate were positive statistically significant at 1% & 10% level of significance respectively. But in case of Rural areas, it has been observed that independent variables, annual income (Rs.) of the family and Wage rate were statistically significant at 1% level of Significance.*

**Keywords:** Economic Model, Employment Inequality, Multivariate Regression, Cobb Douglas, Logarithmic.

## Introduction

“Employment” opportunities and its status decides the economic strength and potential of growth of a country. To provide reasonable and sufficient employment to the work force is a big challenge before both developed and developing countries. Basically, education, level of skill, stage of growth, Govt. Policies and most importantly, the work culture decides the level and quality of employment. The issue of “jobless Growth” and “Employment Inequality “ are also two big challenges before the policy makers. The jobless growth issue is related with modern growth pattern while employment inequality is related with uneven growth, level and quality of education, huge population and limited opportunities especially in rural areas. The issue of reasonable and sustainable employment at both

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rural and urban sector is the key factor of sustainable and inclusive growth and therefore the issue selected for study is important.

The area of the problem selected for study is Sagar City of Madhya Pradesh. Madhya Pradesh is an economically backward state. The agriculture sector contributed about 35% during 2019-20 in state GDP which shows that the state has limited opportunities of employment as the CMIE data released in May, 2020 shows that total 27.5 % population of the state is unemployed. The other data reveals that the share of employment by sub sectors i.e. primary sector is 54.9% as against national data i.e. 46.1%. The primary sector includes agriculture, forestry and fishing (54.7%), mining and quarrying (0.2%). While the share of employments in Secondary sector (22%) in the state while it is 21.8% at national level. The share of employment in tertiary sector was 23.1% in the state as against 32% at national level. The overall unemployment rate in Madhya Pradesh was 13% which was lower than the National average i.e. 18%. (Source: Annual Employment-unemployment survey, GoI).

To examine the employment inequality of the district, Cobb Douglas equations were used because the value of regression coefficient was more than 85% and the relations of explanatory variables with dependent variables in majorities were positively associated and statistically significant at desire level of significance. This is the criterion for selection of Cobb Douglas equations which was best fit in the present situations as compared to linear and semi-log equations. The Cobb Douglas equation says that beta's values increased by 1%, the value of correlation coefficients of respective explanatory variable indicated the increment in the dependent variable in percentage.

Regression and Correlation Analysis have been used for testing the effects of explanatory variables on the dependent variable (employment inequality) which were suggested the contribution of different independent variables in the rising the value of dependent variables. An employment inequality model was prepared as a economic model and tested with the help of different mathematical models i.e. Linear, Cobb Douglas.

**Objectives:** The following two objectives

- To study the social parameters of employment inequality among sample households.
- To analyse the employment inequality models by regression analysis.

## Research Methodology

**Nature of the study:** The present study is analytical in nature and based on primary data. The data were related to details of family education, available labour force per households, total working force, Actual working days and family members engaged in different occupations were collected from 360 samples households belong to towns (320) and Villages (40).

**Sample Design:** Multistage sampling technique was used for selection of the Sagar block, towns, villages. The sample households were selected through random sampling method i.e. lottery, number tables and sequences. Data were collected by survey method and selected households interviewed.

- At first stage- District was selected
- At second stage- Block was selected

- At third stage – Villages/Towns was selected
- At fourth stage- sample households was selected

**Classifications of economic group:** The sample households classified into four categories. The income levels were varying house to house as per the income sources or occupational patterns of the family. Income categories were divided according to the Annual Income of sample households i.e. Lower (upto Rs.150000), Semi-Lower (Rs.150001-250000), Medium (Rs.250001-350000), Higher (Rich) (Rs.350001- above).The limit of lower income group was decided based on ‘income earn by both categories i.e. skilled and Non-skilled,wage rates prescribed time to time, by Government of India/ state GoI.(Data is available in the office of labour Commissioner of the district).

**Data Collection:**The survey was carried out in Sagar block of Sagar district of Madhya Pradesh. Three villages namely- Pathariya Jat, Chitaura, and Patkui were selected .Total 40 sampled households were interviewed for the purpose of the study. So far as counterpart there was three towns namely- Sagar cantt, Macronia and Dhana were chosen for detailed survey of 320 respondents.

**Statistical Tools:**The Multivariable regression analysis was used with Logarithm transformation of data was employed for testing employment inequality with the help of dependent and independent variables. An employment days per households per year were taking into account as dependent variable which was influenced by the explanatory variable i.e. Annual Income of the households, Education score of the family members, percentage of working force per household, and wage rate per day as explanatory variables..

**Parameters of Analysis:**In present manuscript Primary data with related to Sample households, Education Level of the family members and Average Family size, working force per households per year, Unemployed days per households, occupation pattern of household were shown in details.

**Education Standard:** The family members having different level education, along with higher technical education levels and its equivalent attained by the person determine what is knowledge known as educational standard.

**Family Size:** The number of normally resident members of a household is its size. The normally resident members will include temporary stay-away 15 days but exclude temporary visitors or guests. Even though the determination of the actual composition of a household will be left to the judgement of the head of the household.

**Occupation:** The nature of economic activity performed by a person is his/ her occupation. For classifying the occupation of a person, the ‘National Classification of Occupations (NCO 1968)’ is used. In an occupational classification, the grouping of occupations has to be based on the fundamental criterion of ‘type of work performed’. All the workers engaged in same type of work are grouped together irrespective of the industrial classification of establishments where they are engaged.

**Employment Inequality model:** The family members engaged in the any type of work in a month/year on payment basis in any in private or public department was consider as a employment the conditions directly or indirectly responsible for job of the members was consider as employment model.

**EMP days (Y)= Number of days employed in the years per household:** Total working days devoted by family members during the year were estimated and consider as a independent variable who has contribution in the dependent variable.

**InF (x<sub>1</sub>)=Annual Income of the family in rupees:** The annual income of the family earned from skilled,semi-skilled, casual, and contractual jobs during the year are taken into account and consider as a dependent variable in present model.

**Wff (x<sub>2</sub>)=Percent of working force in the family:** working force is the actual work done by the family members during the years was estimated in percentage from the available working force in the households and consider as independent variable in the model.

**EduF (x<sub>3</sub>)=Education Score of the family:** Education score is the basic indicator of family development. The education level of different members was differing each other i.e. illiterate to post graduate. The weightage of individual education level 1- illiterate, 2- primary, 3- junior, 4- high school, 5- Intermediate, 6- graduation, 7-PG and above, were given and multiplied by number of family members each education standard and total together for estimation of education score of the family. Which was taken as a independent variable.

**WR (x<sub>4</sub>)=Wage rate of the labor Per day (in Rs.):**The amount of rupees getting by different labour against their physical work in a day in the prevailing survey area was taking into account and consider as a independent variable for present analysis.

**Sample Size:** Total 360 respondents were target of the study which was selected from sagar block of sagar district and interviewed during 2019-2020.

**Significance of the study (Data Use):**The result of proposed research work would be useful for formulating the National, State and district development policy for removing the employment inequality and generating employment opportunities. The suggested policies may be helpful for reducing the poverty level of the different stages of the study areas. The results of the Employment inequalities, poverty level of the selected income groups would be useful for society welfare. Comparative analysis would be done among the Town and village of sagar Block of Sagar district of Madhya Pradesh. Finally, work may be useful for Central, State, and Local government of the study areas to improve the issues concerned with employment Inequality, of the sample selected areas to reduce the households poverty level poorer.

### **Interpretation of Beta's in Log –Level Multivariate Regression**

An economic model employment inequality was analysed with the help of log-linear model considering four explanatory variables i.e. Annual Income of family(Rs), Education Score, Available Working force in family, Wage Rate of labour per day, were analysed. Results shows that all four explanatory variables together having effects 94% on regression coefficient. This is indicating that the explanatory variables were closely associated with the value of regression coefficient. It is further seen from the table that among explanatory variables the value of correlation coefficients of Annual Income of the family (0.50%), Working force (4.74%), and Wage rate(4.18%) were associated with depended variables i.e. employment inequality. This indicated that if the level of above variables

increased by 1%, the change in dependent variables, correlation coefficient increased by 0.5%, 4.74%, and 4.18% of annual income, working force, and wage Rate variables respectively.

It is further noticed that among above four variables Annual Income of family and Working force were found positive relations with dependent variables and statistically significant at 1% level of significance. While, wage rate was contributed their relations at 10% level of significance. However, the education score of the family has positive relations with employment inequality but non-significant zone. This indicated that education has positive relation with employment generation but not the level of desire of the requirement. This may be due to lack of job option according to the education level of the family members or sample households. It is well known facts that town areas have better job opportunity to the educated persons in both the sector private as well as public while, rural areas are lack behind of such facilities.

So, it has been seen in the case of Towns correlation coefficient (94%) Education score have no effects on Employed days. It seems education has no effects on Employed days. Annual Income of the family, Working force and wage rate have positive effects on dependent variable (Employed days),

### Employment Inequality – Village Case

#### Multiple Variable Regression Result in logarithmic transformation

II) Employment -Inequality Model

Emp (Y)=Employed days per households per year (*Dependent Variable*)

IncF (X1)= family Annual Income (Rs) (*Independent variable*)

Edu(X2) =Education Score of Family (*Independent variable*)

PWF(X3)= Percentage of working force per day per year(*Independent variable*)

WR(X4)= wage rate per day (Rs) (*Independent variable*)

#### Cobb Douglas Equation

$$Y = f( X_1^{b_1}, X_2^{b_2}, \dots, X_n^{b_n} )$$

Y= Dependent variable, X1, X2, X3, x4....Xn explanatory variable

b1, b2, ....bn are the correlation coefficients of respective explanatory variables (in terms of percentage)

#### Log Form of Cobb Douglas Equation,

$$\text{Log (EMP days)} = \beta_0 + \beta_1 \text{ log (IncF)} + \beta_2 \text{ log (Edu)} + \beta_3 \text{ log (WF)} + \beta_4 \text{ log (WR)} + \epsilon$$

**ANOVA Result (Village)**

	Degree of Freedom df	Intercept	Annual Income	Total education Score	% of Working Force	Wage Rate per day	Table Value			R2
Regression	4	-2.898 (0.753)	0.580*** (0.064)	0.045 (0.115)	0.223 (0.250)	0.927*** (0.165)	10%- 1.64	5%-1.96	1%-2.588	0.7739
Residual	35									
Total	39									

Figures in Parenthesis indicated Standard error; \*\*\* Significance level at 1%, \*\* Significance level at 5%, \* Significance level at 10%

**Interpreting Double log Multivariate Regression Estimated Results**

$$\text{Log (EMP days)} = \beta_0 + \beta_1 \log (\text{IncF}) + \beta_2 \log (\text{EduF}) + \beta_3 \log (\text{WFf}) + \beta_4 \log (\text{WR}) + \epsilon$$

$$\text{Log (EMP days)} = (-2.89) + 0.58 (\text{IncF}) + (0.04) (\text{Edu}) + 0.22 (\text{WF}) + 0.92 (\text{WR}) + \epsilon$$

In order to interpret these results

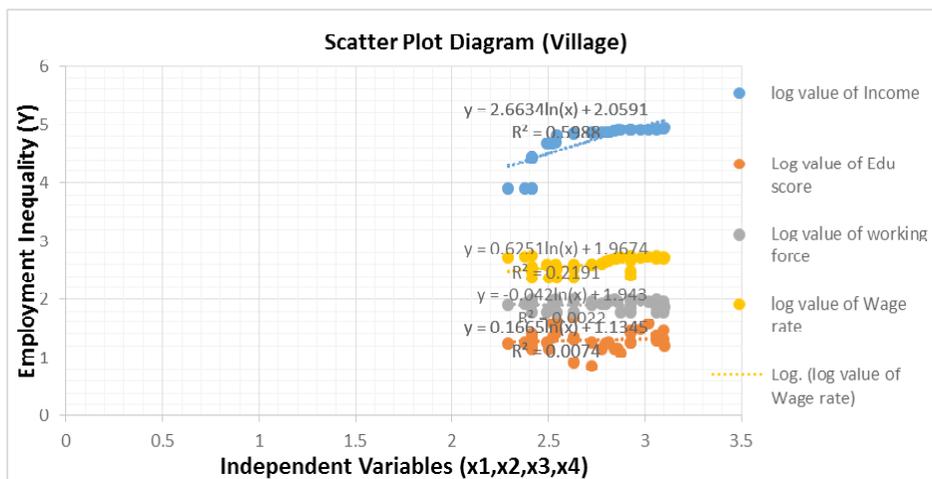
- Gauss Markov Assumptions hold
- Regression Coefficients estimate is Statistically Highly Significant i.e.  $R^2$  0.94 (Practically Significant)
- We hold all other Independent Variable Constant

$$\left(\frac{d}{d}\right) \text{ Annual Income of the family) } \mathbf{\text{Log (EMP days)}} + \left(\frac{d}{d}\right) \text{IncF) } \mathbf{\text{Log (EMP days)}} = \hat{\alpha}_0 (\text{Intercept}) + \hat{\alpha}_1 \log (\text{EMP days}) + \beta_2 \log (\text{EduF}) + \beta_3 \log (\text{WFf}) + \beta_4 \log (\text{WR})$$

$$= d \text{ EMP days} / \text{EMP days} = d \text{ IncF} / \text{IncF} + d \text{ WR} / \text{WR} * \beta_1 (\text{Correlation Coefficient})$$

$$== 100 * d \text{ EMP days} / \text{EMP days} = 100 * d \text{ IncF} / \text{IncF} \beta_1 + 100 * d \text{ WR} / \text{WR} * \beta_4$$

$$= \% \Delta \text{ EMP days} = \% \Delta \text{ IncF} \beta_1 + \% d \text{ WR} * \beta_4 (\text{Correlation Coefficient})$$



### Interpretation of Beta, & Four in Log –Level Regression

The regression coefficient of rural area was estimated 77 % in case of employment inequality models. This indicated that the explanatory variables jointly have 77% effects on employment inequality. It is further seen from the estimates that annual income and wage rates have positive contributions with dependent variables and statistically significant at 1% of level of significance. This indicated that if the value of mentioned variables increased by 1% each the value of correlation coefficient of respective explanatory variables increased by 0.580% and 0.927% shows the increment effects in dependent variable by the related variables. However, other two variables were positive associated with dependent variable but non-significant level of significance.

The contribution of other two variables were negligible association with employment inequality levels. This may be attributed that education and work force have a minor role in the employment generation in the study area may be due to poor quality of education and unhealthy work force available in the study area. Therefore, their contribution was not up to the desire level. These conditions are required to rectified the situations in the study areas and suitable measure please may be initiated by both local administrative bodies, politicians, planners, policy makers and other authorities like NGOs who will contributes for improving quality educations and good helper to young workers.

### Conclusion

The study result reveals that employment inequality exists in the Sagar block due to lack of industrial development. The study results related to the reasons of employment inequality, it reveals that the four variables i.e. Annual Income of family and Working force were found positive relations with dependent variables and statistically significant at 1% level of significance. While, wage rate was contributed their relations at 10% level of significance. However, the education score of the family has positive relations with employment inequality but non-significant zone. The education has positive relation with employment generation but not the level of desire of the requirement. This may be due to lack of job opportunities according to the education level of the sampled households. It is well known facts that town areas have better job opportunity to the educated persons in both private and public while rural areas are lacking behind to provide jobs.

The positive trend of education was observed with the advancement of economic category i.e. class I to Class IV 3.29 % to 27.11% respectively. This may be attributed better economic conditions and education facilities including interest of the family members in higher educations.

In case of occupation pattern and number of occupations at the households, it was observed that majority have double source of income in case of town i.e.58%. In case of triple source of income dairy +business + private job was only single combinations. This indicates that lesser sample households have the condition triple source of income. This may be due to higher investment in the combination of triple source of income as compared to others.

In the pool situation, higher percentage of working days per households per year was observed 78% in Economic class III category. While lower percentage(66%) was seen in class I. This also true in case of towns and villages of same category of sample households. The recent amendments

in three laws related to agriculture sector and the New Education Policy introduced by the Central Government has created hope that in future, these two reforms will help to improve employment inequality in the region.

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# Examining Socio-Economic Disparities in Healthcare Access: A Case Study of Uttar Pradesh

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## ABSTRACT

*We will have been a nation for 100 years by 2047. According to GDP, India currently is the fifth-largest economy in the world. By 2027, we estimate India's GDP to be worth \$5 trillion. In spite of its 75 years of independence, numerous accomplishments, and significant economic expansion in recent times, India continues to lag behind and struggle to match the world's top economies in the healthcare sector. It is ranked 66 in global health security index 2021.*

*Numerous inefficiencies exist in India's public health system, including disparities in access to healthcare between urban and rural areas, inadequate infrastructure in certain areas, a scarcity of medical professionals, insufficient funding, and challenges in providing healthcare to a sizable and diverse population. Even if there are more and more millionaires and billionaires in the country rising, the lowest quintile still lacks access to essential healthcare amenities.*

*The developed nations of the world like the USA, Italy etc. have a healthy population not because of its wealth, but rather because of its well-being and a strong public healthcare system.*

*The Indian healthcare system is divided into three tiers: primary, secondary, and tertiary. Primary healthcare is deemed to be the most crucial factor in ensuring healthcare facilities at the initial level. However, the research indicates that at this level, there exist a variety of disparities. To ensure that everyone has an equal access to primary healthcare, which would support the services being provided at the secondary and tertiary level and ultimately ensure a robust healthcare system at the state level, the government may play a crucial role. The study primarily focuses on the preparedness of Uttar Pradesh's healthcare system and identifies significant obstacles to the provision of high-quality services.*

**Keywords:** Healthcare, Inequalities, Economic growth, Innovation, Primary healthcare.

## Introduction

India's health sector has always presented major challenges to policy makers by demanding increased budgetary expenditure every year in proportion to the desired outcomes for a healthy

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nation. Experts have accepted the fact that there is a strong relationship between economic growth and better health and it is a two-way relationship. A population with major health problems can never be a part of the growth process of the nation. On the other hand, a nation surrounded by health problems can adversely affect the country's development goals. The Millennium Development Goals and later the Sustainable Development Goals included this and the integrated health goals in their agenda. Have done. Having signed the Sustainable Development Goals, India now has the responsibility to formulate and implement its policies to achieve those goals. There is a need to set health priorities. With our development policies it is much more important and needed to work in this area. Our policy makers understood this and initiated several health related programs in the past, which have been extremely successful. Our vaccination programmes, especially the globally acclaimed pulse polio, have reduced infant and maternal mortality rates and we have almost won the battle against the once deadly smallpox. Financing healthcare is a key component of providing health care in the world. Financing healthcare is a key component of providing healthcare. In India, the government largely operates its own large public healthcare system. Yet a large portion of population must seek medical care outside the system. Healthcare has become one of the most expensive services for any person from the middle and lower classes. Therefore, the government needs to put more efforts to improve primary health care. The challenges of healthcare for tribals, women, adolescents and youth from north eastern regions are different from those of the general population. Health services in tribal areas require a different approach, which can be region specific and sensitive to the tribals, in which participation and empowerment of the local population can be fully ensured and the lack of knowledge and behavior change can be addressed. To bridge the gap, health literacy and communication can be made a major and strategic medium. Similarly, the different health needs of men and women are important for the welfare of the nation. To ensure the justice for men and women in the country, it is necessary to eliminate malnutrition among women, especially pregnant women and children. When a large section of the population remains undernourished, the economic development of the country is definitely affected. The need of the hour is to intensify primary health services and the skilled medical professionals need to add to the workforce. Primary level healthcare needs to be improved. India's primary healthcare system plays a crucial role in addressing the diverse health challenges across the country, aiming to make healthcare accessible and affordable for all citizens. However, challenges such as uneven distribution of resources and infrastructure gaps persist in some regions. A nation with healthy people will be able to contribute to and achieve its development goals and make India stronger and more vibrant.

### **About Uttar Pradesh:-**

Uttar Pradesh is the most populous state of India with approx 24.14 crore population. As per NITI AAYOG state health index Uttar Pradesh secured last position in the category of larger states. There are a variety of disparities found in the health care system of Uttar Pradesh. The western part of Uttar Pradesh is healthier and wealthier than the Central part, Bundelkhand region and Eastern UP. The health amenities in UP are in a better position but not accessible and affordable. Eastern Uttar Pradesh is suffering from many problems in which disparities in health care services are one of the biggest challenges in this region. During monsoon the eastern part of Uttar Pradesh is inundated and makes it tough for the population to access the existing services. Access to healthcare services

is the major problem among so many problems of the healthcare system. Socio-economic inequalities seep into the health sector and disproportionately affect health outcomes of marginalized communities. The western part of Uttar Pradesh is socioeconomically stronger than the Eastern part of the state and Bundelkhand is also in a better position than the Eastern part of the state .The districts of Eastern Uttar Pradesh are suffering with low health outcomes and poor health development.

The overall performance of Eastern Uttar Pradesh in terms of health attainment is pitiable. ‘INDIA INEQUALITY REPORT 2021 -India’s unequal healthcare story’ says that, “the general category is better off than SCs and STs, Hindus are better off than Muslims, the rich are better off than poor,men are better off than women and the urban population is better off than rural population”when it comes to healthcare access and on health indicators.. Social and economic inequalities are the major barriers which are affecting access to health services and are one of the major factors responsible for overall economic development of the state.

**Table 1: UP in comparison to India**

Indicators	Uttar Pradesh	India
infant mortality rate(per live births)	50.4	35.2
Under five mortality rate(per 1000 live births)	59.8	41.9
All children aged 6-23 months who are fed a healthy diet (%)	6.1	11.3
Children under 5 years who are stunted (height-for age)	39.7	35.5
Mothers who consume iron folic acid for at least 100 days during their pregnancies (%)	22.3	44.1

**Source:** National Family Health Survey (NFHS 5)

**Findings:-** The National Family Health Survey (NFHS) 5 data for Uttar Pradesh and a few other states was released by the government on November 24, 2021. The data shows the situation of people’s health in the state.The percentage of children under five years who are severely wasted has increased in UP from 6% in 2015-16 to 7.3% in 2020-21. The percentage of children aged 6-59 months who are anemic has also increased from 63% to 66% over the same period.Although the indicators on stunted and wasted children show marginal improvements, a recent response from the Women & Child Development Ministry to an RTI query from *The Hindu* notes that UP is home to nearly 1.86 lakh malnourished children.Data for UP also shows an increase in the percentage of anemic women aged 15- 19 years. The prevalence of obesity has also increased in 2020-21 as compared to 2015-16 with the proportion of obese people (in all categories - men, women and children) increasing substantially in UP.In comparison to India’s average, UP remains a laggard state in many of the important health indicators. Table 1 below shows some of these indicators in which UP has fared poorly than the national average.Although there is a decline in IMR in UP as compared to NFHS 4 data, but looking at the India average, UP severely underperforms. It is a matter of serious concern that in UP, nearly 50 children die per 1000 live births. For India, on an

average, this figure is 35. The latest data shows that not only has India missed the target, but UP fares much poorly. Similarly, U5MR is much higher in UP as compared to India. In UP, nearly 60 children per 1000 live births die below five years of age; for India this figure is about 42. The NHP targets reducing U5MR to 23 by 2025, but clearly the current levels are dissatisfactory. The indicators of malnutrition are alarming in the northern state as well. There are about two stunted children in every five children (under five years of age) in UP (40%). The share of wasted children (under five years of age) in UP stands at 17%. A study by Jean Dreze and Vipul Paikra shows that in states such as UP, where the health services are already in a poor condition in normal times, the period of lockdowns during 2020 witnessed a collapse of these services. They studied the Health Management Information System data and compared the April-May 2020 average as a ratio of the January-February 2020 average, and also the April-May 2020 average as a ratio of the April-May 2019 average. In UP, there has been a deterioration in some key indicators such as child wasting and anemia over the years. The improvement in others has been rather slow over the past five years (between NFHS 4 and 5). The data shows that Uttar Pradesh is not performing well in healthcare due to several inequalities found in the region. Women and children are the most affected and primary healthcare could be an approach to reduce the inequality and provide necessary healthcare to all.

### Way forward:-

There is a talk everywhere about the demographic dividend of India but it is also a matter of concern that either this young population could take the country to the top or it could be a burden. One of the most important factors to make young population productive is providing them with best health facilities. As the paper is concerned, there are disparities found in the access to healthcare services. So various steps need to be taken in this direction. Increase funding for healthcare infrastructure, ensuring a well equipped and accessible network of primary health centers, hospitals and clinics, strengthen training programs, skilled healthcare professionals, addressing the shortage of skilled personnel, especially in rural areas. Embracing digital health solutions to enhance healthcare delivery, telemedicine, electronic health records and data analytics for better resource allocation, encouraging collaborations between the government and private sector to improve efficiency, resource utilization, and expand healthcare access. A comprehensive and collaborative effort involving government, healthcare professionals, communities, and the private sector can contribute to significant improvements in India's healthcare system.

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# A Financial Approach to Urban Development: The Case of Municipal Fiscal Efficiency in Uttar Pradesh

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## ABSTRACT

*Local governments are crucial in India's governance, with the 73rd and 74th Constitutional Amendments (1992) institutionalizing local governance to improve service delivery. The 74th Amendment Act empowered Urban Local Bodies (ULBs) to drive urban development. Uttar Pradesh, home to 11.9% of India's urban population, places municipal finance at the heart of urban progress. This paper examines the finances of Municipal Corporations (MCs) in Uttar Pradesh from 2012-13 to 2020-21, assessing their fiscal efficiency and spending patterns. The analysis shows that while own-source income (tax and non-tax) increased, its share in total income remains consistently low, with government transfers dominating MC revenues. Fiscal autonomy is limited, and revenue growth, especially in tax collections, remains unsatisfactory. Most expenditures are financed by state and central government transfers rather than own revenues. On the expenditure side, revenue spending far outweighs capital expenditure, indicating low asset and infrastructure investment. Public works expenditure improved, but spending on public health and education significantly declined, reflecting deteriorating expenditure quality. Fiscal inefficiency persists, with key indicators showing weak financial management. The paper recommends innovative financing mechanisms, enhanced accountability, and increased government transfers to meet growing expenditure needs. It also suggests creating consolidated local government data to support further research on municipal finances.*

**Keywords:** urban local bodies, municipal finance, fiscal efficiency, expenditure quality.

**JEL Classification:** R510, H750, H770

## 1. INTRODUCTION

Over recent decades, significant governance reforms have emerged in both developed and developing economies to enhance public service delivery and support development. Factors such as

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dissatisfaction with centralized systems, a transition from state-controlled to market economies, and the need for economic, social, and political diversification have driven these changes (M. Govinda Rao, 2011). The restructuring seeks to improve resource allocation, governance, and economic growth while addressing poverty and empowering marginalized communities (M. Govinda Rao, 2000). A crucial aspect of these reforms is the devolution of decision-making powers from central to sub-national governments, encompassing both fiscal and political authority (Vazquez, 2011). Unlike mere de-concentration, decentralization includes political, administrative, and fiscal dimensions (Vazquez, 2016).

In India, the 73rd and 74th Constitutional Amendment Acts of 1992 marked a significant advance in decentralization by granting constitutional status to local self-governments, establishing a three-tier structure for rural (Panchayats) and urban (Municipalities) governance. Local governments, especially urban local bodies (ULBs), play a critical role in providing public goods and services. As urbanization strains infrastructure, effective municipal finance has become increasingly vital (Mohanty et al., 2007). The fiscal capacity of local governments significantly impacts their ability to meet development goals and address urban poverty (Mona Serageldin, 2008).

India has 4,906 ULBs, with Uttar Pradesh hosting 763—16% of the total and housing 11.9% of the urban population. Municipal finance in Uttar Pradesh is crucial for urban development, with 17 municipal corporations managing essential services, including clean water, roads, drainage, and sanitation.

The 74<sup>th</sup> Constitutional Amendment Act (1992) and the Uttar Pradesh Municipal Corporations Act (1959) have specified various sources of revenue as well as expenditure responsibilities for these Municipal Corporations-

### **1.1 Sources of Revenue**

- a) Own Source Revenue: Tax revenue and non-tax revenue.
- b) External revenue sources: Government Transfers and Grants

### **1.2. Expenditure Responsibilities and Functions**

The 74<sup>th</sup> Amendment Act has laid down a list of 18 functions to be devolved to Urban Local Bodies in order to decentralize powers and functions, as of March 2016, the government of Uttar Pradesh devolved 13 functions to the ULBs, out of which 8 functions are performed completely by ULBs and 5 are shared between ULBs and various government agencies.

#### **1.2.1. Functions performed only by the ULBs:**

- i. Water supply for domestic, industrial and commercial purposes.
- ii. Public health, sanitation, conservancy and solid waste management.
- iii. Provision of urban amenities and facilities such as parks, gardens and play grounds.
- iv. Burials and burial grounds, cremation and cremation grounds.

- v. Cattle ponds and prevention of cruelty to animals.
- vi. Vital statistics including registration of births and deaths.
- vii. Public amenities including street lighting, parking lots, bus stops etc.
- viii. Regulation of slaughter houses and tanneries.

### 1.2.2. Functions shared between ULBs and government agencies:

- i. Urban planning including town planning.
- ii. Regulation of land use and construction of buildings.
- iii. Promotion of cultural, educational and aesthetic aspects.
- iv. Planning for economic and social development.
- v. Roads and bridges.

Local governments, due to their proximity and understanding of local needs, are well-positioned to provide public goods and services (Oates, 1972). This paper evaluates the finances of municipal corporations in Uttar Pradesh, focusing on their revenue collection and expenditures. A key finding is their heavy reliance on state and central government grants to meet spending obligations, indicating dependency on external support.

## 2. Review of Literature

**Wallace E. Oates (1972)** introduced the concept of decentralization, advocating for delegating responsibilities to local governments for better service delivery, encapsulated in his “Decentralization Theorem.” He argued that local governments, due to their proximity and better understanding of community needs, are more effective in providing public goods, while the central government’s role in macroeconomic stabilization remains critical. Since then, research on local government finances has expanded significantly.

For instance, **Helen X.H. Bao et al. (2024)** examined local governments in China, showing their use of innovative financing methods, such as debt financing, to meet infrastructure goals. **James LT Thanga et al. (2023)** analyzed Aizawl Municipal Corporation, finding its average own revenue share of total revenue to be only 11.59% from 2015–16 to 2021–22, indicating heavy reliance on grants. **Pathak (2023)** highlighted the negative effects of subnational fiscal regulations that prohibit fiscal deficits. **Jain and Singh (2022)** recommended local bodies diversify revenue streams through municipal bonds and market securities. **Nath and Madhu (2022)** found that regular state grants decrease fiscal efforts in Delhi and Mumbai. **Tarit K. S. and Chakraborti M. (2021)** drew similar conclusions in West Bengal. **Singh A.K. & Singh M.P. (2018)** stressed the need for increasing own-source revenue in Uttar Pradesh. Lastly, **Banerjee R. (2017)** emphasized the necessity for local revenue generation to enhance service delivery and infrastructure development.

### 3. Objectives

The paper's primary objectives are to:

1. Examine the financial performance of Uttar Pradesh's municipal corporations with regard to income collection and expenditure.
2. To investigate the extent to which municipal corporations rely on subsidies and transfers from higher governmental levels.
3. To use different ratios to assess the financial situation of municipal corporations.

### 4. Data and Methodology

This study uses secondary data from the annual income-expenditure reports of local bodies published by the Uttar Pradesh Directorate of Economics and Statistics. The data covers all municipal corporations in Uttar Pradesh from 2012–13 to 2020–21. Various ratios and percentages, such as own-sourced revenue to total expenditure, own revenue's share in total income, and the percentage of transfers and grants in total income, are employed to assess fiscal autonomy and the income-expenditure gap.

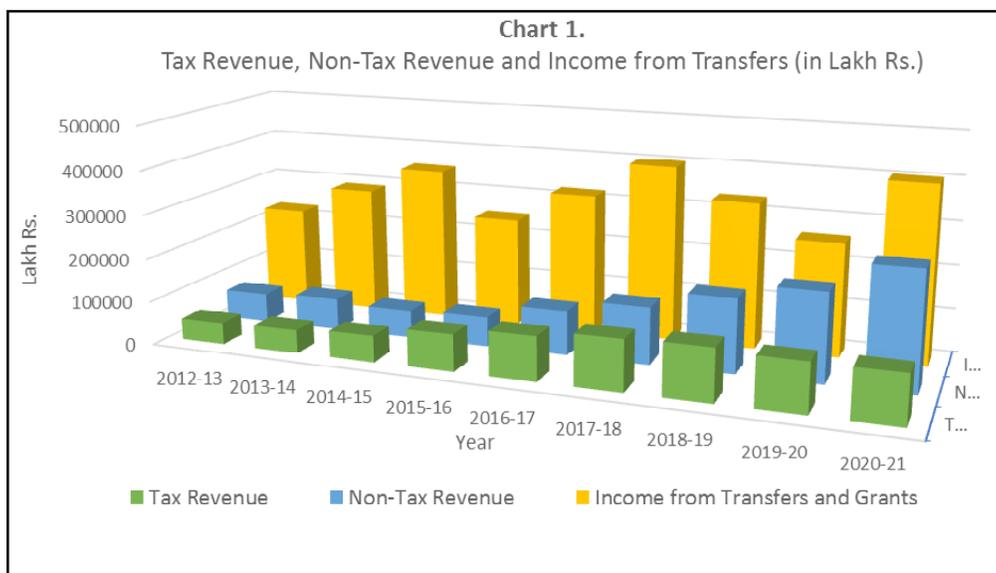
A significant limitation is the lack of accurate and comprehensive data on local government finances. Thus, combined income-expenditure data from all municipal corporations is used. The analysis relies on limited data regarding total and capital expenditure, as precise figures for expenditure heads are unavailable. Interest payments are excluded due to missing data, and revenue expenditure is estimated as the difference between total and capital expenditure.

### 5. Municipal Finance in Uttar Pradesh

In India, as in other parts of the world, local governments rely heavily on grants and transfers to cover their expenses. Any level of government's financial health can be determined in a significant manner by looking at its own revenue (Singh, 2020). The municipal corporations in Uttar Pradesh are unable to meet their expenditure needs due to their inadequate revenue generation, which forces them to rely excessively on outside funding sources including grants, project loans, devolution from central and state financial commissions, etc. In Uttar Pradesh, municipal corporations' own source revenue has grown over time in absolute terms, but its growth rate has not demonstrated any discernible trends. The rise in the number of municipal corporations throughout time can also be linked to the increase in revenue.

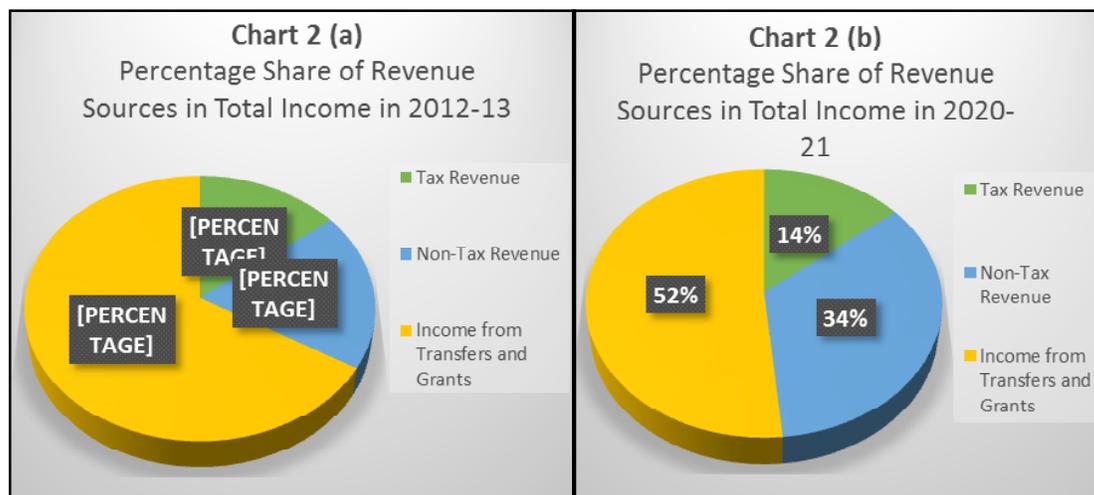
Chart 1 highlights a weak tax base for municipal corporations in Uttar Pradesh, as non-tax revenue has consistently outpaced tax revenue. Although tax revenue briefly exceeded non-tax revenue in 2015–16, it fell behind from 2016–17 onward, indicating key revenue sources include water charges, licensing fees, fines, and duties on municipal properties. The gap widened further from 2017–18, partly due to the introduction of the Goods and Services Tax (GST), which replaced key local taxes like entertainment tax and octroi, negatively affecting municipal finances. Additionally,

municipal corporations' heavy reliance on specific levies, such as property tax, limits their ability to diversify revenue streams. External funding from government grants remains a dominant source, highlighting the corporations' ongoing dependence on state and central transfers.



Source: Author's own representation using the data from UPDES, Government of U.P.

### 5.1. Comparative share of Sources of Revenue of the Municipal Corporations



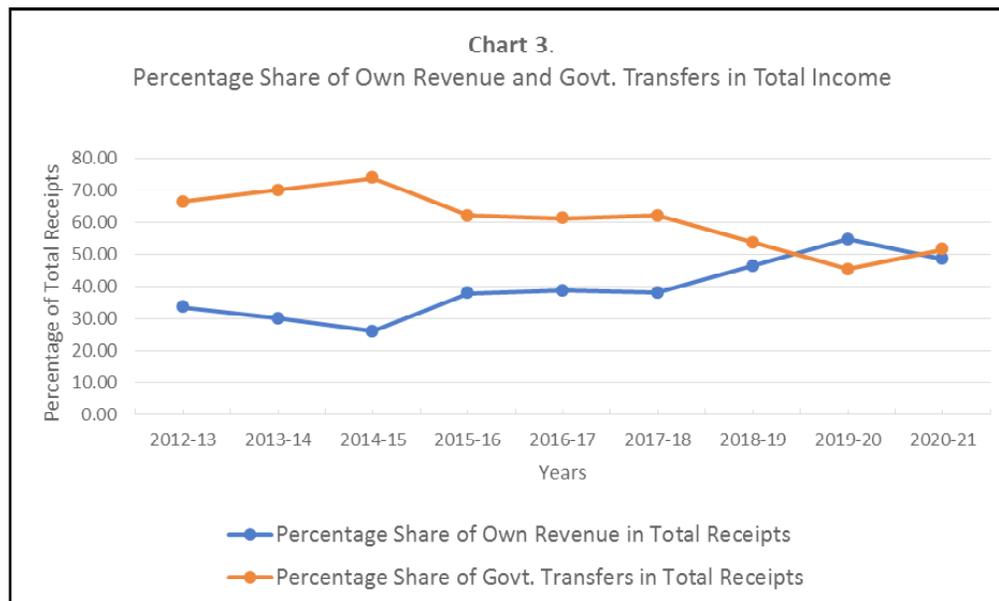
The proportion of total income from own sources is crucial for assessing municipal corporations' independence and financial stability, reflecting their tax collection efficiency. Chart 2 contrasts the

percentage of each revenue stream in the MCs' overall income from 2012–13 to 2020–21. While Chart 1 shows a significant increase in absolute tax revenue, Chart 2 reveals the tax revenue percentage remained at 14% in 2020–21, unchanged since 2012–13, suggesting inefficiencies in tax collection. Conversely, the share of non-tax sources nearly doubled, from 19% to 34%, indicating improved collection of licensing fees and fines. Additionally, reliance on government grants decreased from 67% to 52%, reducing dependence on state and central transfers.

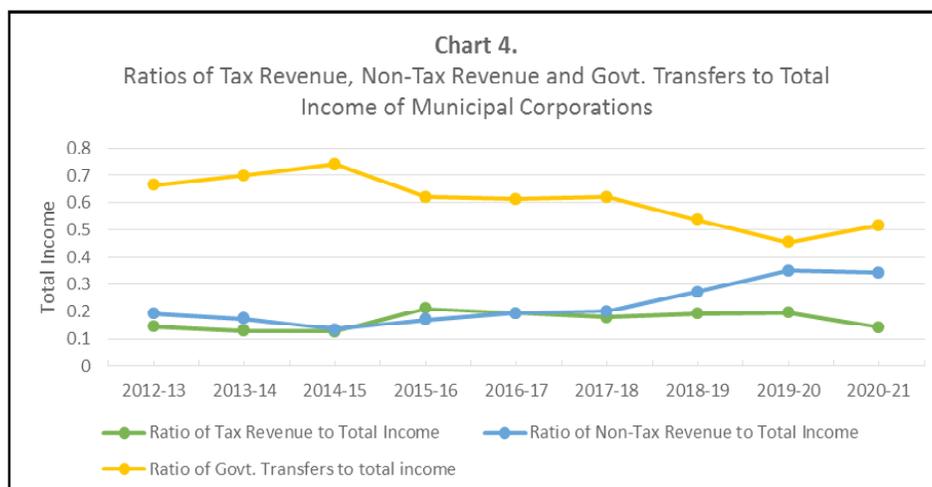
**Source:** Author's own representation using the data from UPDES, Government of U.P.

## 5.2. Measuring Fiscal Performance and Financial Position

In India, the share of own revenue (tax and non-tax) in total revenue for urban local bodies has declined, while government transfers have increased (RBI, Report on Municipal Finances, 2022). Conversely, Chart 3 shows a decreasing trend in government transfers and an increasing trend in own revenue as a percentage of total revenue for municipal corporations in Uttar Pradesh. Notably, in 2019–20, 55% of total revenue was derived from internal sources, indicating improved revenue collection. However, a significant portion of municipal expenditures still relies on government transfers, necessitating the calculation of various financial ratios to assess the health of municipal corporations.



**Source:** Author's own representation using the data from UPDES, Government of U.P.



**Source:** Author's own representation using the data from UPDES, Government of U.P.

Transfer earnings from external sources dominate local government revenue in Uttar Pradesh. Chart 4 illustrates the contribution of each revenue stream to municipal corporations' total income from 2012–13 to 2020–21. In 2012–13, tax revenue constituted 0.14, non-tax revenue 0.19, and government transfers 0.66 of total income. By 2020–21, non-tax revenue's share increased to 0.34, while government transfers fell to 0.51. The tax revenue ratio remained steady, peaking at 0.21 in 2015–16 before dropping to 0.12 in 2013–14. Government transfers peaked at 0.73 in 2014–15 and dropped to 0.45 in 2019–20.

Despite increased total tax revenue, its share in total income has not significantly improved. To strengthen their financial position, municipal corporations must enhance their revenue streams through innovative funding options, ensuring sustainable growth in revenue for quality public services and urban infrastructure, thereby achieving fiscal efficiency and stability.

**Table 1. Annual Growth Rates of Different Sources of Income**

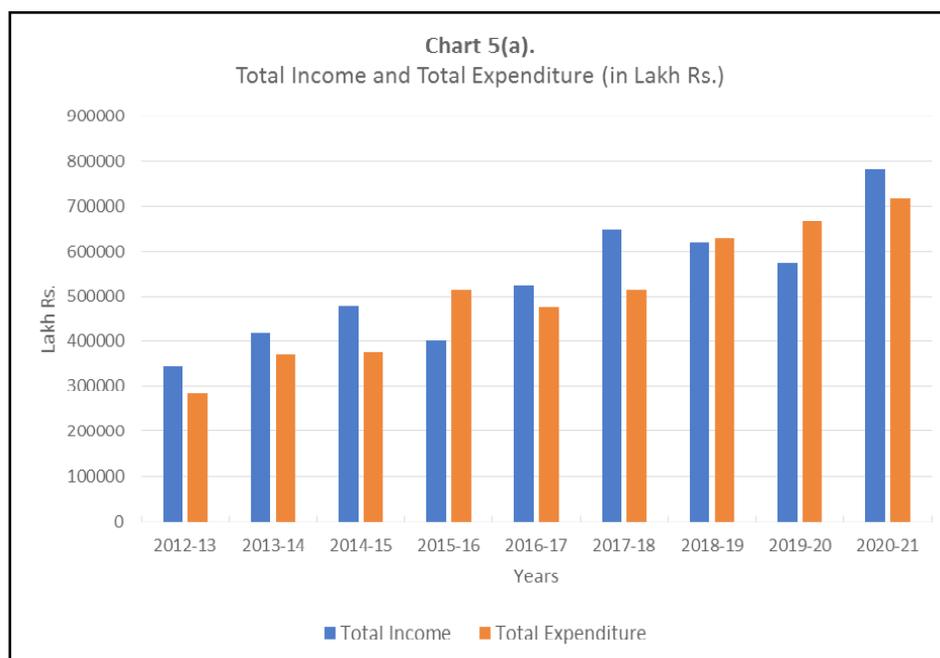
Year	Growth Rate of Tax Revenue	Growth Rate of Non-Tax Revenue	Growth Rate of Income from Govt. Transfers	Growth Rate of Total Income
2013-14	8%	10%	9%	28%
2014-15	14%	-11%	-1%	21%
2015-16	40%	7%	23%	-29%
2016-17	20%	50%	33%	29%
2017-18	14%	27%	21%	25%
2018-19	3%	30%	17%	-17%
2019-20	-6%	20%	9%	-22%
2020-21	-1%	34%	21%	56%

**Source:** Author's own calculations using data obtained through UPDES's annual reports.

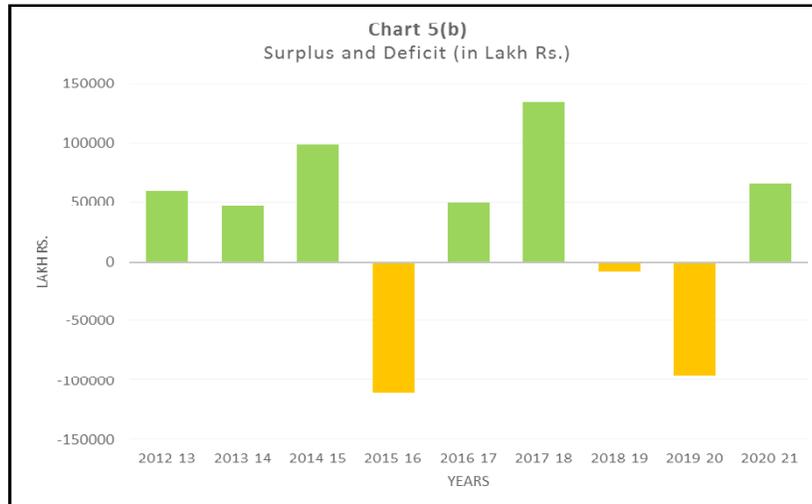
Table 1 shows the growth rates of municipal corporation revenues, revealing instability. Tax revenue peaked at 40% in 2015–16 but declined after the introduction of GST in 2017. Non-tax revenue surged by 50% in 2016–17 but saw negative growth in 2014–15. Government transfers grew by 33% in 2016–17, boosting total income growth. Despite these increases, overall income was volatile, with a high of 56% in 2020–21 and a low of -29% in 2015–16. To stabilize finances, municipal corporations must adopt innovative financing methods and reduce reliance on government transfers.

### 5.3. Expenditure of Municipal Corporations

The 12th Schedule of the 74th Constitutional Amendment Act (1992) outlines 18 tasks that Urban Local Bodies (ULBs) in India must perform, though state governments can transfer these responsibilities to ULBs as they see fit. In Uttar Pradesh, the Uttar Pradesh Municipalities Act (1916) and the Uttar Pradesh Municipal Corporations Act (1959), along with other legislation, form the legal framework for ULBs. Municipal corporations must spend on both capital and revenue expenditures to fulfill their obligations. Capital expenditure focuses on long-term investments like housing, roads, and infrastructure, while revenue expenditure covers recurring costs, including salaries (establishment expenditure) and service maintenance (operational and maintenance expenditure) (Jain & Singh, 2022).

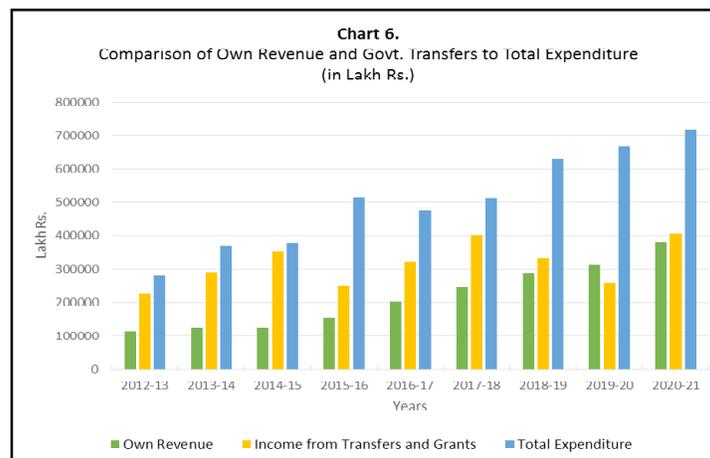


Source: Author’s own representation using the data from UPDES, Government of U.P.



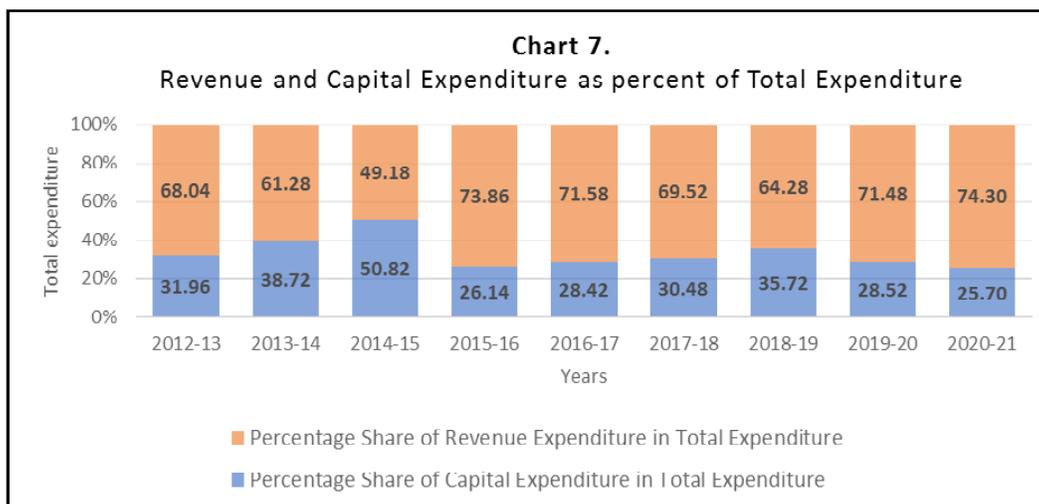
**Source:** Author's own representation using the data from UPDES, Government of U.P.

Chart 5(a) shows that the MCs' total income and total expenses grew over the research period. A noteworthy finding is that, as figure 5(b) illustrates, there was a surplus of income over spending for the majority of the years; the exceptions were 2015–16, 2018–19, and 2019–20. Chart 5(b) shows that during the study period, the biggest surplus of revenue over spending was in the years 2017–18 and the lowest surplus was in 2013–14. The highest deficit was in 2015–16 and the lowest deficit was in 2018–19. Both municipal corporations and the residents of their territory benefit from the rising trend in revenue and expenditure seen in Chart 5(a). However, in order to preserve fiscal stability, all municipal governments are required by law to balance their budgets. Unlike the central government, municipal corporations are not permitted to run fiscal deficits and do not have the financial capacity to do so. As a result, they typically do not run deficits to stimulate aggregate demand.



**Source:** Author's own representation using the data from UPDES, Government of U.P.

Chart 6 illustrates municipal corporations’ own revenue and income from government transfers with their total expenditure for the duration of the research. The graph makes it clear that, in the majority of years, own revenue only contributes to a small amount of total expenditure; the majority of expenditure is financed by other levels of the government. Own-sourced revenue only made up a higher proportion of expenditures than income from government transfers in the 2019–20 fiscal year. Uttar Pradesh’s municipal corporations are excessively dependent on grants and devolutions from higher levels of government because they are barely able to cover their expenses on their own revenue. This is a serious issue since it takes time for higher government grants and transfers to be made available, which limits the MCs from covering the immediate expenses necessary for operations or development. The substantial growth in total expenditures over the study period is shown in Chart 6, however grants and transfers were relatively lower in comparison to expenditure, indicating that even government transfers have not been able to keep up with the increasing requirements of expenditure.

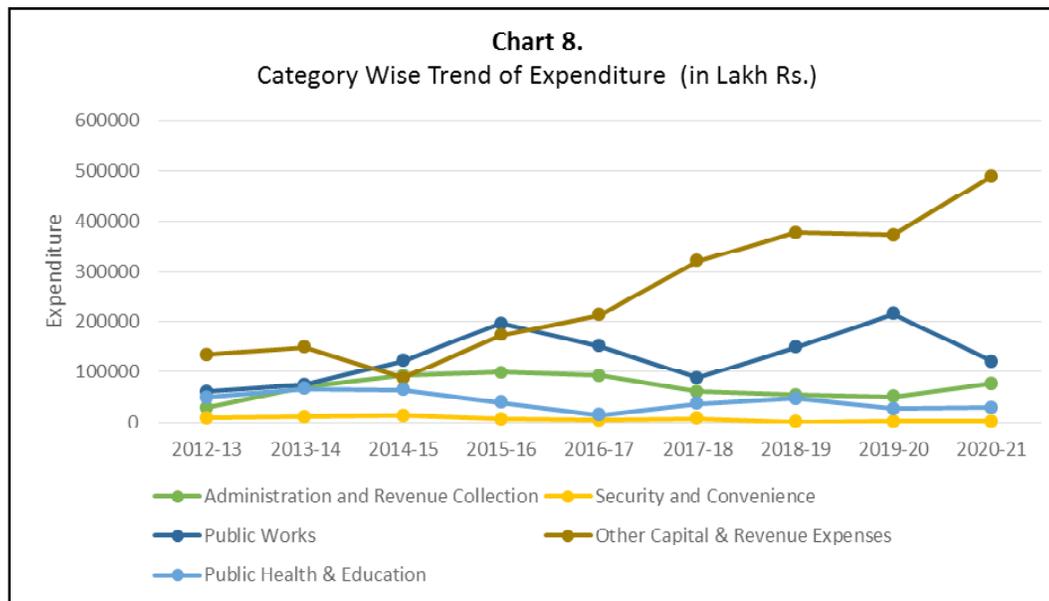


**Source:** Author’s own representation using the data from UPDES, Government of U.P.

To gain a comprehensive understanding of municipal finances, it’s essential to examine expenditure components. Chart 7 shows that revenue expenditure consistently dominates municipal spending, while capital expenditure forms a smaller share. Capital spending peaked in 2014–15 at 50.82%, surpassing revenue expenditure, but hit a low of 25.70% in 2020–21, when revenue expenditure reached its highest at 74.30%. This trend suggests that municipal corporations in Uttar Pradesh have focused more on maintaining operations and service delivery than on creating new infrastructure. However, this shouldn’t be viewed as inefficiency, as spending priorities depend on the cities’ development stages and specific needs. While revenue spending covers essential services and operational costs, capital expenditure is crucial for long-term infrastructure growth. A balanced approach to both is necessary for municipal stability and quality of life improvements.

Municipal corporations in Uttar Pradesh allocate funds from various sources to meet their responsibilities, including public works, health, education, security, administration, and tax collection.

Chart 8 illustrates the spending trends in these areas. There is a notable decline in expenditure on education and public health, which dropped significantly between 2012–13 and 2020–21, largely due to the increasing involvement of the central and state governments in these sectors.



**Source:** Author's own representation using the data from UPDES, Government of U.P.

Meanwhile, spending on public works more than doubled during the same period. Revenue collection and administration costs rose until 2015–16 before declining, while security and convenience spending remained stable until 2017–18, after which they decreased. The largest increase occurred in “other capital and revenue” expenditures, which cover operational and developmental activities. Overall, while total spending has risen, the need for targeted investment in key areas like urban infrastructure and quality of life remains crucial.

## 6. Conclusion and Suggestions

The lack of accurate, comprehensive data hampers evaluation of local governments' financial health and service delivery. A unified data repository for local bodies is essential, along with increased accountability and innovative financing strategies, such as municipal bonds and value capture financing. To meet growing expenditure needs, tax revenue must be increased, and government transfers expanded. Additionally, boosting capital spending and investments in public works, health, education, and housing is vital. Public surveys can help assess service quality, offering insights into urban needs. Though the 74th Constitutional Amendment advanced urban development, much progress is still needed for municipal corporations to become self-sufficient.

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# Contemporary Challenges in the Social Sector

Akriti Singh<sup>1</sup> & Dr. Rajesh Singh<sup>2</sup>

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## ABSTRACT

*The social sector, pivotal in enhancing the well-being of populations, now faces an array of obstacles that limit its capacity to effectively address societal needs. With responsibilities spanning health, education, poverty reduction, and welfare services, this sector confronts unique challenges that stem from a rapidly changing global landscape. Chief among these issues are inadequate financial resources, a shortage of skilled professionals, and subpar infrastructure, all of which undermine the sector's impact. Further complicating matters are external pressures such as economic instability, migration crises, and environmental degradation, each placing additional burdens on already strained systems.*

*The onset of the COVID-19 pandemic has laid bare the deep-seated inefficiencies in healthcare, education, and social protection mechanisms, while simultaneously widening the gap between privileged and marginalized communities. Although technological advancements offer new pathways for delivering services, they also highlight stark disparities in digital access and literacy, exacerbating social exclusion.*

*In addition to these operational and systemic difficulties, many non-governmental organizations (NGOs) and community-based organizations struggle with long-term sustainability and a growing dependency on fluctuating donor funds. Policy bottlenecks and governance shortfalls further hinder timely and effective interventions, often delaying vital services for those most in need.*

*This abstract delves into the complex challenges currently confronting the social sector, dissecting their roots and analyzing their consequences. It also aims to identify forward-looking strategies that could potentially reshape the sector, fostering collaborations across government, civil society, and the private sector to build more resilient and inclusive systems capable of addressing emerging and future societal demands.*

**Keywords:** - Poverty Reduction, Healthcare, Literacy, Migration, unemployment etc.

## Introduction

The social sector is a cornerstone of modern society, working to improve the quality of life through services that address health, education, poverty, and social welfare. However, in today's rapidly changing global environment, this sector is facing a range of complex challenges that threaten

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its ability to meet societal needs effectively. Financial constraints, a lack of skilled professionals, and inadequate infrastructure are key internal issues that undermine the sector's impact. At the same time, external pressures such as economic instability, migration, and environmental degradation create additional stress on already overstretched systems.

The COVID-19 pandemic has further exposed deep-seated inefficiencies in healthcare, education, and social protection mechanisms. It has also widened the gap between more privileged populations and marginalized communities, making it clear that many systems in place were unprepared for such a large-scale crisis. While technological innovations offer new opportunities for service delivery, they also highlight disparities in digital access and literacy, which can deepen social exclusion for those who are already vulnerable.

Non-governmental organizations (NGOs) and community-based groups, which are essential to the social sector, now face growing difficulties in sustaining their work over the long term. Many of these organizations rely on unpredictable donor funding, making it hard to maintain consistent operations. Moreover, inefficiencies in governance and policy implementation further complicate efforts to deliver vital services where they are most needed.

This research seeks to examine the roots of these issues, assess their broader consequences, and propose strategies for strengthening the sector. By fostering greater collaboration between governments, civil society, and the private sector, there is an opportunity to create more resilient and inclusive systems that are better equipped to address both current challenges and future demands.

## Literature Review

The social sector, which addresses critical societal needs such as healthcare, education, poverty alleviation, and welfare, has been extensively studied across various academic fields. As global conditions evolve, this sector faces an increasing number of complex challenges that require deeper investigation and understanding. One of the primary challenges facing the social sector is the ongoing issue of financial constraints. According to Salamon (1999), the sector has long depended on a mixture of government funding, private donations, and grants from international organizations, creating a precarious situation when these sources are inconsistent or insufficient. Bielefeld (2009) discusses how financial instability undermines the sector's capacity to deliver long-term services, leaving it vulnerable to short-term disruptions. In a similar vein, Fowler (2013) points out that donor funding is often tied to specific agendas, limiting the ability of organizations to address the full scope of community needs.

Kwaku Twumasi Ankrah (1995) The present article examines the relationship between rural-urban migration and socioeconomic development in Ghana. Specifically, it highlights how the decision of migrants to relocate to a place with better access to healthcare, entertainment, and education forces them to re-socialize, which is a major factor in the development of their social and behavioral patterns. The paper's study shows that when there are income disparities in one's current region, moving in quest of a better locational match is influenced by geographic variations in mean salary and technology. These factors are linked to predicted income and migration decisions. (B.Chandra mohan Patnaik, 2014)

A lack of skilled professionals remains a significant hurdle for the social sector. Research by Lewis and Kanji (2009) highlights that low wages, limited career progression, and burnout contribute to difficulties in attracting and retaining qualified workers. Studies have suggested that without addressing these human resource challenges, the social sector will continue to struggle with inefficiencies in service delivery. Ragan (2010) emphasizes the need for structured training and support systems to improve the capacity of organizations to meet societal demands effectively. Technology presents both opportunities and challenges for the social sector. Madsen (2010) notes that digital tools can enhance the efficiency of service delivery, particularly in healthcare and education. However, the digital divide remains a significant concern, especially for marginalized communities. Warschauer (2004) underscores how unequal access to technology exacerbates social inequality, leaving some groups further behind. The work of Norris (2001) supports this, arguing that the digital divide continues to deepen social exclusion, particularly in low-income and rural areas.

Higher-order thinking and the development of advanced language abilities are closely related to academic literacy, which is a set of literacy skills tailored for content acquisition (Shanahan & Shanahan, 2008). According to recent studies, kids can only gain advanced reading abilities by actively participating in meaningful, purposeful, and emotionally charged disciplinary learning activities (Moje et al., 2008). Thus, academic literacy development is understood as participation, socialization, and transformation attained via an individual's growing involvement in authentic and meaningful disciplinary learning inquiries, in contrast to the "autonomous model" of literacy development, which sees literacy as a set of discrete, transferable reading and writing skills (Duf, 2010; Russell, 2009). In this regard, academic literacy development is seen as a potent mediator for individuals. (Li, 2022)

It has been established that COVID-19 has a non-discriminating character but a discriminating effect. Its spatial spread has been far-reaching. Countries, cultures, communities, classes, gender, and geography have all been impacted by this bio catastrophe. Millions of people—males and females, wealthy and impoverished, old and young, white and black—have been impacted by it. However, its impacts are discriminatory, severely harming the underprivileged, women, people with disabilities, kids, and young people. It has, to put it simply, rendered "the vulnerable the most vulnerable ones." Numerous words, including "the great equalizer," "generator of human capital," "the great empower," and others, are applied to the educational system. Education is a strong indicator. (Sudhakar Patra, August 2021)

## **Research Methodology**

**Primary Data:** Primary data are collected through the different professionals of the various organizations.

**Secondary Data:** - Secondary data was gathered through the internet, journals, newspapers, and magazines, among other places.

**Research Type:** - Descriptive Research

**Research Area:** - All Social Sector

Sampling Type: -Convenience Sampling

Sample size: – 200

This study employs a qualitative research design, utilizing library research and literature review methods to explore the contemporary challenges and opportunities in the societal landscape. The qualitative approach is particularly suitable for this research as it allows for an in-depth understanding of complex and multifaceted issues through comprehensive analysis of existing frameworks.

This research is primarily qualitative focusing on analyzing and synthesizing information from various sources to identify key trends and issues in the social landscape. Qualitative research is chosen for its ability to provide rich, detailed insights into the social matter, facilitating a deeper understanding of the nuances and implications of contemporary challenges.

The primary sources of data for this conference paper are academic journal articles, books, government reports, and other scholarly publications. These sources were selected for their relevance and credibility in providing comprehensive information on the current state of the social landscape.

Data analysis was conducted through thematic analysis, which involved identifying, analyzing and reporting patterns within the data. Thematic analysis is suitable for this conference paper as it allows for the identification of key themes trends in the social landscape.

## **Result and Discussion**

The younger generation of today is seeking fulfillment at their work. While money is important these youngsters look to be part of a bigger picture. Leading a balanced life that offers them happiness and satisfaction, takes overriding priority over money. At the St Gallen Symposium, a global conference for leaders, students were asked as to what motivated them in their careers. Almost 50% of leaders of tomorrow responded that work which had a positive impact on society was the most important criterion as against a mere 14% who were motivated by income levels. These findings reflect the shifting attitudes of today's students who are now keen on applying management skills to shape society.

If things continue as they are, unemployment will become a serious problem. In addition, an economy experiences the following: a rise in poverty, a rise in crime, labour exploitation, political unrest, declines in mental health, and a loss of skills due to migration from one nation, region, or locale to another. Humans have been nomadic creatures ever since the first ones left Africa and started to spread out. At least 258 million people, or 3% of the world's population, still reside outside of their nation of birth.

## **Future Scope**

Not just the millennial's, the mid-segment, and senior segment workforce are also increasingly moving towards the social development sector. The sector today is growing rapidly, making it a lucrative career option across all age groups and demographics. NGOs and CSOs are now working towards developing the skills of individuals who are keen on taking the social sector as a career option. A few organizations, like PRADAN (Professional Assistance for Development Action), have

adopted a unique model to develop and engage aspirants who want to pursue their careers in the social development sector and work for the betterment of society.

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# Demographic Transition and Challenges for the Health Sector in India

Anchal Rai<sup>1</sup>

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## ABSTRACT

*India is going through a demographic transition. Both the crude birth rate and the crude death rate are decreasing. Between 1970-75 and 2000-05, the birth rate has decreased from 36.7 percent to 25.5 percent, while the death rate has decreased from 14.0 percent to 8.4 percent (LASI, Wave 1). Due to demographic transition, ageing population is increasing in India. In the year 2000, the population of people aged 60 years and above was 6.9 percent, which will increase to 11.4 percent in 2025, while the child population (0–14) will decrease from 34.7 percent to 24.2 percent (LASI). People aged 60 years and above are facing a greater burden of disease as they are more likely to have non-communicable diseases and they also have communicable diseases and other age-related problems. Therefore, if their population increases, it will increase the burden on the health sector. This paper looks at the challenges posed by the increasing ageing population due to the demographic transition to the health sector in India. The study is based on secondary data taken from National Health Accounts, the Longitudinal Ageing Study in India, Rural Health Statistics, Senior Care Reforms in India (NITI Aayog), and other government official reports. The study found that India has a huge shortage of doctors and hospital beds and inadequate health infrastructure. Due to demographic transition, the population of the elderly is increasing rapidly, but the health sector is not improving at the same pace. Therefore, the increasing ageing population due to demographic transition is a big challenge for the health sector.*

**Keywords:** Demographic Transition, Population ageing, Health Infrastructure

## INTRODUCTION

Demographic transition affects every sector of the economy, including the health sector. The term demographic transition was first coined by Warren S. Thompson in 1929 and later by Frank W. Notestein in 1945. There are five stages of demographic transition. In the first stage of demographic transition, both birth rate and death rate are high. In the second stage, the birth rate is high but the death rate is low, which leads to population explosion. In its third stage, the birth rate starts decreasing and the death rate remains low. In the fourth stage, both birth rate and death rate become low, and in

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the last stage, both birth rate and death rate are approximately equal and low. India is also going through a phase of demographic transition. Both birth rate and death rate are decreasing in India. The demographic transition in India is leading to the problem of population ageing. The term “population ageing” describes the process by which the proportion of older persons in the population increases. In this phenomenon, the population growth rate of people aged 60 years and above is increasing, and the population of people aged 0-14 years is decreasing. In India, the burden of disease is increasing due to the ageing population, which has a major impact on the health sector. In India, the demographic transition is leading to an ageing population, which in turn leads to an increasing disease burden. People aged 60 years and above have more diseases than those aged 45-59 years (LASI, Wave 1).

The elderly population faces non-communicable diseases and communicable diseases as well as age-related problems. There are many shortcomings in the health sector in India. This paper examines the challenges faced by the health sector in India due to the increasing ageing population caused by the demographic transition.

### Review of Literature

Rohini Kumari (2017), *India’s Demographic Transition and its Impact on Economic Development*. This paper examines India’s demographic transition and the impact of population growth on economic development and vice versa. The study used total fertility rate data from the years 1901-10 to 2011, birth rate, and death rate data from the years 1941-51 to 2001-11. The result of this study shows that demographic transition has three kinds of effects on the economy as well as on its development: negative, positive, and no effect.

Dr. Madhubala Swami (2016), *Demographic Dividend: Challenges and Opportunities for India*. This paper examines the challenges and opportunities in India due to demographic dividend. The result of this study shows that due to demographic dividend, the working-age population has increased a lot, which is leading to economic growth, and it also shows that due to demographic dividend, there is a need to create more employment and there is a need to provide various types of educational and health infrastructure for the youth.

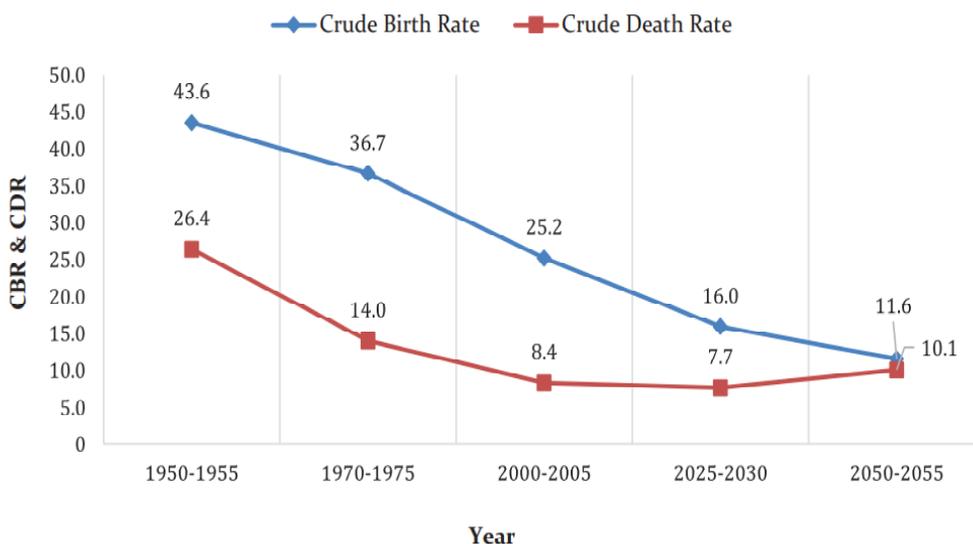
Jitender Saroha (2017), *Demographic Transition in India*. This paper examines the various stages of demographic transition in India from 1901 to 2011. India had a high stationary phase from 1901 to 1921, followed by steady growth until 1951. The period from 1951 to 1981 saw a population explosion, and from 1981 to 2011, India was in the late expanding stage of transition.

Ramani Ponnappalli, Krishna Murthy Ponnappalli, and A. Subbiah (2013), *Ageing and the Demographic Transition in India and its States: A Comparative Perspective*. The paper analyses India’s ageing population and demographic shift, highlighting advanced transitions in southern states like Kerala, Tamil Nadu, Andhra Pradesh, and Karnataka compared to the lag seen in UP, Bihar, Madhya Pradesh, and Rajasthan.

### Trend of Demographic Transition in India

Figures 1 and 2 here show the trend of demographic transition in India from 1950-55 to 2050-55. Figure 1 shows the trend of crude birth rate and crude death rate. According to Longitudinal Ageing Study in India (LASI) Wave 1, 2020, In the year 1950–55, the crude birth rate (43.6%) was much higher than the crude death rate (26.4%). In 1970-75, both declined to 36.7% and 14.0%, respectively. In 2000-2005, both declined to 25.2% and 8.4%, respectively. Between 2025-30, both will become 16.0% and 7.7%, respectively. This clearly shows that the crude birth rate is higher than the crude death rate but is declining faster than the crude death rate. In 2050–55, the crude birth rate (11.6%) and crude death rate (10.1%) will become approximately equal.

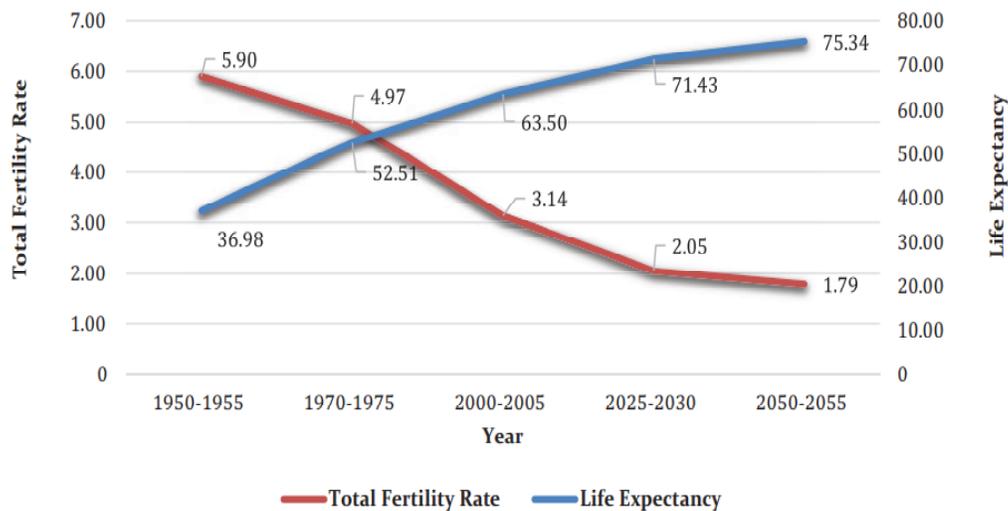
**Figure 1: Trend of Crude Birth Rate and Crude Death Rate in India,1950-55 to 2050-55**



**Source:** Longitudinal Ageing Study in India (LASI) Wave1, India Report 2020.

Figure 2 shows the trend of total fertility rate and life expectancy. According to LASL, the total fertility rate was 5.90% in 1950-55, 4.97% in 1970-75, 3.14% in 2000-05, which will decrease to 2.05% in 2025-30 and 1.79% in 2050-55. Hence, it is clear that the total fertility rate is continuously decreasing. The same life expectancy, which was 36.98, 52.51, and 63.50 years in 1950-55, 1970-75, and 2000-05, respectively, will increase to 71.3 and 75.34 years in 2025-30 and 2050-55, respectively. India’s demographic transition is demonstrated by the steady decrease in the country’s crude birth and death rates, the ongoing reduction in the country’s overall fertility rate, and the ongoing rise in life expectancy.

Figure 2: Trend of Total Fertility Rate and Life Expectancy, 1950-55 to 2050-55



Source: Longitudinal Ageing Study in India (LASI) Wave1, India Report 2020.

### Ageing Population and Disease Burden

Population ageing is taking place in India, as shown in Table 1. According to Longitudinal Ageing Study in India (LASI) Wave 1, 2020, the population of people of 60 years and above in India, which was 5.4% in 1950, 5.7% in 1975, and 6.9% in 2000, will increase to 11.4% in 2025 and 19.5% in 2050. The child population (0-14 years), which was 37.5% in 1950, 40.1% in 1975, and 34.7% in 2000, will become 24.2% in 2025 and 18.5% in 2050, which means the percentage of the old age population is increasing in India and the percentage of the child population is decreasing. The old age dependency ratio is also increasing continuously. It was 9.4 percent in 1950, which will increase to 31.5 percent in 2050. Tables 2 to 5 show the disease burden of the aging population. According to the Longitudinal Ageing Study in India (LASI) Wave 1, 2020, people aged 60 years and above have more diseases than those aged 45-59 years. According to LASI (Wave-1), 2020, among people aged 45 to 59 years, 20.5% have hypertension, 2.2% have heart disease, 1.0% have stroke, 21.9% have CVDs, 9.2% have diabetes mellitus, 1.9% have high cholesterol, 4.7% have anaemia, 0.5% have depression, and 11.7% have joint disease. Whereas among people aged 60 years and above, 32.0% people reported that they have hypertension, 5.2% people have heart disease, 2.7% people have stroke, and 34.6% have CVDs, 14.2% people have diabetes mellitus, 2.5% people have high cholesterol, 4.7% people have anaemia, 0.8% people have depression, and 18.8% people have joint disease. Therefore, as the aging population increases, the burden of diseases will also increase.

**Table 1: Indictors of Ageing Population, 1950 to 2050**

Indictors	Year				
	1950	1975	2000	2025	2050
Child population in age 0-14(%)	37.5	40.1	34.7	24.2	18.5
Working age population in age 15-59(%)	57.1	54.3	58.4	64.4	62.0
Elderly population in age 60 and above (%)	5.4	5.7	6.9	11.4	19.5
Old age dependency ratio	9.4	10.4	11.7	17.6	31.5
Ageing Index	8.4	8.7	12.6	31.2	74.5

Source: Longitudinal Ageing Study in India (LASI) Wave1, India Report2020.

**Table 2: Comparing the age group of 45-59 between 60 and above diagnosed with Hypertension, Heart Disease, Stroke and Cardiovascular Disease, 2017-18**

Age (in years)	Hypertension	Heart Disease	Stroke	CVDs
45-59	20.5	2.2	1.0	21.9
60 and above	32.0	5.2	2.7	34.6

Source: Longitudinal Ageing Study in India (LASI) Wave1, India Report 2020.

**Table 3: Comparing the age group of 45-59 between 60 and above diagnosed with Diabetes Mellitus, High Cholesterol and Anaemia, 2017-18**

Age (in years)	Diabetes Mellitus	High Cholesterol	Anaemia
45-59	9.2	1.9	4.7
60 and above	14.2	2.5	4.7

Source: Longitudinal Ageing Study in India (LASI) Wave1, India Report 2020.

**Table 4: Comparing the age group of 45-59 between 60 and above diagnosed with Depression, Other Psychiatric problem, Alzheimer’s Disease and Dementia, 2017-18**

Age (in years)	Depression	Other Psychiatric Problem	Alzheimer’s Disease and Dementia
45-59	0.5	0.4	0.4
60 and above	0.8	0.4	1.0

Source: Longitudinal Ageing Study in India (LASI) Wave1, India Report 2020.

**Table 5: Comparing the age group of 45-59 between 60 and above diagnosed with chronic bone or joint condition, 2017-18.**

Age (in years)	Arthritis	Rheumatism	Osteoporosis	Joint Disease
45-59	7.0	4.7	0.6	11.7
60and above	10.7	7.6	1.3	18.8

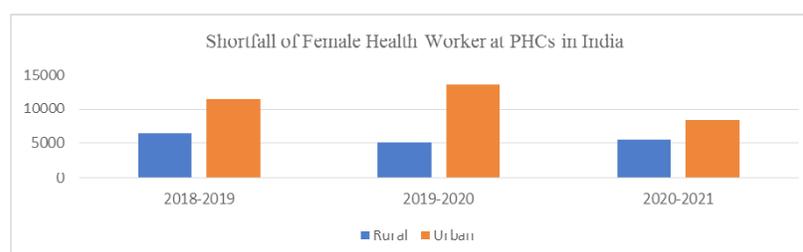
Source: Longitudinal Ageing Study in India(LASI) Wave1, India Report 2020.

## Challenges for the Health Sector

### Manpower

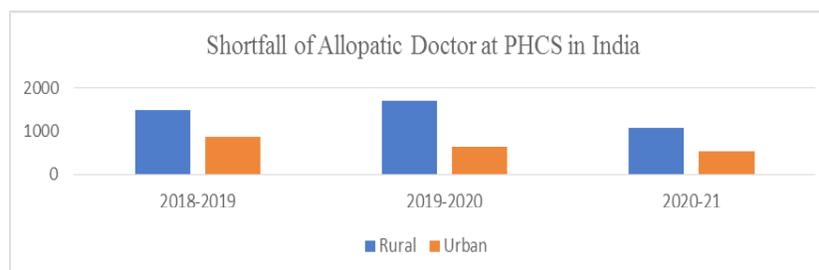
According to Rural Health Statistics as shown in figure 3, the shortfall of female health workers in PHCs in rural areas was 6492 in the year 2018-19, 5066 in the year 2019-20, and 5524 in the year 2020-21. Whereas in urban areas it was 11498, 13666, and 8374, respectively. From figure 4, the shortfall of allopathic doctors at PHCs in the year 2018-19 was 1486 and 867 in rural and urban areas, respectively. Similarly, in the year 2019-20, the shortfall was 1704 and 653 in rural and urban areas, respectively. Again, in the year 2020-21, it was 1084 in rural areas and 537 in urban areas. The shortfall of total specialists in CHCs was 17459 in year 2018-19, which has further reduced to 15775 in the year 2019-20 and 17519 in year 2020-21.

**Figure 3**



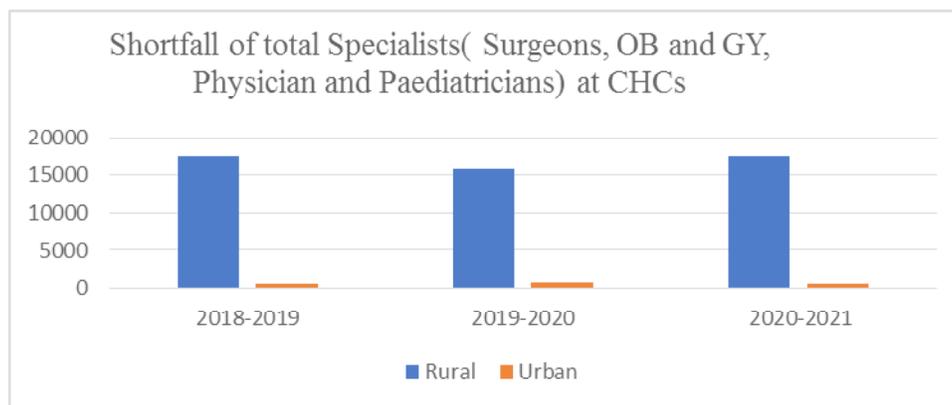
Source: Rural Health Statistic 2018-19, 2019-20, 2020-21.

**Figure 4**



Source: Rural Health Statistic 2018-19, 2019-20, 2020-21.

Figure 5



Source: Rural Health Statistic 2018-19, 2019-20, 2020-21.

## Infrastructure

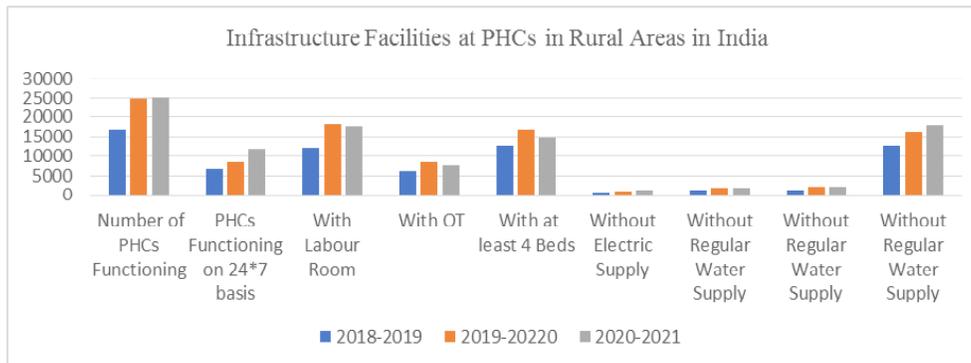
### Beds

The CRISIL (An assessment of the healthcare delivery market in India with a focus on West India, 2023) report states that although India has the greatest population, its bed density is extremely low, at just 15 beds. This is less than both the world median of 29 beds and the bed densities of other emerging nations, such as Brazil (19 beds), Vietnam (26 beds), and Malaysia (19 beds).

### Infrastructure Facilities at PHCs and CHCs in Rural Areas

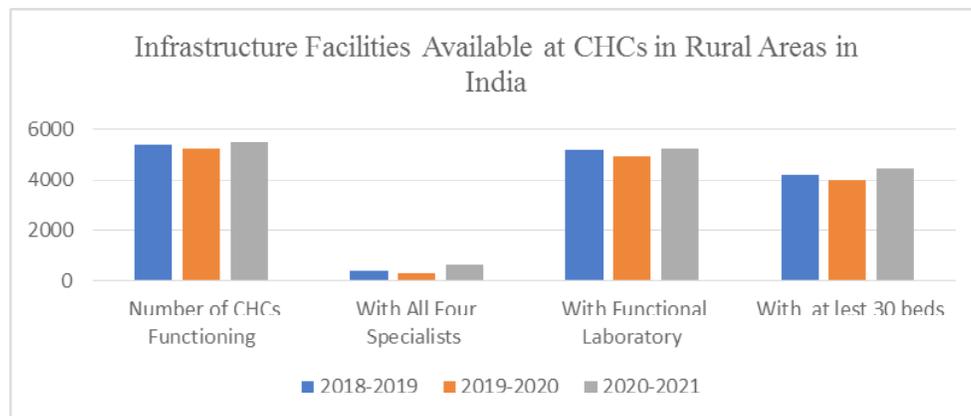
According to Rural Health Statistics, there were 16613 PHCs in rural areas in the year 2018-19, out of which only 6733 functioned on a 24×7 basis, only 11979 had a labour room, only 6064 PHCs had OT, and only 12760 PHCs had at least 4 beds. Out of 16613 PHCs, 795 PHCs did not have electricity supply, 1358 did not have a daily water supply arrangement, 1355 were without all-weather motors, and only 12704 PHCs had computers. However, the number of PHCs has increased to 24918 in 2019-20 and 25140 in 2020-21. There were 8514 PHCs in year 2019-20 and 11704 PHCs in year 2020-21 that did not work on a 24×7 basis. Only 18049 PHCs in year 2019-20 and 17613 PHCs in year 2020-21 had labour rooms. Only 8640 had OT in 2019-20, while this number has increased to 7827 in the year 2020-21. There were only 16658 PHCs that had at least 4 beds, while this number is 14882 in year 2020-21; there were 1076 such PHCs that did not have electricity supply, while this number is 1204 in year 2020-21; 1725 did not have daily water supply, while this number is 1681 in year 2020-21; 1937 did not have motorable facilities in every weather, while this number is 2094 in year 2020-21; and only 16199 had just computers, while this number is 17806 in 2020-21, as shown in figure 6. 5335 CHCs were functioning in 2018-19, 5183 in 2019-20, and 5481 in 2020-21. Of these, only 378 CHCs had all four specialists in 2018-19, 304 CHCs in 2019-20, and 614 CHCs in 2020-21. There were only 4210 CHCs in year 2018-19, 4026 in year 2019-20, and only 4440 in year 2020-21, which had at least 30 beds, as shown in figure 7.

Figure 6



Source: Rural Health Statistic 2018-19, 2019-20, 2020-21.

Figure 7



Source: Rural Health Statistic 2018-19, 2019-20, 2020-21.

## RESULT

Figures 1 and 2 show that India is going through a demographic transition. It is clear from Figure 1 that in 1950–55 the crude birth rate and death rate were 43.6% and 26.4%, respectively, which will decrease to 11.6% and 10.1%, respectively, in 2050–55. The crude birth rate and death rate will be approximately equal in 2050–55. The total fertility rate, which was 5.90% in 1950-55, will decrease to 1.79% in 2050-55, and the life expectancy, which was 36.5 years, will increase to 75.34 years in 2050-55. Table 1 shows the indicators of aging population from 1950 to 2050, and it is evident from the table that population ageing is taking place in India. The percentage of the child population was 37.5 in 1950, which was 40.1 in 1975, and it will be 18.5 in 2050. The population percentage of people aged 60 years and above was 5.4 in 1950 and 5.7 in 1975, and it will increase

to 19.5 in 2050. The old-age dependency ratio is also increasing continuously. It was 9.4 in 1950, 10.4 in 1975, and will increase to 31.5 in 2050. It is evident from tables 2 to 5 that in India the diseases are more prevalent among people aged 60 years and above. People in the age group of 60 years and above had 32% hypertension, 5.2% had heart disease, 14.2% had diabetes mellitus, 0.8% had depression, and 18.8% had joint disease, whereas in the age group of people 45-59 years, only 20.5% had hypertension, 2.2% had heart disease, 9.2% had diabetes mellitus, 0.5% had depression, and 11.7% had joint disease. It is evident from Figures 3 to 7 that there are inadequate health facilities in India. In the year 2018-19, there was a shortfall of 6492 female health workers in rural areas and 11498 in urban areas. In the years 2020–21, this shortfall was reported at 5524 and 8374, respectively. The shortfall of allopathic doctors in 2020-21 was 1084 in rural PHCs and 537 in urban PHCs. The shortfall of specialists (surgeons, obstetricians and gynaecologists, physicians, and paediatricians) in CHCs in rural areas was 17459 in the year 2018-19 and 17519 in the year 2020-21. It's shortfall in urban areas was 641 in the year 2018-19 and 636 in the year 2020-21. India's bed density is 15, which is lower than both global medians (29) in developing countries like Brazil (21) and Malaysia (19). There are many shortcomings in the infrastructure of PHCs and CHCs in rural areas of India. In the year 2018-19, out of 16613 PHCs, only 11979 had a labour room, 795 were without electricity supply, and 1358 did not have regular water supply. In the year 2020-21, the number of PHCs increased to 25140, but only 17613 had a labour room, 1204 PHCs were without electricity supply, and 1681 did not have regular water supply. There were 5335 CHCs in 2018-19 and 5481 CHCs in 2020-21. In 2018-19, only 378 CHCs had all four specialists, and 4210 CHCs had at least 30 beds. In 2020-21, only 614 CHCs had all four specialists, and 4440 CHCs had at least 30 beds. It is clear from the above facts that due to the increasing ageing population in India, the disease burden will also increase. Since there are inadequate facilities in the health sector here, the increase in the elderly population is a challenge for them.

### **Suggestion**

Manpower in the health sector needs to be increased in India.

Infrastructure of PHCs and CHCs in rural areas needs to be improved.

The number of female health workers needs to be increased. The government should increase health expenditure.

### **CONCLUSION**

In this paper, the demographic transition in India and its challenges for the health sector have been examined. The results show that due to demographic transition, the percentage of ageing population is increasing, and diseases are found to be more prevalent in the elderly population. Also, manpower and infrastructure facilities are inadequate in the health sector. Therefore, the increasing percentage of ageing population due to demographic transition in India is a big challenge for the health sector.

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# Demographic Transition in India: Issues and Challenges of Healthcare Sector

Dr. Anjali Singh<sup>1</sup>

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## ABSTRACT

*India as a welfare state caters to the wants of 18 percent of humanity\*\*. Outreaching to the diverse and exponentially expansive populace with limited resources is challenging for policymakers. As per the latest National Family Health Survey (NFHS-5) social indicators such as total fertility rate, sex ratio, and health outcome indicators viz., infant mortality rate, under-five mortality rate, and institutional birth rates have improved over the years. The evolving population dynamics in India are supposedly propelling the total dependency ratio of the elderly population (60+) till 2036. A higher dependency ratio indicates a greater need for social services support. Dependency ratio may be defined as the number of children (under 14) and elderly persons (age 60+) per 100 working-age population (15-59 years). To ensure the dependents' good health and well-being, a systematic and seamless social sector infrastructure is essential. The actual tapping of demographic transition will however depend a lot on ensuring universal healthcare for all at all ages.*

*The magnitude of this paper is to observe the projected population characteristics as of 1st March 2011-2036; further, the study shall look into the trends in government health expenditure and out-of-pocket expenditure social security expenditure, and private health insurance expenditure as a percentage of total health expenditure, during year 2014-15-2021-22, the Status of Empowered Action Group States about Health Indicators and SDG goal-3 shall also be observed. A study of the status of Population coverage of the primary healthcare system during the year 2024-25, shall also be part of the study.*

**Key Words:** Demographic transition, Dependency ratio, healthcare sector, government health expenditure.

## Introduction

With the surge of 'Viksit-Bharat' India envisions growth with equity thus the role of social sector services becomes essential, social services not only address the wants of marginalized groups but also up-skill them. Over decades the scenario of demographic dynamics has put forth an appeal for social service support. In recent years the government's spending on social infrastructure has

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increased still the dependency ratio alarms for a better universal healthcare system for all at all ages. “Over the last decade, the Indian concept of welfare has been significantly transformed into a more long-term-oriented, efficient, and empowering avatar.” Hooda, Shailendra (2013) in ‘Changing Pattern of Public Expenditure on Health in India Issues and Challenges’ assessed the resource requirement vs. actual spending in health. Choudhary, Mita (2020) in her work ‘Role of National Health Mission in Health Spending of States: Achievements and Issues’, analyzed health spending on NHM, Wang L, (2021) in his study ‘The Health Status Transition and Medical Expenditure Evaluation of Elderly Population in China’. has analyzed the demographic transition in China. M. Prabhakar, Christopher David (2018) in ‘Sustainable Development Goals: Challenges for India’ hastalked about the population in India and the achievement of said goals. The present study is secondary data-based, for better understanding the paper has been divided into three sections; the first part shall discuss the population dynamics in India during the year 2011-2036 and the second part will be devoted to the government expenditure and out-of-pocket expenditure and social security expenditure and private health insurance expenditure as a percent of total health expenditure, the third part shall be representing the status of EAG states about health outcomes and projected population, population coverage of primary healthcare is also a part of study.

### **The Dependency Ratio in India**

The dependency ratio is the number of children (age 0-14 years) and senior citizens (age 60+) per 100 working-age population (15-59 years). Changes in the dependency ratio reflect an indication of the future requirements of healthcare support. According to the ‘Population Projection Report 2019, “the ratio highlights the potential dependency burden on the working population and indicates the shifts in dependency, as we are going from a situation in which children are dominant to a situation in which older persons outnumber children (i.e, the transition from high mortality and high fertility, to low mortality and low fertility). A high dependency ratio indicates that the economically active population and the overall economy face a greater burden to support and provide the social services needed by children and older persons who are often economically dependent.”

Further, the Technical Group Population Projections assess in its report on Population, “Due to increasing longevity population 60 years and above are projected to increase from 101.5 million in 2011 to 227.4 million in 2036. Simultaneously, with India having made significant progress in achieving population control with TFR below the replacement level of fertility of 2.1, the young age (0-14 years) population is projected to fall from 373.9 million to 306.4 million during the same period. These amount to a fall in dependency ratio from 65% in 2011 to 54% in 2036.”

The proportion percentage of aged 15-59 will increase to 64.9% in the year 2036 from 60.7 in the year 2011 whereas the proportion of old age (60+) will increase to 14.9% from 8.4% in 2011. The data represented in Table projects the population of all ages during 2011-2036, majorly the increase in dependency especially the ratio of the older population from 13.8% in 2011 to 23% in 2036 reflects that the economic and social burden of the working population is going to be increasing till 2036.

**Table 1: Trends of Working-age Population and dependency Ratio in India**

Indicator /year	Population by broad age-age			Proportion (percentage)			Median age(years)	Dependency Ratio(%)		
	0-14	15-59	60+	0-14	15-59	60+		Young (years)	Old(60+)	Total(Young and old)
2011	373,893	735,424	101,538	30.9	60.7	8.4	24.92	50.8	13.8	64.6
2016	362,202	810,687	118,185	28.1	62.8	9.2	26.55	44.7	14.6	59.53
2021	349,990	875,446	137,570	25.7	64.2	10.1	28.34	40.7	15.7	55.7
2026	339,222	923,857	162,829	23.8	64.8	11.4	30.27	36.7	17.6	54.3
2031	323,258	962,991	193,426	21.9	65.1	13.1	32.38	33.6	20.1	53.7
2036	306,376	988,476	227,438	20.1	64.9	14.9	34.48	31.0	23.0	54.4

Source: mospi.gov.in population statistics

Report of the Technical Group on Population Projections for India and States 2011-2036, Ministry of Health & Family Welfare, July, 2020

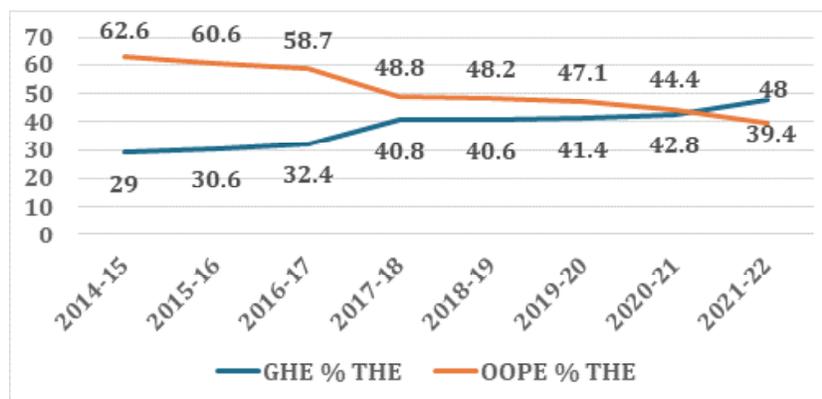
These analogies reflect projected social wants and more importantly burden on the healthcare sector.

**Trend in Government Health Expenditure & Out-of-Pocket Expenditure in India: during 2014-2021**

According to the National Health Accounts, 2020-21, “India’s health sector is characterized by low government expenditure on health, high out-of-pocket expenditure (OOPE), and low financial protection for adverse health events. India’s Government spending on health at 1.5% of GDP is among the lowest in the world. This scenario has constrained the capacity and quality of healthcare services offered in the public system.”

The latest developments in government health expenditure over the past few years have made healthcare more affordable in India, the figure -1 is representing the actual picture of the two.

**Figure-1**



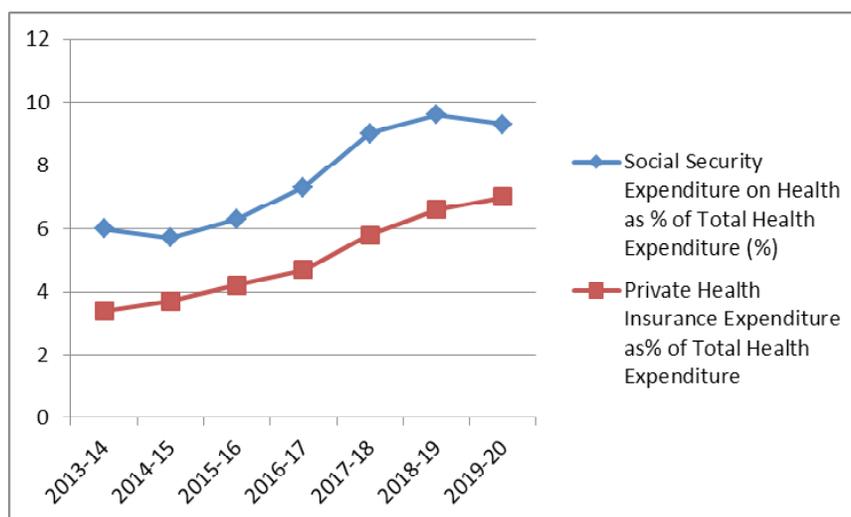
Source: National Health Accounts-2019-20

Table 1 reflects that the dependency ratio of older age (60+) is gradually increasing; it suggests a need for a robust universal public health care system and prospects of social security and health insurance. The trend of GHE and OOPE as a percentage of total health expenditure needs to be observed, Figure 1 projects the trend of government health expenditure is uphill since 2016-17 and reached 48% in FY 2021 from 29% in FY 2014. On the contrary, the arc of out-of-pocket expenditure on health as a percentage of total health expenditure has witnessed a downfall to 39.4% in 2019 from 58.7% in FY 2014.

### Social Security Expenditure and Private Health Insurance Expenditure as Percent of Total Health Expenditure:

Social security and health insurance become irreplaceable if the projection of the population suggests a higher dependency rate in the future. That too if the EAG states are showing average results (performer) on the dashboard of the SDG India Index specifically goal-3. Universal health coverage for all at all ages is to be achieved by 2030. The well-being of the nation's senior citizens (60+) needs to be addressed

Figure-2



Source: National Health Accounts-2019-20

The trend of social security expenditure as a percentage of total health expenditure has gained a hike of 2% and reached 9.3% in FY 2019 from 7.3% in FY 2016, whereas the private investment in health insurance has got a better pace and reached up to 7% in 2019 from 4.7% in FY 2016.

### The Status of Empowered Action Group States about Health Indicators

On June 18, 2001, under the Chairmanship of the Minister for Health and Family Welfare, Dr. C.P. Thakur, Empowered Action Group (EAG) was set up to facilitate the preparation of area-specific

programs in eight States, namely, Bihar, Jharkhand, MP, Chhattisgarh, Orissa, Rajasthan, UP, and Uttaranchal, which have lagged in containing population growth to manageable levels.

Table 2 is the presentation of the performance of EAG states in terms of health indicators i.e. IMR, NMR, Under-5 Mortality rate per 1000, and Projected Population During the year 2011-2036. The achievements of the above states as per SDG India Index 2021 have also been pointed out.

The decadal projected population growth will reach 34.7% in 2036 from 24.9 in 2011, Chhattisgarh has secured the top position in the projection of population growth rate i.e. 24.2 in 2011 to 32.5 in 2036, the important feature is according to SDG India Index 2021 Chhattisgarh and UP have scored less than 70 and are listed as a performer (P) instead of Front Runner (FR).

**Table-2: The Status of Empowered Action Group States about Health Indicators:**

States/UTs	IMR (per1000 live-births)		Under-5 Mortality Rate (per1000 live-births)		Neo-natal Mortality Rate (deaths per1000 livebirths)		Projected Population During year 2011-2036		NITI Ayog SDG India Index Goal 3 Ranking as on year 2021
	NFHS-4 2015-16	NFH-5 2019-21	NFHS-4 2015-16	NFH-5 2019-21	NFHS-4 2015-16	NFH-5 2019-21	Projected Population in 2011	Projected Population in 2036	
All India	40.7	35.2	49.7	41.9	29.5	24.9	24.9	34.7	74 FR
Bihar	48.1	46.8	58.1	56.4	34.5	36.7	19.1	28.1	64FR
Chhattisgarh	54.0	44.3	64.3	50.4	32.4	42.1	24.2	32.5	60 P
Madhya Pradesh	51.2	41.3	64.6	49.2	29.0	36.9	23.3	31.7	62 P
Jharkhand	43.8	37.9	54.3	45.4	28.2	33.0	22.1	31.4	74FR
Rajasthan	41.3	30.3	50.7	37.6	20.2	29.8	22.4	32.1	70 FR
Uttar Pradesh	63.5	50.4	78.1	59.8	35.7	45.1	21.5	30.7	60 P
Uttarakhand	39.7	39.1	46.5	45.6	32.4	27.9	21.5	31.7	77FR

Source: NFHS-4,5, Economic Survey 2021-22, NITI Ayog dashboard SDG India Index.

The lower pace of growth of these states has somewhere curtailing the dependency ratio of elderly persons as compared to the faster-growing states.

### Population Coverage of Primary Healthcare

Universal health is a vision of National Health Policy 2017 with the high recommendation of 2 beds per 1000 persons though in 2021 Ministry of Health and Family Welfare states that India has reached 0.6 beds per 1000 persons.

**Table-3: Population Coverage of Primary Healthcare**

Category	Norms	2019-20	2020-21	2021-22
SUB-CENTRE	300-5,000	5,729	5,734	5,691
PHC	20,000-30,000	35,730	35,604	36,049
CHC	80,000-1,20,000	1,71,779	1,63,298	1,64,027

Source :PRS Legislative Research: Demand for Grants-2024-25

According to the, 'Rural Health Statistics 2021-22', Ministry of Health and Family Welfare, each level of primary healthcare covers a greater population than recommended. Coverage of PHCs has worsened since 2019-20.

Primary health care is a three tiered system with: The units of primary health care complement each other to provide universal health care.

- **Community Healthcare Centre (CHC):** Provides Specialist services so each CHC is required to have four kinds of specialists onboard.
  - i) Surgeon,
  - ii) Physician,
  - iii) Obstetricians and
  - iv) Paediatrician. As of 2021-22, only 10% of all CHCs had all four specialists onboard.
- **Primary Health Centre (PHC):** Provides basic preventive and curative healthcare: According to the rural healthcare statistics 2020-21 Each PHC is required to have four to six beds. As of 2021-22, 74% of PHCs had a minimum of four beds. Need to be noted that 41% of PHCs of Odissa and Bihar have 4 beds. According to NITI Aayog (2021), 72% of all hospital beds were located in urban areas.
- **Sub-Centre: Provides:** Maternal health, family welfare, and immunization. Each Ayushman Bharat HWC would cover a population of 3,000-5,000 people and provide services including (i) care in pregnancy and childbirth, (ii) childhood and adolescent healthcare services, and (iii) screening and basic management of mental ailments and emergency medical services.

### Conclusion & Findings:

Demographic transition in India will result in a high dependency ratio of senior citizens (60+) till 2036. The demographic transition in India is caused by several reasons, in 2006 the proportion of the working-age population (age 15-64) was 62.9% and is expected to be increasing up to 68.4% in 2026.

Another positive trend in the country's health financing space is the increase in Social Security Expenditure (SSE) on healthcare. This has a direct impact on reducing out-of-pocket payments. A robust social security mechanism ensures that individuals will not face financial hardship and the risk of poverty as a consequence of accessing essential healthcare services.

The decadal projected population growth will reach 34.7% in 2036 from 24.9 in 2011, Chhattisgarh has secured the top position in the projection of population growth rate i.e. 24.2 in 2011 to 32.5 in 2036, the important feature is according to SDG India Index 2021 Chhattisgarh and UP are listed as a performer (P). Thus, EAG states will have to work for faster-growing social infrastructure facilities.

### Suggestions:

There is a need to invest in the construction of new healthcare facilities and upgrading existing ones, with more emphasis on the availability of healthcare workers and investment in research and development.

An integrated and close-knit healthcare system is needed for the good health and well-being of all at all ages.

As the dependency ratio suggests the share of social security and government health insurance should be increased as a percentage of total health expenditure.

Mental health is an issue to be kept as the focus of all healthcare policies social infrastructure planning may set up some mental health zones for addressing the mental health issues of persons in need.

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# Finding Challenges and Opportunities for Developing India into a Developed Economy

Anshika<sup>1</sup>, Kunal Saxena<sup>2</sup> & Dr. Vikas Pradhan<sup>3</sup>

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## ABSTRACT

*India's economic growth path has attracted worldwide attention, marked by lightning-fast growth and substantial structural adjustments. However, a set of challenges and opportunities accompany this growth trajectory, shaping the country's economic landscape. This study discusses a wide range of problems and possibilities that are influencing India's economic growth. Although India has consistently achieved robust GDP growth rates, it continues to grapple with ongoing issues like infrastructure deficiencies, socioeconomic disparities, and regulatory obstacles. Furthermore, the recent economic activities have intensified these problems, revealing weaknesses in healthcare, supply networks, and labor markets. The present study also examines the capacity of these possibilities to promote economic resilience and inclusivity. Through an analysis of present trends of GDP growth and per capita NNI, this research seeks to provide a thorough understanding of India's economic possibilities and the strategic necessities required to fully exploit its potential.*

**Keyword:** Indian economy, Economic Growth, GDP, Per capita NNI, Developed Economy

## Introduction

India's transformation from a developing nation to a developed nation is a vivid tale of substantial progress, aspiration, and complexity. Since gaining independence in 1947, India has emerged as one of the leading economies globally driven by key industries such as information technology, manufacturing, and agriculture, and the fundamental driver of India's economic growth since the 1980s has been the government's focus on prioritizing development, with capital playing a key role as its primary ally. (**Bongaarts & Sinding, 2011**) However, despite its remarkable growth, substantial constraints remain that impede its transformation into a fully developed nation. India faces formidable obstacles such as widespread poverty, gender inequality, inadequate health care, and an education system in need of overhaul. In addition, the nation grapples with inadequate infrastructure, the need

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to provide employment opportunities for its vast workforce, and the implementation of sustainable environmental measures. These constraints are accompanied by several possibilities that could help India bridge the gap and achieve developed country status. (Ahmad et al., 2018) Given its growing young demographics, India has the potential to emerge as a major global leader in innovation, technology, and entrepreneurship. The government's emphasis on projects such as Digital India, Make in India, and the green energy transition reflects a significant commitment to facilitating future-oriented growth. When efficiently harnessed, India's demographic dividend, characterized by its growing middle class, has the potential to boost domestic consumption, economic output, and global competitiveness. (Zakaria Arshad et al., 2009) This study examines the strategies needed to follow its path towards becoming a developed country, examining the complex balance between the obstacles India faces and the opportunities it can harness. By effectively tackling these complex challenges, India can achieve a future characterized by economic prosperity, social inclusiveness, and environmental sustainability. (Ghosh, 2015)

### Current Status of Indian Economy

India currently ranked as the **fifth-largest economy globally**, has seen unprecedented economic expansion in recent decades. India's economy has seen impressive growth in recent quarters, with a growth rate of around **8.4% (MoSPI 2024)** in **FY 2023-24**. The first quarter of **FY 2024-25** saw a **6.7% (MoSPI 2024)** growth, driven by strong private consumption, government spending, and a robust services sector. Programs of liberalization, a burgeoning middle class, and a vibrant services industry have propelled the rise. The **services sector** remains the largest contributor, contributing over **55%** (Economic Survey 2024) to the economy with an annual growth rate of **8.4%** (MoSPI 2024), and agriculture still plays a significant role, contributing about **18.3% of GDP** (Economic Survey 2024), and the manufacturing sector contribute **17%** of total GDP in **FY 2023-24**, which is possible because the "Make in India" initiative has driven growth in the manufacturing sector, supported by government schemes like the Production-Linked Incentive (PLI) scheme. The journey towards long-term economic success has remained a destination for FDI, with investments flowing into sectors like technology, telecom, e-commerce, and renewable energy. India attracted **\$70.95 billion** in **FDI** inflows in **FY 2023-24**, a slight decrease from **\$71.4 billion**, reflecting the nation's economic fluctuations and numerous obstacles.

### Methodology

This study is quantitative in nature and is based on descriptive analysis of data and based on secondary data which gathered from reputed source like economic survey, Ministry of Statistics and Programme Implementation (MoSPI) and Handbook of Statistic, PLFS report and various news paper article and it also includes an extensive review of existing literature, such as academic journals, government reports, policy papers, and industrial publications, to provide a theoretical framework and contextual background to the study. The main objective of this study is to discuss the challenges and opportunities for developing India into a developed economy. This study

includes data related to GDP and Per Capita NNI of last decade, which helps to understand the economic growth of India.

## Literature Review

“India’s economic growth since independence has been driven by economic reforms, poverty reduction, and government intervention, with potential for future growth and development.”(Sen, 2009) As far as rising economies go, it is widely accepted that India leads the globe in terms of economic might. (Bongaarts & Sinding, 2011) India has already shown to be the dominant force in the area when it comes to commerce and investment. (Khan et al., 2022) Over the course of the last half-century, India’s economic development has been progressively accelerating, becoming less unpredictable and more diverse across sectors and states.

However, in order to maintain this acceleration, it is necessary to solve many issues, including investment, credit availability, and export slowdowns. (Ahmad et al., 2018) According to Sharma, (2021) and Paruchuru et al., (2020) India is facing economic growth issues such as declining domestic demand, declining savings, rising inflation, and declining agricultural growth that must be addressed if the country is to achieve its target of \$5 trillion GDP by 2024–25. India may transfer to become a business-based economy by leveraging its strengths in skilled human capital, macroeconomic stability, the private sector, a flexible and adjustable economy, and the biggest local market.(Dahlman & Utz, 2005)

## Discussion

**This paper examines GDP and Per Capita Net National Income data to gain a deeper understanding of economic growth over the past decade.** The Gross Domestic Product (GDP) and per capita Net National Income (NNI) are often considered reliable indexes of economic growth; however they are not complete measurements of progress. GDP measures the aggregate worth of commodities and services generated within a nation, whereas per capita NNI modifies this number to represent the income per person, providing a concise overview of economic performance and mean income levels. Yet, these measures mainly measure economic production and income distribution, disregarding crucial aspects of development like as health, education, and quality of life.

In 2011-12, the GDP growth rate was 5.5% and the per capita NNI rate was 2.1%. However, in the current FYP, there has been a slight slowdown, with a 0.4% increase in constant GDP and a 1.2% increase in NNI. Following this, the GDP and NNI growth rates have been steadily increasing, reaching their highest points of 8.3 and 6.9 in 2016-17. Then there was a notable decline in GDP and NNI, dropping to 4.0% and 2.5% in 2019-20, respectively. During the period of 2020-21, there was a global pandemic, which clearly led to a decline in both GDP and NNI. However, following this period, both GDP and NNI experienced their highest growth rates in the decade, reaching 9.9% and 9.2% respectively in 2021-22.

Table 1: Annual Growth Rate of GDP and Per Capita NNI

Year	Gross Domestic Product	Per Capita Net National Income
2011-12	5.5	2.1
2012-13	5.1	3.3
2013-14	6.3	4.6
2014-15	7.5	6.2
2015-16	8.0	6.7
2016-17	8.3	6.9
2017-18	6.9	5.5
2018-19	6.5	5.2
2019-20	4.0	2.5
2020-21	-6.2	-8.9
2021-22	9.9	9.3
2022-23	6.8	5.7
2023-24	8.2	7.4

Source: Economic Survey 2023

Note: GDP, Per Capita NNI at constant price

We can divide this decade into the three parts listed below:

**Pre Pandemic period (2011-12 to 2019-20):** Both the Gross Domestic Product (GDP) and the Per capita Net National Income (PCNNI) have shown favorable growth in the pre-pandemic period, which spans from 2011-12 to 2019-20. However, beginning in 2017-2018, the growth rate began to decline, which could be a result of several economic issues, including the adoption of the Goods and Services Tax (GST) and the demonetization of currency.

**Pandemic Impact (2020-21):** The negative growth rate in both GDP and PCNNI reflects the direct economic impact of the COVID-19 pandemic. Both the fall in GDP and the significant fall in PCNNI are indicators of the disruptions in the macroeconomic environment.

**Post-pandemic Recovery (2021-22 to 2023-24):** A strong recovery in GDP and PCNNI growth rates after the pandemic is a sign of a strong economic bounce back. After a period of stable growth rates, reflecting a restoration of the economic trajectory that existed before the pandemic, the peak in 2021-22 signals a strong recovery effort.

### Barriers, Bottlenecks and Challenges before India being a Developed Economy

As a developing country, India has faced many hurdles, bottlenecks, and challenges over time to become a developed economy, including economic growth, food security, political stability, and liberalization and globalization. The initial years after independence witnessed low economic growth, poverty, and industrialization, with a focus on creating a self-reliant economy through planned development and public sector enterprises, but in contemporary times, here are some of the challenges:

## **Inequality and Poverty**

All over the world, inequality and poverty continue to be major issues in society, but in India, the gap between the rich and the poor has widened. According to the World Bank data, 11.9% (2021-2022) of the population falls below the poverty line, further highlighting the inequalities between the rich and the poor. There is also inequality in different regions, as well as cultural beliefs that affect welfare programs in the country.

## **Unemployment and Underemployment**

The nation faces a high level of underemployment as well as unemployment, particularly among the labor force. According to an article published in Forbes India in 2023, 8.03% of the youth of the population are unemployed. This is due to technological advancement, and one of the causes is a mismatch between skills and job opportunities.

## **Infrastructure Gap**

There are many gaps when it comes to infrastructure development, especially in rural areas, which include poor transport networks, inadequate electricity supply, and lack of access to clean water and sanitation facilities. Investing in infrastructure is essential to achieve economic growth and enhance the quality of life of the general public.

## **Agricultural Development**

Agriculture is always an important and critical sector for a country, employing 46% (PLFS 2023) of the population in agriculture and the allied sector, but it faces many challenges like low productivity of labor, lack of access to modern technology, irregularity in markets, and fragmented land holdings, which effect agricultural development.

## **Rising Debt:**

Rising public debt in India is a matter of concern, as it hampers the government's ability to allocate funds for vital services and infrastructure. According to the Economics Times news article, India's total external debt in March 2024 was **\$663.8 billion**, which is **\$39.7** more than in 2023.

## **Global Economic Uncertainty:**

A primary constraint in the contemporary world is the presence of global economic uncertainties, including trade disputes, geopolitical conflicts, and changes in global markets, which have an impact on India's economy. These risks can be mitigated by diversifying trading partners, promoting local sectors, and increasing economic resilience.

## **Opportunities in Indian Economy to become be a Developed Nation**

India is currently positioned to take advantage of several significant opportunities for become developed nation and we have the potential to accelerate its economic development and growth.

Efficient exploitation of these potentials has the potential to propel India towards sustainable and equitable economic development. Here are some key areas:

### **Demographic Dividend:**

According to the **Time of India** news, “It will peak around 2041, when 59% of its population will be of working age (20–59 years). At present, India’s working-age population is nine hundred million.” **This indicates India has the world’s largest labor force. By utilizing this resource effectively, we can enhance both economic productivity and growth.**

### **Digital India:**

Digital India brings economic benefits and revolutions in agriculture, healthcare, education, and finance. E-commerce and fintech are flourishing. Government investment in digital infrastructure and start-up ecosystems is crucial. Business Standard News reports that **“India’s digital economy is growing at 2.8% per year and expected to reach \$1 trillion by 2027–28.”**

### **Manufacturing Growth:**

India’s manufacturing sector share in GDP was **17% in FYP 2023-24 (economic survey 2024)** and this sector projected to exceed **\$1 trillion by 2025-26 (business Standard news)**. It provided the labor force with about **36 million** jobs, and it has the potential to create millions more. Our aim is to become a global manufacturing hub because the manufacturing sector has the capacity to absorb labor-force.

### **Renewable Energy:**

India is making great strides in renewable energy, aiming to reach 500 gigawatts by 2030. The country ranks fourth in renewable energy capacity due to solar and wind power expansion. (Ministry of New and Renewal Energy) This shift solves environmental issues and creates jobs.

### **Service Sector Expansion:**

The service industry, especially in IT and business process outsourcing, is an important catalyst for growth, creating employment opportunities that require advanced work skills. Currently, the service industry is expanding rapidly and aggressively around the world. The contribution of this sector to **GDP is 54% (economic survey 2024)** which is higher than any other sector. This industry generated highly skilled employment that catalyzed economic expansion.

### **Infrastructure Development:**

Infrastructure development is essential for India’s socio-economic progress. The government has launched the National Infrastructure Pipeline (NIP) and several other projects to enhance infrastructure in sectors such as transport, energy and urban transformation and quality of life.

## Findings

- As previously mentioned, India faces numerous challenges in its journey to become a developed nation, including inequality and poverty, underemployment, infrastructure development, and agricultural development. However, one of the most significant challenges is the increasing national debt, a factor that disproportionately impacts future generations. The total country external debt in the first quarter of 2024 was \$663.8 billion, which is \$39.7 more than in 2023; it will become such a serious problem in the future.
- As a fast-growing developing nation, India has many opportunities that can help it become a developed nation, including a digital India, an independent working-age population, a growing manufacturing sector, a fast-expanding service sector, and a pathway for renewable energy. These entire sectors have the potential to absorb unemployed and unskilled labor, which will result in economic growth.
- According to this study, we have the largest working-age population, which is projected to grow by 59% by 2041, and we have the potential to excel in the renewable energy sector, ranking fourth globally. The expansion of solar and wind power will lead to capacity reaching 500 gigawatts by 2030, while the digital economy is growing at 2.8% per year and is expected to reach \$1 trillion by 2027–28.

## Conclusion

The transformation of a developing nation into a developed one is characterized by remarkable achievements and persistent challenges. Our growth starts with the form of an agrarian economy, which is turned into a vast hub for the goods production and the dynamic services sector with affordable costs, which is possible by liberalization policies. However, this growth has not been without its hurdles. Socio-economic inequality and poverty, a lack of technology skills, the infrastructural gap, rising debt itself are huge challenges and underemployment are regulatory bottlenecks that continue to impede progress. Despite these challenges, India is uniquely positioned to harness several transformative opportunities. As a result, it is important to prioritize policies aimed at reducing poverty and inequality, investing in education and skills development to create a skilled workforce, accelerating infrastructure development to improve connectivity, modernizing agriculture through the use of technology and market linkages, maintaining fiscal discipline, and strengthening economic ties with other countries. If India takes advantage of these opportunities, it can maintain its current rate of economic growth and establish itself as a global economic superpower. India has the potential to become a global economic superpower if it takes action to address these issues and the possibilities they offer.

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# Assessing Poverty among Various Social Groups in Rural Varanasi

Anup Kumar Mishra<sup>1</sup>

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## ABSTRACT

*Poverty and social exclusion continue to pose major challenges to governments across the world. As has been noted in the context of poverty, it is a global phenomenon which affects all states to different extents and is not confined to the developing world. The present paper is only an honest effort to investigate the issues of social exclusion and poverty at ground level. Entrusting on the line of "Think Globally, Act Locally", globally I reviewed the literature for the understanding of the subject and then "Acted Locally" by taking the two villages of Varanasi district in Eastern Uttar Pradesh of India as my 'Universe' and tried to analyse the issues of social exclusion and poverty by adopting the mixed methods of research. The area of this present work is challenging and to make a perfect research methods and methodology for this area is a complicated job. It is a great opportunity for me to build up a systematic research method and methodology to knowing the relationship between social exclusion and poverty. The present paper tried to present research methods to explore the systematic solution for research questions.*

**Key Words :** wpr, poverty, social exclusion

## Methodology

The Following methodology has been used in the study:

- I. Review and Secondary Data
  - II. Primary data and its analysis ( Use of simple statistical tools and narrative method )
  - III. Data collection through questionnaire (schedule) and Qualitative interview
- 1. Objective and Research Questions**
    - i. Within the core characteristics of the prevailing Indian society, there are a set of social, religious, cultural and economic factors that typically cause social discrimination against the lower caste persons. As obvious outcome of such social discrimination, there is vast and deep rooted Social Exclusion.
    - ii. The structural content and the form of discrimination can be sighted under Labour market.

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- iii. The attributing factors of the consequence of discrimination can be in the form of Wage rates, work place, working hours, wage payment intervals, and employment rates.

### Selection of Village

- Two villages, one of “**higher caste strata**” and the other of “**lower caste strata**” has been selected as per census data (2011) for all villages in the selected **SEWAPURI** block of Varanasi.
  - i) **For higher caste strata** we filtered those villages where;
    - a. SC population are 20 per cent or below.
    - b. Number of household (HH) are above 250.
  - ii) **For lower caste strata:**
    - a. SC population are 20 per cent or above.
    - b. Number of household (HH) are 250 or above.
- As based on the above criteria, we have selected the villages on lottery method of random sampling separately one from ‘higher caste strata’ and the other from ‘lower caste strata’. Finally we selected the following villages.
  - a. For higher caste strata: **KARDHANA**
  - b. For lower caste strata: **NEWADA**

### Review of Literature

An attempts to review all those literature in a chronological order in which the issues of poverty social exclusion and few other socio economic aspects have been covered.

Sen (1997) discusses the impact of various inequalities on individuals, focusing on the effect of unemployment on social exclusion, family crises, and lower skills, motivation, and political activity. He also discusses how massive unemployment may intensify racial and gender inequality and emphasizes that these costs will not be adequately reflected in market prices.

Although the theory and concept of social exclusion originated in developed countries, they have been applied extensively to developing countries. (The International Institute for Labour Studies has played a key role in introducing the idea of social exclusion into the developing country debate.) Properly done, such diffusion should attend closely to the context-dependent definitions and meanings involved with an idea like social exclusion. It certainly does not mean the same thing in every culture (de Haan 1998).

Buck and Harloe (1998) explore the processes underlying social exclusion in London, arguing that it is best seen in terms of functioning of the labor market, access to state redistribution, and access to communal resources of reciprocity and mutual support. Thorne (1999) explores the social exclusion of indigenous peoples in Brazil and the impact on their physical and social environments of World Bank-sponsored development projects.

Amartya Sen draws attention to the various dimensions of the notion of social exclusion (Sen, 2000), Distinction is drawn between the situations wherein some people are being kept out and wherein some people are being included (maybe even being forced to be included)—in deeply unfavourable terms. He describes the former as “unfavourable exclusion” and the latter as “unfavourable inclusion”. Meenakshi, J.V. and other (2000) computes the poverty rates for scheduled caste, scheduled tribe and female-headed households through the 50<sup>th</sup> round of NSSO unit level data. Through this paper they tried to attempt to found out answers of the following questions: – How do head count ratios for scheduled caste, scheduled tribe and female-headed households compare with poverty rates overall? Marjit, S. (2001) A Report on ‘Mapping the Socially Excluded: Beyond Poverty Measurements’, is based on a primary survey of 50 villages in the district of Cooch Behar in West Bengal. Report indicates that social exclusion implies that despite apparent availability of several goods and services, certain section of the population remain outside its coverage for many reasons. Kozel Valerie & Parker Barbara (2003), reviews the nature and evolution of poverty in UP. It draws on a range of information, including household surveys, qualitative field studies and conversations with poor men and women.

S Maheswaran and Paul Attewell (2010) indicates in their economic analysis of NSSO data that SC and ST respondents experience a 15 percent wage penalty compared to otherwise equivalent HC workers. Sonale De Desai, Cecily Dorden Adams and Amaresh Dubey(2010) discussed thoroughly about the contribution to inequalities in the markets of basic skills .

Sukhadev Thorat and Joel Lee (2010) focused on food security programs locating the delivery of services such as mid-day meals and fair price shops in HC settlements results in inadequate access and discriminatory pricing practices. Surinder S. Jodhaka, (2010) agrees that caste had for long been a subject of inquiry with sociologists and social anthropologists but the economists who worked on ‘hard’ questions of development rarely treated caste as a relevant area of inquiry. However, over in years, scholars have come to recognise the crucial impotence of the ‘noneconomic’ factors such as caste, race, ethnicity or gender in structuring market and determining economic outcomes. Papola T. S. (2012), makes an effort to present the comprehensive outcomes of various study on social discrimination and social exclusion.

### **Labour Market Analysis in the Study Area**

Earlier studies found that discrimination in labour market operates through exclusion in hiring and payment of lower wages. In about 36 percent of the villages the SC’s were denied casual employment in agriculture. In about 25 percent villages, the SC, faced discrimination in terms of lower wage payments. The SC wage labour thus, received daily wage at a rate, which has less than the market wage rate or wages paid to the ‘Upper Caste’ workers. The present paper based on primary survey also found such discrimination in labour market which have been presented in various form.

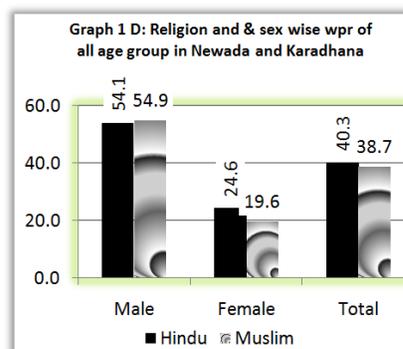
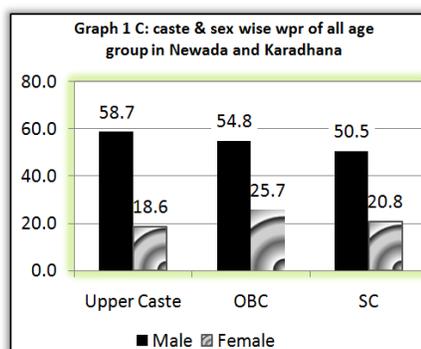
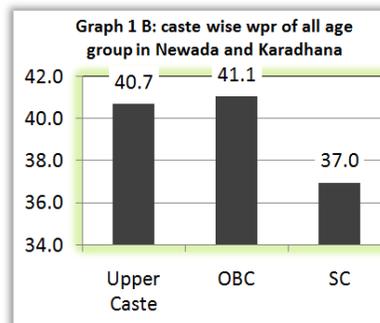
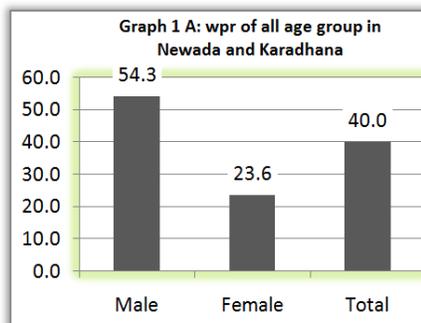
### **Worker Population Ratio ( wpr) of all age groups**

Observing the status of labour market one should analyse the status of worker population ratio (wpr). In the study we found the similar pattern of wpr at ground level as all India pattern. The total

wpr of all age group in both the villages of Varanasi district of Uttar Pradesh is 39.9 percent which exactly match the all India rural figure of 39.9 percent. In Uttar Pradesh it is less than that (33.8 percent). Wpr for Upper Caste was 40.71 percent, and for OBC it was 41.05 percent but it was only 36.9 percent for SC's, in the two villages of 'Varanasi' in 'Uttar Pradesh'.

**Table 1: Workers population ratio of all age group in Newada and Karadhana (in percentage)**

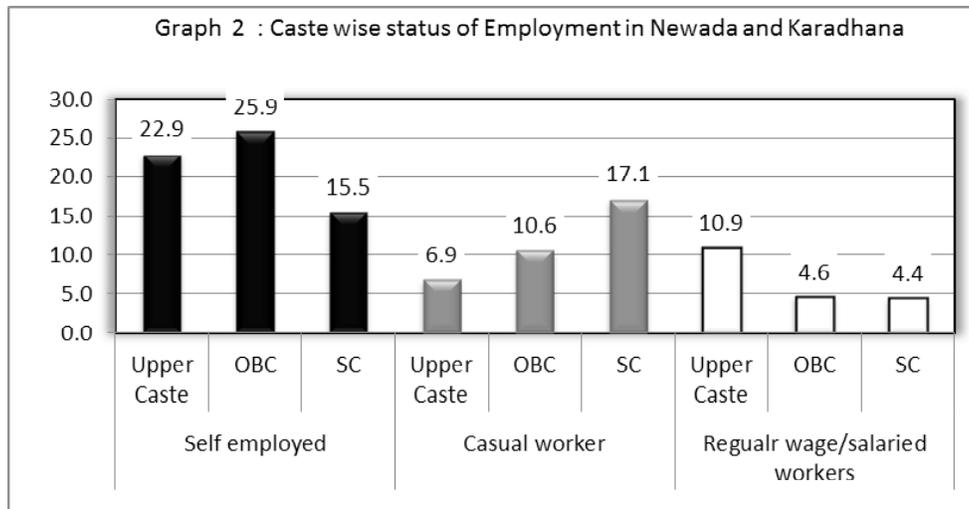
Village and Caste	Religion and Sex								
	Hindu			Muslim			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Newada</b>									
UpperCaste	54.32	22.55	39.73	-	-	-	54.32	22.55	39.73
OBC	53.00	28.02	40.94	-	-	-	53.00	28.02	40.94
SC	51.84	21.78	38.23	48.57	8.82	28.99	51.47	20.08	37.10
Total	53.11	24.75	39.85	48.57	8.82	28.99	52.96	24.16	39.47
<b>Karadhana</b>									
UpperCaste	63.34	14.05	41.77	-	-	-	63.34	14.05	41.77
OBC	54.96	28.19	42.16	55.52	19.76	39.10	55.16	25.29	41.07
SC	50.46	20.71	36.88	30.77	66.67	42.11	50.17	21.08	36.94
Total	54.48	24.49	40.47	55.16	20.13	39.13	54.65	23.45	40.14
<b>Newada + Karadhana</b>									
UpperCaste	58.74	18.57	40.71	-	-	-	58.74	18.57	<b>40.71</b>
OBC	54.55	28.16	41.90	55.52	19.76	39.10	54.85	25.70	<b>41.05</b>
SC	50.79	20.96	37.20	43.75	17.50	31.82	50.50	20.82	<b>36.98</b>
Total	54.11	24.56	40.30	54.91	19.65	38.73	54.27	23.61	<b>39.99</b>
<b>Uttar Pradesh<sup>1</sup> Rural</b>	-	-	-	-	-	-	<b>49.1</b>	<b>17.7</b>	<b>33.8</b>
<b>All India Rural<sup>2</sup></b>	-	-	-	-	-	-	<b>54.3</b>	<b>24.8</b>	<b>39.9</b>



The figure is more discriminating in term of gender wpr for female was only 18.5, 25.7 and 20.8 percent in comparison of 58.74, 54.85 and 50.50 percent for male for ‘Upper Caste’, ‘OBC’ and SC’s respectively table observing the religious wise wpr the study found that ‘Muslims’ females wpr was less than Hindu females in all age group. This has been also depicted these data in graphical mode (Graph 1 A to D).

**Activity Status within total population /Caste Wise/Gender Wise**

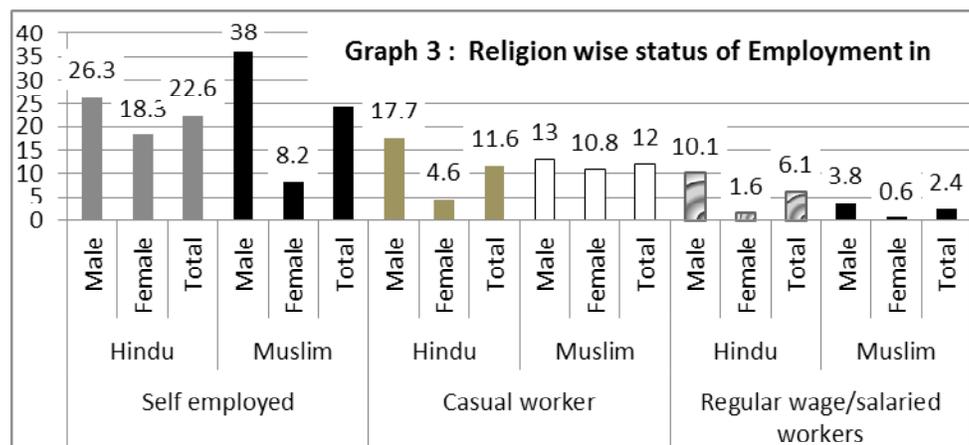
While observing the activity status within total population in the study area result found that only 4.4 percent SC was engaged in regular wage or salaried works in comparison of 4.6 percent for OBC and 10.9 percent for Upper Caste population. The condition of female in this activity is more worsen in almost all the categories (only 1.5, 1.0 and 2.9 percent for SC, OBC and Upper Caste respectively). The most self employed population was found in the OBC category (25.9 per cent) followed by the Upper Caste (22.9 per cent). Again SC’s population got the worst condition (15.5 per cent) in self employment) status. The population of SC’s are maximum engaged as casual labour (17.1 per cent). Only 6.9 percent Upper Caste population are engaged in casual work. This shows the condition of poverty among SC category. It seems that more casual workers denote more poverty. It may be verified with the land availability in SC’s category households. Again the study found the unequal status of female workers in all work’s activity in among the all the category. ( Graph 2)



### Activity Status within Total Population / Religion Wise / Gender Wise

Graph 3 shows the religion wise, male-female status of work in the study area of rural Varanasi. It indicates that Muslim's population are more self employed (24.3 per cent) than Hindu population (22.6 per cent). In contrast Hindu's female are more self employed (18.6 per cent) than Muslim females (only 8.2 percent).

There are not many differences in casual work category among Hindu and Muslim population. The only difference is that the Hindu female, are less engaged as casual worker (4.6 per cent) than Muslim female (10.8 per cent). The discrimination is seen in the category of regular wage or salaried works. Only 2.4 percent Muslim population are engaged in this category in comparison of 6.1 percent for Hindu population.

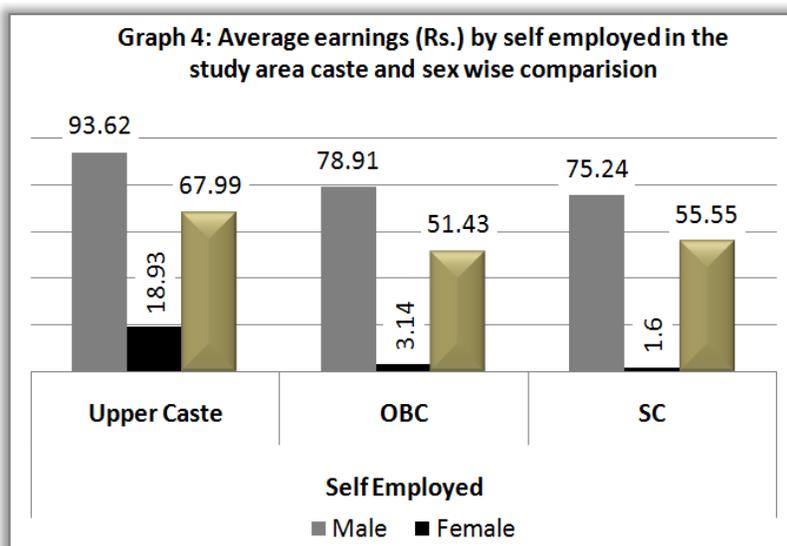


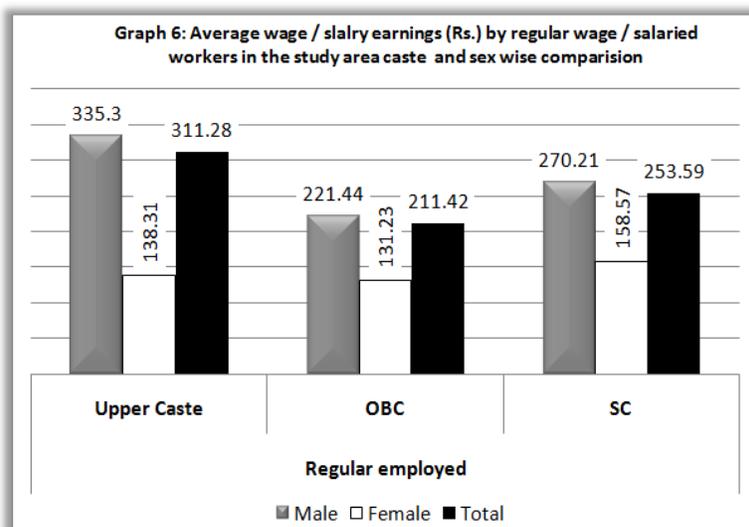
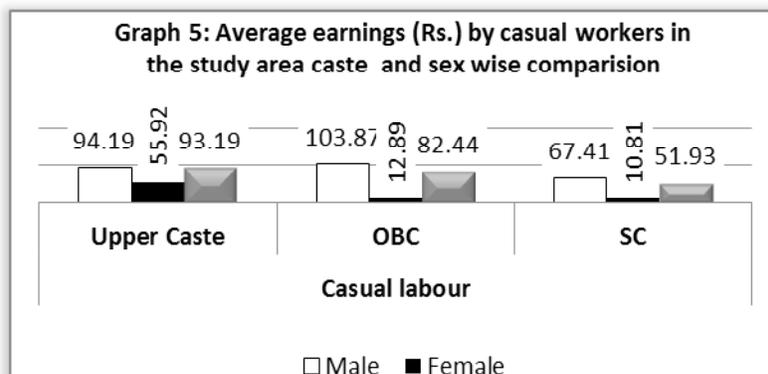
### Average wage / salary earnings

The most worry some, unequal and discriminatory situation are seen in the average wage or salary earnings among various caste and religion groups in the various status of work. One are hand Upper caste workers are getting highest among wage / salary per day (Rs. 146.87) and on the other OBC and SC's workers are getting lowest average wage / salary earning per day (Rs. 78.36 and Rs. 79.63 respectively) in the study area.

The average wage / salary earnings per day earnings by 'Upper Caste' workers are more than two times than OBC and SC workers. In general this seems the cause of poverty in SC or OBC category populations. The most worrisome situation exists in the 'Casual labour' work status where 'Upper caste' is getting Rs. 93.19 average wage / salary earnings per day and SC workers are getting only Rs. 52.62 average wage / salary earning per day in the two villages of Varanasi in eastern Uttar Pradesh. Even OBC workers are getting just equal to 'Upper Caste' workers (Rs. 94.57). 'Self employed' OBC and SC workers are also getting less average wage / salary earnings per day (Rs. 42.84 and Rs. 55.86 respectively) than Upper caste workers (Rs. 67.99).

Naturally 'Regular wage /salaried' employed workers are earnings more than other types of workers in every caste category, but we also found unequal status in this category. 'Upper caste' workers are getting Rs. 311.28 average wage/salary per day and OBC and SC workers are getting less than that (Rs. 221.00 and Rs. 255.42 respectively). Analysing with the help of graphs gender wised we find that female workers average wage /salary per day are more discrimination in almost every caste category and work category. Female SC workers are getting lowest average wage per day (Rs. 11.01) than OBC female (Rs. 16.68) and Upper caste female (Rs. 55.92). This may be the clear case of caste discrimination in the study area.





**Table 2 :Average wage/ salary earnings (Rs. 0.00)**

Status of Works	Male	Female	Total
<b>Uttar Pradesh Rural<sup>1</sup></b>			
SelfEmployed	-	-	-
Casuallabour	129.20	110.68	127.40
Regularemployed	296.51	171.27	276.13
<b>All India Rural<sup>2</sup></b>			
SelfEmployed	-	-	-
Casuallabour	129.72	105.29	122.26
Regularemployed	322.28	201.56	298.96

**Source:** <sup>1</sup> & <sup>2</sup> Calculated from NSSO, 68th round, Employment and Unemployment Situation in India 2011-12, pp-174-177.

The wage gap of male-female also indicates the gender inequality in the status of worker in the study area. Upper Caste self employed male are getting Rs. 93.62 per day and female are getting only Rs. 18.93 in the same work. Worst condition is in OBC and SC category. OBC male are getting Rs. 76.79 per day in 'Self employed' group and OBC female are getting only Rs. 1.84. The same situation exists in SC category (Rs. 75.89 for male and only Rs. 1.64 for female per day) on other hand in the status of casual work. Upper caste casual worker earn Rs. 94.19 per day where as female Upper caste worker gets more than Upper caste male (Rs. 107.51 per day) but female OBC earn merely Rs 16.68 per day. The gap also exists in SC category where SC male casual workers earn Rs. 68.29 per day and SC female casual workers earn merely Rs. 11.01 per day. *This is the clear cut indication and cause of poverty among SC category especially for female.*

### **General Findings for Labour Market and Exclusion**

When we observed the activity status within total population in the study area we found that only 4.4 percent SC was engaged in regular wage or salaried works in comparison of 4.6 percent for OBC and 10.9 percent for Upper Caste population. The condition of female in this activity is more worsen in almost all the categories (only 1.5, 1.0 and 2.9 percent for SC, OBC and Upper Caste respectively). The most self employed population was found in the OBC category (25.9 per cent) followed by the Upper Caste (22.9 per cent). Again SC's population got the worst condition (15.5 per cent) in self employment) status. The population of SC's are maximum engaged as casual labour (17.1 per cent). Only 6.9 percent Upper Caste population are engaged in casual work. This shows the condition of poverty among SC category. It seems that more casual workers denote more poverty. It may be verified with the land availability in SC's category households. Again we found the unequal status of female workers in all work's activity in among the all the category. In our study area the caste wise status shows that, maximum SC's population are engaged in casual works which may be the root cause behind poverty in SC category. Observing gender wise we find that female workers average wage /salary per day are more discrimination in almost every caste category and work category. Female SC workers are getting lowest average wage per day (Rs. 11.01) than OBC female (Rs. 16.68) and Upper caste female (Rs. 55.92). This may be the clear case of caste discrimination in the study area.

### **Suggestions for Policy Implications**

Facts reveal that lower caste or deprived caste of rural India or not only economically and socially vulnerable, they also tend to benefit little from the state sponsored health care system. The market based private enterprises is beyond their rich and in the absence of equitable access to preventive and curative health care services the degree of their deprivation is likely to increase manifold. Hence, health care needs of the deprived class of rural India should be addressed keeping their social and cultural specific in mind.

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# A Study of Socio-Economic Implications of Ageing Demographic Transition in India

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## ABSTRACT

*India, traditionally characterized by a youthful population, is undergoing a demographic transition marked by a steadily increasing share of elderly citizens. With improvements in healthcare, declining fertility rates, and higher life expectancy, the ageing population is projected to grow significantly in the coming decades. The primary objective is to analyze the current demographic trends in India with respect to the ageing population and to assessing how the increasing elderly population will affect workforce dynamics, economic productivity, and the dependency ratio. Specifically, it examines the impacts on economic growth, healthcare systems, pension frameworks, and family structures. The hypothesis posits that the growing elderly population will intensify pressure on economic resources and social services, potentially undermining economic productivity unless appropriate policy measures are implemented.*

*This research utilizes demographic data from sources such as the Census of India, Human Development Report of India, NSSO, NFHS and World Population Prospects (UN) would be analyzed to assess trends in ageing, fertility rates, life expectancy and dependency ratio. Economic data related to employment, income levels, healthcare spending, and social security coverage would also be examined.*

*The findings suggest that the ageing population in India presents both challenges and opportunities. While there will be increased demands on healthcare and pension systems, there are also opportunities for economic growth through the promotion of senior-friendly industries and policies. This study underscores the need for proactive measures to adapt to the changing demographic landscape and harness the potential benefits of an ageing population, ensuring sustainable socioeconomic development in India.*

**Keywords:** Population Ageing, Demographic Transition

## Introduction

**Demographic transition:** According to E.G Dolan, “Demographic transition refers to a population cycle that begins with a fall in the death rate, continues with a phase of rapid population growth and concludes with a decline in the birth rate”.

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**Ageing Population:** An ageing population is a population where the median age is increasing due to a decline in fertility rates and an increase in life expectancy.

India, historically marked by a predominantly young population, is now navigating a profound demographic transition with a steadily increasing proportion of elderly citizens. This shift, driven by advancements in healthcare, declining fertility rates, and rising life expectancy, forecasts a significant growth in the elderly population over the coming decades. India's population of 141.72 crores the latest United nation the second largest globally, comprising 17.78% of the world's total (United Nations 2024), and the United Nations Population Division estimates that India's population will in fact overtake China's by 2028. The latest projections by the United Nations suggest that the global population could grow to around 8.5 billion in 2030, 9.7 billion in 2050.

### Review of Literature

- **S Siva Raju (2011)**, "*Studies on Ageing in India*": The paper outlines the status of research on ageing in India and provides a situational analysis of elderly in terms of economic, social, psychological and health aspects, and elder abuse. The paper also develops issues upon which models of care for the elderly can be framed and argues that factors such as place of residence, social class and gender among others tend to influence such models of care.
- **Subaiya, Lekha and Dhananjay W Bansod (2011)** "*Demographics of Population Ageing in India*", The paper explores the demographic profile of older persons in India using the 2001 census data and projections up to 2026 to build a knowledge base to better understand the implications of changing population age structure. The data for this paper is drawn from censuses for the period from 1961 to 2001 and may be viewed as an update of an earlier analysis. Projection data is taken from the Population Projections for India and its states, 2001-26, by the Technical Group of Population Projections.
- **K. S. James and Srinivas Goli (2022)**, "*Demographics of Ageing in India: Socio-Economic Inequalities and Challenges on the Health Front*" This study by investigates the emerging challenges of ageing in India due to demographic changes. The authors highlight that the demographic transition in India has led to a significant increase in the elderly population, primarily driven by declining fertility rates and increasing life expectancy. The study uses data from the Census of India (2011) and the 71st round of the National Sample Survey Organisation to analyse the socio-economic implications of this demographic shift.
- **Dipti Govil, Harihar Sahoo, K. S. James, and Ravi Durga Prasad (2023)** "*Economics of Ageing in India: Thematic Review of Literature*" provide a comprehensive review of the economic aspects of ageing in India. This review

categorizes the existing literature into themes related to elderly work participation, family transfers, economic burden, government transfers, social security, and elderly poverty. The authors highlight that population ageing is a universal phenomenon, and the rapid growth of the elderly population in India poses significant economic, social, and healthcare challenges.

### Objectives

- To analyse the current and projected demographic trends related to the ageing population in India.
- To identify the key factors driving this demographic transition in this study area.

### Research questions

- What are the current and projected demographic trends related to the ageing population in India?
- What would be the problems due to this demographic transition in this study area?

### Research Methodology

**Datatype And Sources of data** - The type of data is quantitative in nature and whole part of the data is collected from secondary source. The main source of the secondary data used in the study are from the United Nations Population Fund (UNFPA) India, India Ageing Report 2023. Longitudinal Ageing Survey in India (LASI), 2017-18. Census of India, Population Projections by the Government of India (2011-2036). World Population Prospects 2022 by the United Nations Department of Economic and Social Affairs.

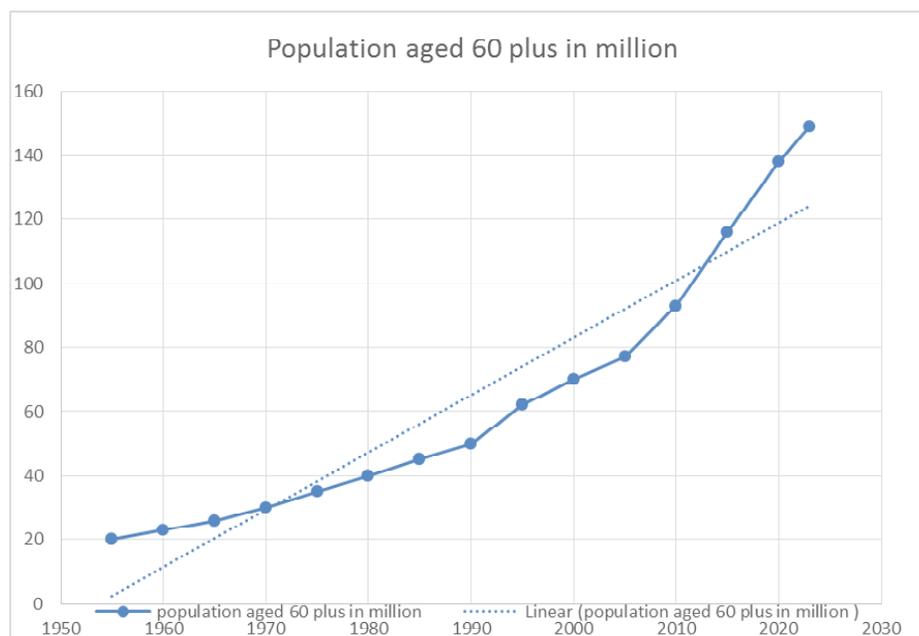
**Countries with the greatest absolute number of adults 60+, 2015 and 2050**

Year 2015	Adults 60+	Projection 2050	Adults 60+
	Adults 60+(thousands)	Country	Adults 60+(thousands)
1. China	209,240	1.China	491533
<b>2. India</b>	<b>116,553</b>	<b>2.India</b>	<b>330043</b>
3. United States	66,545	3.United States	108,326
4. Japan	41,873	4.Brazil	69,882
5. Russia	28730	5.Indonesia	61,896

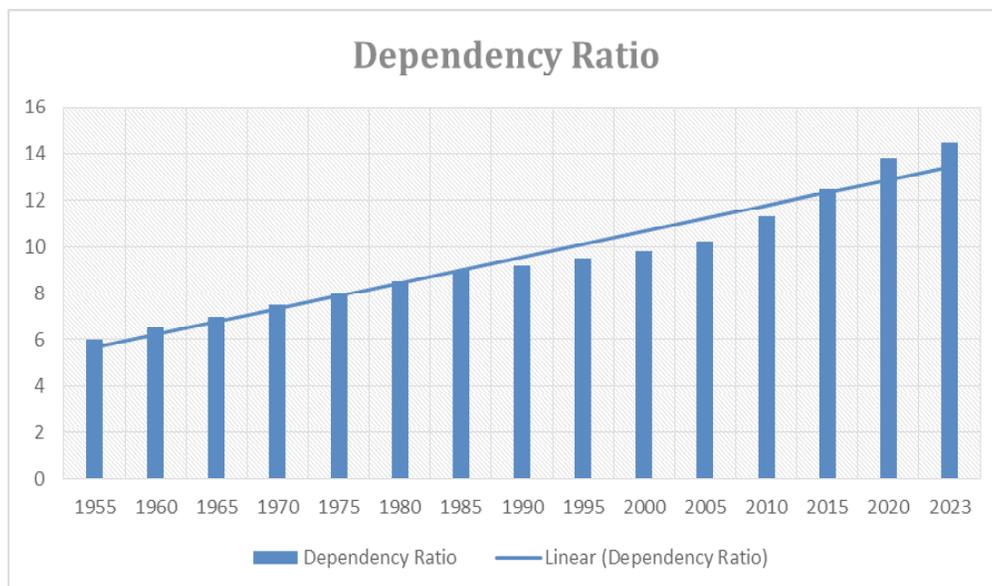
**Source:** (United Nations 2015); medium fertility scenario

## Data Analysis

Year	Total Population (millions)	Population Aged 60+ (millions)	Percentage of Population Aged 60+ (%)	Life Expectancy at Birth (years)	Old Age Dependency Ratio (%)	Demographic Phase
1955	409.00	20.00	4.89	41.5	6.0	Early Expanding
1960	450.55	23.00	5.10	43.5	6.5	Early Expanding
1965	497.00	26.00	5.23	45.5	7.0	Early Expanding
1970	553.00	30.00	5.42	47.5	7.5	Early Expanding
1975	623.52	35.00	5.61	49.5	8.0	Early Expanding
1980	696.83	40.00	5.74	51.5	8.5	Late Expanding
1985	780.24	45.00	5.77	53.5	9.0	Late Expanding
1990	870.45	50.00	5.75	55.5	9.2	Late Expanding
1995	945.00	62.00	6.56	60.5	9.5	Late Expanding
2000	1,016.00	70.00	6.89	62.0	9.8	Late Expanding
2005	1,139.96	77.00	6.76	63.5	10.2	Low Stationary
2010	1,224.61	93.00	7.60	65.5	11.3	Low Stationary
2015	1,311.05	116.00	8.85	67.5	12.5	Low Stationary
2020	1,380.00	138.00	10.00	69.5	13.8	Low Stationary
2023	1407.56	149.00	10.59	70.8	14.5	Low Stationary
2030	1480.0	180.0	12.2	72.5	18.0	Early Aging
2040	1540.0	220.0	14.3	74.5	21.0	Mid Aging



Source: UNFP Report (author interpretation through MS-excel)



Source: UNFPA, India Ageing Report 2023

From **1955 to 2023**, India has undergone significant demographic changes, particularly in the aging population. The total population has grown from approximately 409 million in 1955 to around 1.41 billion in 2023. During this period, the population aged 60 and above has increased from 20 million to 149 million, reflecting a rise in the percentage of the elderly population from 4.89% to 10.59%.

This demographic shift is largely attributed to improvements in life expectancy, which has increased from 41.5 years in 1955 to 70.8 years in 2023. The old age dependency ratio, which measures the number of elderly people as a proportion of the working-age population, has also risen from 6.0% to 14.5%. This indicates a growing burden on the working-age population to support the elderly.

The demographic phases reflect the transition from high birth and death rates (Early Expanding) to lower birth and death rates (Low Stationary), indicating a more stable population growth with an increasing proportion of elderly individuals. This transition necessitates robust policies and programs to address the challenges associated with an aging population, such as healthcare, social security, and economic support. The increasing proportion of elderly individuals necessitates enhanced geriatric care, financial empowerment, and capacity-building initiatives to ensure their well-being and integration into society.

### Regional Variations in Aging in India (State-wise Data)

Here is a state-wise data table showing the elderly population (aged 60 and above) as a percentage of the total population in India for selected years:

State/UT	2001 (%)	2011 (%)	2021 (%)	2023 (%)
Kerala	10.5	12.6	16.5	17.2
Tamil Nadu	8.8	10.4	13.6	14.1
Himachal Pradesh	8.6	10.2	13.1	13.7
Punjab	8.2	9.8	12.7	13.3
Andhra Pradesh	8.0	9.6	12.4	12.9
Odisha	7.8	9.4	12.2	12.7
Maharashtra	7.5	9.1	11.8	12.3
Karnataka	7.3	8.9	11.6	12.1
West Bengal	7.1	8.7	11.4	11.9
Uttarakhand	6.9	8.5	11.2	11.7
Gujarat	6.7	8.3	11.0	11.5
Haryana	6.5	8.1	10.8	11.3
Jammu & Kashmir	6.3	7.9	10.6	11.1
Chhattisgarh	6.1	7.7	10.4	10.9
Rajasthan	5.9	7.5	10.2	10.7
Madhya Pradesh	5.7	7.3	10.0	10.5
Jharkhand	5.5	7.1	9.8	10.3
Assam	5.3	6.9	9.6	10.1
Uttar Pradesh	5.1	6.7	9.4	9.9
Bihar	4.9	6.5	9.2	9.7

**Source:** United Nations Population Fund (UNFPA) India, India Ageing Report 2023. Longitudinal Ageing Survey in India (LASI), 2017-18. Census of India, Population Projections by the Government of India (2011-2036). World Population Prospects 2022 by the United Nations Department of Economic and Social Affairs.

The data reveals significant regional variations in the aging population across different states in India. States like Kerala, Tamil Nadu, and Himachal Pradesh have a higher proportion of elderly individuals compared to states like Bihar and Uttar Pradesh. This variation can be attributed to differences in life expectancy, fertility rates, and migration patterns.

### Key Observations:

- Kerala consistently shows the highest percentage of elderly population, reflecting its advanced healthcare system and higher life expectancy.
- Southern states like Tamil Nadu, Andhra Pradesh, and Karnataka also have a higher proportion of elderly individuals, indicating better healthcare and social support systems.
- Northern and central states like Uttar Pradesh, Bihar, and Madhya Pradesh have a lower percentage of elderly population, which may be due to higher fertility rates and lower life expectancy.

- These regional variations highlight the need for state-specific policies and programs to address the unique challenges faced by the elderly population in different parts of India. Tailored interventions can ensure that the elderly receive adequate healthcare, social security, and support services, improving their overall quality of life.
- **According to the population projection for India and states from 2011- 2036** the State which is expected to have least growth during 2011-2036 is Himachal Pradesh (6 percent), followed by Tamil Nadu (8 percent). In contrast, NCT of Delhi will have the highest projected growth of 98 percent during the period. States, which will have projected growths in the range of 10-20 percent are, Andhra Pradesh, Punjab, Jammu & Kashmir, Manipur, Karnataka, Odisha, Maharashtra, Telangana and West Bengal. The population in the states of Gujarat, Rajasthan, Madhya Pradesh, Nagaland, Uttar Pradesh, Mizoram, Puducherry, Bihar, Meghalaya, Arunachal Pradesh, NCT of Delhi, Dadra & Nagar Haveli and Daman & Diu is projected to increase by more than 30 percent.

**Several countries have implemented innovative policies and practices to manage the challenges of an aging population. Here are some best practices from around the world that could be adapted to the Indian context:**

#### **1. Japan: Integrated Care and Technological Innovations**

Japan, with one of the highest proportions of elderly people, has developed a comprehensive approach to elderly care. The country has implemented integrated care systems that combine healthcare and social services to provide holistic support to the elderly. Technological innovations, such as robotics and telemedicine, are widely used to assist in daily activities and healthcare monitoring. These technologies help reduce the burden on caregivers and improve the quality of life for the elderly.

#### **2. Singapore: Lifelong Learning and Financial Security**

Singapore has focused on promoting lifelong learning and financial security for its aging population. The Skills Future program provides credits to citizens for continuous education and skills training, encouraging older adults to remain active and engaged in the workforce. Additionally, the Central Provident Fund (CPF) ensures financial security for retirees through mandatory savings and investment schemes.

#### **3. South Korea: Family Support and Community Engagement**

South Korea has implemented policies to strengthen family support and community engagement for the elderly. The government provides financial incentives to families who care for their elderly members at home. Community centers offer various programs and activities to keep the elderly socially active and engaged, reducing the risk of isolation and loneliness.

#### **4. Germany: Flexible Retirement and Pension Systems**

Germany has introduced flexible retirement options and a robust pension system to support its aging population. The country allows for phased retirement, where older workers can gradually reduce their working hours while receiving partial pension benefits. This approach helps maintain the elderly's financial independence and keeps them engaged in the workforce for longer.

## 5. Sweden: Age-Friendly Infrastructure and Housing

Sweden has focused on creating age-friendly infrastructure and housing to support its elderly population. The country has implemented universal design principles in public spaces and housing to ensure accessibility for all age groups. Additionally, Sweden offers various housing options, such as co-housing and assisted living, to cater to the diverse needs of the elderly.

### Adaptation to the Indian Context

India can adapt these best practices by focusing on integrated care systems, promoting lifelong learning, and ensuring financial security for the elderly. Implementing technological innovations in healthcare, strengthening family and community support, and creating age-friendly infrastructure can significantly improve the quality of life for India's aging population. Additionally, flexible retirement options and robust pension systems can help maintain financial independence and engagement among the elderly.

By learning from these international examples, India can develop comprehensive policies and programs to address the challenges of an aging population and promote healthy and active aging.

### Key Factors Driving the Demographic Transition of Ageing in India

India's demographic transition, characterized by a significant shift towards an ageing population, is influenced by several interrelated factors. These factors include declining fertility rates, increasing life expectancy, and regional variations in the ageing process. Understanding these drivers is crucial to comprehending the socio-economic implications of this transition.

#### Declining Fertility Rates

- India's fertility rate has experienced a substantial decline over the past several decades. In the 1950s, India had a **total fertility rate (TFR)** of around 5.9 children per woman, meaning that each woman, on average, was giving birth to almost six children. However, by **2023**, the TFR had dropped to approximately **2.0 children per woman**, below the replacement level fertility rate of 2.1, which is the rate needed to sustain the population at its current size in the long term.
- The factors to fertility decline family sizes have shrunk, Economic pressures, such as higher living costs and the need for dual-income households. Education, particularly for women, has played a crucial role in reducing fertility rates. The movement of populations from rural to urban areas has also influenced fertility rates where living costs are higher, families tend to have fewer children and public health campaigns and government initiatives aimed at reducing population growth have successfully increased contraceptive use, the base of the population pyramid is shrinking, while the proportion of elderly people is increasing.

#### Increasing Life Expectancy

life expectancy in India has seen dramatic improvements over the last several decades. In 1960, the average life expectancy was around **42 years**. By **2023**, life expectancy had risen to approximately

**70 years**, by 2050, life expectancy is projected to reach **75-80 years**, reflecting improvements in healthcare, nutrition, and living standards.

As India's economy has grown, living standards have improved, leading to better nutrition, better treatments for infectious diseases, improved maternal and child health services, Government initiatives in sanitation, clean drinking water, and nutritional programs have improved overall health outcomes, contributing to longer life spans.

### **Regional Variations in Ageing**

India's demographic transition is not uniform across the country. Some states, particularly in the southern and western regions, are ageing more rapidly than others due to earlier declines in fertility rates and better healthcare infrastructure.

- Southern states like Kerala, Tamil Nadu, and Andhra Pradesh have already experienced substantial ageing due to early declines in fertility and higher life expectancy, In contrast, northern states like Uttar Pradesh and Bihar have younger populations due to higher fertility rates.

### **Conclusion**

The study finds that ageing is not a problem for India in the current scenario, however in decades of 50's it would start to have severe impact of India in terms of Economy, Social relations. We need to frame policies to tackle the situation from becoming a menace. The future demographic projections for India clearly indicate a rapid ageing process, with the elderly population expected to grow significantly by 2050. The population of individuals over 60 in India is set to double from 10.5% in 2022 to 20.8% by 2050 According to United Nations Population Report. The report outlined the major challenges feminization, due to women living longer than men, resulting in economic deprivations and dependencies; ruralisation, due to a high proportion of the elderly living in rural areas; and the ageing of the old population. As India approaches this demographic crossroads, proactive and long-term planning is essential to mitigate the challenges and harness the potential benefits of an ageing society. Strengthening healthcare, enhancing social security, and addressing regional and gender disparities would be critical to ensuring that the elderly can age with dignity and security, while the economy remains resilient to these population shifts, this demographic shift towards an ageing society poses complex socio-economic challenges for India, it also presents opportunities for rethinking social, healthcare, and economic policies to promote the well-being of the elderly.

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# Socio-Economic Profiling and Financial Inclusion of Urban Street Vendors: A Case Study of PM SVA Nidhi Yogana in Prayagraj

Arpita Singh<sup>1</sup>

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## ABSTRACT

*Street vendors are playing an important role in the urban informal economy. Street vendors are those who sell goods and services to the general public without having a permanent built-up structure from which to sell. During the lockdown, many street vendors lost their working capital. In these conditions, the government launched a microcredit scheme (PM SV Nidhi Scheme) for providing working capital to street vendors. In this paper, we have studied the socio-economic status of street vendors and their awareness & perception of the PM SVA Nidhi Scheme. For this study, we conducted a survey and collected data from 60 street vendors in three different regions by convenient sampling. In this study, we found that they were happy that the government has started a microcredit scheme for him that provides working capital on very easy installments. Many street vendors benefited from this scheme, but in my study, 55 percent of street vendors could not take advantage of this scheme due to knowledge of this scheme, procedural hurdles, and rejection of loan applications by banks. The study indicates that the PM SVA Nidhi Scheme is an important programme for street vendors. If the government can overcome the scheme's procedural hurdles, it could be a game changer for street vendors in terms of working capital.*

**Keywords:** *Informal Sector, Street Vendor, PM SVA Nidhi, Mirco Credit Scheme.*

## Introduction:

Street vendors are one of the most visible and largest occupational groups in cities, and they are an important part of the urban informal sector. Street vendors are those who sell goods and services to the general public without having a permanent built-up structure from which to sell. Street vendors can be both stationary and mobile. They are stationary in the sense that they occupy space on the footpath or other public or private space, and mobile in the sense that they move from place to place by pushing pushcarts or carrying baskets on their heads. The products they sell include apparel and footwear, leather goods, moulded plastic goods, and various household necessities made in small-scale or home-based industries employing a large number of people. They also play a vital role in

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the urban local supply chain, as manufacturers would struggle to market their own products (Chakraborty, P., and Koley, S. 2018).

In India, the street vendor faces a number of challenges. Financial challenges, social security challenges such as exclusion from life insurance, general insurance for goods and wares, pension, gender disparity, occupational health and hazard challenges, and legal, political, and administrative challenges vary by city. Many street vendors who relied on daily earnings for survival lost their employment as a result of the COVID-19 lockdown. It is critical to understand how the street vendors suffered during the lockdown, whether they received assistance from the government or local agencies, and, most importantly, what their expectations are from the government. It is also critical to learn about the government's policies for protecting their rights (Sharma, S. et al., 2021). Our research focuses on the socioeconomic status of street vendors, as well as understanding various street vendors' awareness and perceptions of the PM Street Vendor's AtmaNirbhar Nidhi (PM SVA Nidhi) 2020, with a particular focus on Prayagraj, Uttar Pradesh.

### **Street Vendors and Urban Informal Economy:**

According to the National Policy of Urban Street vendors, 2004 by Govt. of India, Street vendors defined as "A street vendor is broadly defined as a person who offers goods for sale to the public without having a permanent built-up structure but with a temporary static structure or mobile stall (or head load). Street vendors may be stationary by occupying space on the pavements or other public/private areas, or may be mobile in the sense that they move from place to place carrying their wares on push carts or in cycles or baskets on their heads, or may sell their wares in moving trains, bus etc. In this policy document, the term urban vendor is inclusive of both traders and service providers, stationary as well as mobile vendors and incorporates all other local/region specific terms used to describe them, such as hawker, Pheriwalla, Rehri-patriwalla, Footpath Dukandars, sidewalk traders etc." In practice, street vendors are an important part of the urban informal economy. Street vendors account for a sizable proportion of all informal sector employment. Despite this, street vendors face numerous challenges and biases from local government representatives as well as urban policies and regulations.

### **Livelihood Crises of Street Vendors due to COVID-19**

In the current age of advanced medical sciences and technology, no one could have predicted a pandemic capable of not only sending shockwaves through healthcare infrastructures but also requiring an effective response to the novel corona virus at the expense of livelihood. India's response to the pandemic was swift, with one of the strictest lockdowns in the world. The University of Oxford's stringency index for measuring government response to COVID-19 rated India as 100 on a 0-100 scale (as of 31st March to 19 April, 2020). Travel and public gathering restrictions impacted the flow of economic activities, particularly the livelihood of street vendors, whose earnings are driven by public space occupation and the influx of large crowds.

By June 2020, the second lockdown had been announced, and many street vendors had been diagnosed with covid-19 infections, and many of them, despite being asymptomatic, were labelled

as super spreaders, forcing local health experts and urban local bodies to decide to stop them from vending in order to reduce covid-19 infection. This ban on street vending from the last week of June, 2020, on street vendors in Prayagraj city and across India affected their income and livelihood, and people were wary of purchasing from street vendors due to stereotypes associated with them.

They lost their businesses and income, their routine lives became stagnant, and they found themselves helpless and dependent on society, the government, and a few charitable organizations that provided them with food. The challenge for them was to restart their business because most of their savings and loans had been used to help them survive. They needed working capital to restart their vending business. In many cases, working capital is required to purchase raw materials and begin again.

### **Street Vendors in Prayagraj:**

According to District Urban Development Agency (DUDA)- Prayagraj Nagar Nigam 13800 registered street vendors was 2017 in Prayagraj city. District Urban Development Agency (DUDA) and Prayagraj Municipal Corporation (PMC) will have decided to make 18 vending Zones at Different localities of the city. These vending zones will provide these roadside vendors ample space wherein they can sell their products by paying nominal fee to the authority. PMC authorities have selected 18 sites for developing the vending zones. For the construction of these vending zone, DUDA has already submitted a proposal to the government which will be discussed in the next town vending committee meeting, scheduled on July 20 and 21, 2021. Once the proposal is approved by the committee, work for developing these vending zones will begin. The district administration has already sanctioned an amount of Rs seven lakhs for developing the 'modern vending zone' in front of BSNL office of Civil Lines locality.

The areas where these vending zones will be developed include the stretch of 100 meters of road, starting from IIIT-A crossing to Shambhu Nath college, the stretch of road besides Medical College crossing, Drumond road and Sarojani Naidu road, Meerapur and Rasulpursabji mandi, Govindpur vegetable market, Iswar Saran Degree College, Teliyarganj road- Govindpur turning, market from Phaphamau to Shantipuram and in front of PD Tandon Park. Such zones will also be developed at Elgin Road, besides main post office, both the banks of old bridge over Yamuna (city and Naini sides), the road near Naini jail and at PDA Colony of Naini. Developing these vending zones is an important step for making Sangam city a Smart City. Once the roadside vendors will get the space, based on lottery system through the district administration, the threat of facing the wrath of demolition drive will not bother them (The Times of India, July 16, 2021).

### **The PM Street Vendor's Atma Nirbhar Nidhi (PM SVANidhi):**

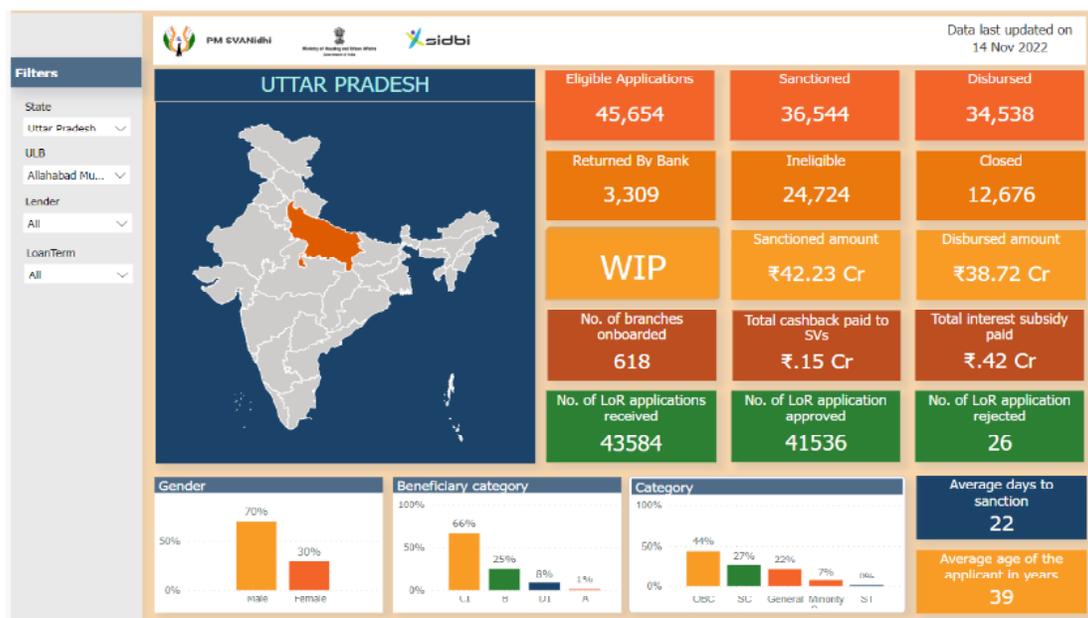
The Ministry of Housing and Urban Affairs launched the PM Street Vendor's Atma-Nirbhar Nidhi (PM SVA Nidhi) on June 1, 2020 to provide affordable Working Capital loan to street vendors who have been adversely affected by the Covid-19 lockdown. According to the scheme guidelines, targeted beneficiaries could be anyone engaged in vending articles, goods, wares, food items, or merchandise of daily use or offering services to the public in a street, footpath, pavement, etc., from

a temporary built-up structure or by moving from one location to another. They provide vegetables, fruits, ready-to-eat street food, Tea, Pakodas, Breads, Eggs, Textile, Apparel, Artisan products, Books/ Stationary, and other services, as well as barber shops, cobblers, Pan Shops, and laundry services.

### PM SVA Nidhi Scheme in Prayagraj-

Figure 2 depicts a brief scenario of the PM SVA Nidhi Scheme in Prayagraj. Under the PM SVA Nidhi scheme, a total of 45,654 eligible applications have been received, of which 36,544 have been sanctioned, and 34,538 loans have been disbursed [as of November 14, 2022]. The PM SVA Nidhi Scheme has 70% male beneficiaries and 30% female beneficiaries. This scheme has benefited 44 percent of OBCs, 27 percent of SCs, 22 percent of Generals, and 7 percent of minority groups.

Figure 2: Dashboard of PM SVA Nidhi Scheme in Prayagraj.



Source: PM SVA Nidhi Dashboard.

### Review of Literature:

Joshi, A. and Reddy, V. (2022) in his paper “Study of perceptions among street vendors of Ahmedabad on ‘Pradhan Mantri Street vendor’s Atmanirbhar Nidhi Scheme 2020 (PM-SVA Nidhi Yojana)’ - Special micro-credit program for street vendors” attempt to find out the perceptions and experiences of street vendors participating in the PM SVA Nidhi Yojana in Ahmedabad. The study uses total data from 60 street vendors to understand their perceptions and experiences of the PM SVA Nidhi Yojana, which was collected by surveying vendors in the west and central zones of Ahmedabad. Apart from this, the study interviewed bank employees to understand various aspects

pertaining to the PM SVA Nidhi Yojana. The study found that street vendor' perceptions of local urban bodies and state governments are not positive. Their perception of the PM SVA Nidhi Yojana was different. They were happy that the government started a microcredit scheme for providing working capital, leading to a reboot of their livelihood.

**Bhowmik, S. (2011)** explained some of the most pressing issues concerning credit availability for street vendors. The study made use of both primary and secondary data sources. The study's findings revealed that because the financial inclusion program is aimed at the urban poor, it has paid little or no attention to street vendors. The National Street Vendor Policy proposed addressing issues of financial inclusion for street vendors through the establishment of SHGs, Associations, and Microfinance Institutions, but it failed due to a lack of proper implementation.

**Silambarsan, M. and Paul, J.P. (2021)**, in his article "Street Vendors- the Forgotten Groups in India: Insight on their Financial Status in Virudhunagar District of Tamilnadu" described status of street vendors. The study collected 477 street vendors' data using a structured questionnaire in a span of six months. The study found that, majority of the street vendors need a daily working capital of Rs. 201 to 300. Most have their savings as their major source of working capital followed by getting capital from money lenders. Almost all of the street vendors have a bank account but only one street vendors out of the entire sample of 477 has got loan from bank.

**Patil, V and Gogte, Jayashree (2019)** in his article "Study of Informal Sector (Street Vendors) in Central Market Area of Yeola, Maharashtra (India) their Integration in Market Architecture" tries to find out current scenario of street vendors acting in the central market area of Yeola Town and identifies some parameters for integrating them into main market activity. The study found that the presence of street vendors in the central market area of Yeola town has substantial impacts on actual pedestrian activities.

### **Need for the study:**

Street vendors are an important part of India's informal sector; they have suffered significant economic losses and have been pushed to the brink of extinction. There was no dedicated microcredit programme for street vendors in Prayagraj, Uttar Pradesh. Various recommendations for vendor upliftment have been discussed in the literature, but nothing specific has been attempted to address the financial challenges of street vendors in the interim. Street vendors become part of the informal economy, and they are compelling to start their own parallel financial system that can help them survive and grow. This requires us to understand their financial needs and monetary needs, followed by their perceptions of the first formal micro-credit program, PM SVA NIDHI, designed for street vendors as beneficiaries. The analysis of these issues may help policymakers develop policies that would be beneficial for street vendors.

### **Objective of the Study:**

The study's overall goal is to understand the socioeconomic status of street vendors, as well as their awareness and perceptions of the microcredit programme (PM SVA Nidhi Scheme) after the COVID-19 lockdown.

The specific objectives are as follows:

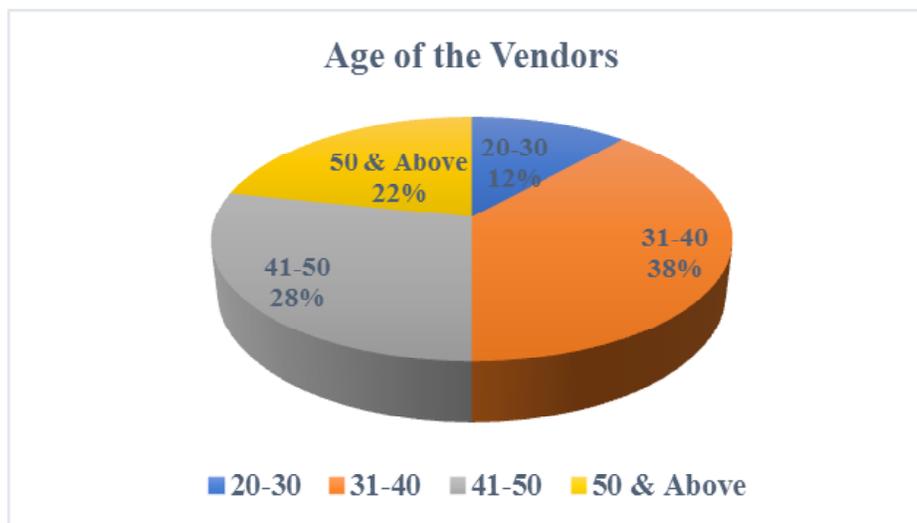
1. To study the socio-economic status of street vendors in Prayagraj.
2. To analyse the different street vendors' awareness and perception of the PM SVA Nidhi Scheme in Prayagraj.

### Research Methodology:

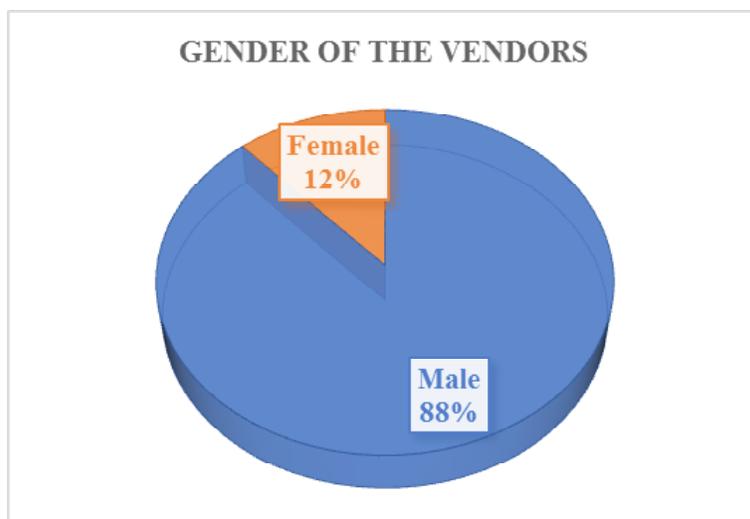
This research is both analytical and descriptive in nature. The study is based on primary as well as secondary data. The secondary data was mainly collected from the dashboard of the PM-SVANIDHI portal, and the primary data was collected from Prayagraj by interview survey. The sample size was 60 that was collected from three different regions of Prayagraj, namely: Near Zero Road Bus Stand, Near Science Faculty Gate, and Near Front of Anand Bhavan Gate Karta, that were selected by convenient sampling. SPSS was used for data analysis.

### Major Findings of the Study:

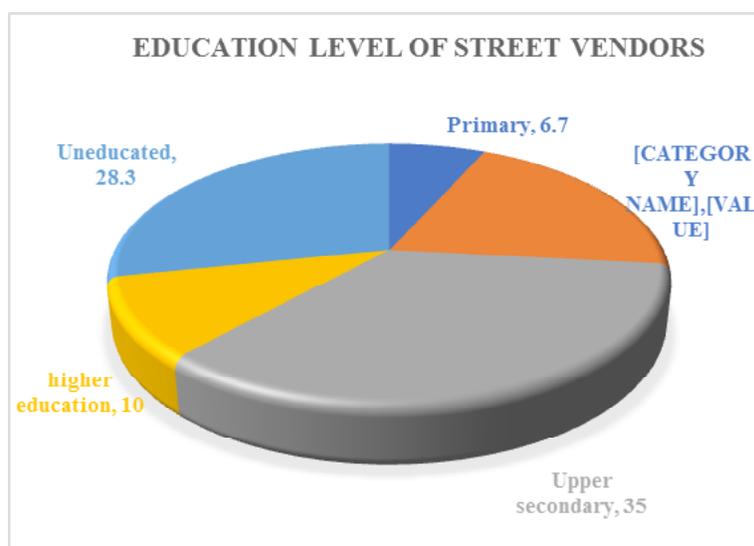
**Age of Street Vendors:** As per the survey, in this study we have found that the majority of street vendors are in the 30–50 age group. The age group of 21–30 has only 11 percent street vendors, the age group of 31–40 has 38 percent street vendors (the maximum of all age groups), the age group of 41–50 has 28 percent street vendors, and the over-50 age group has 21.7 percent street vendors.



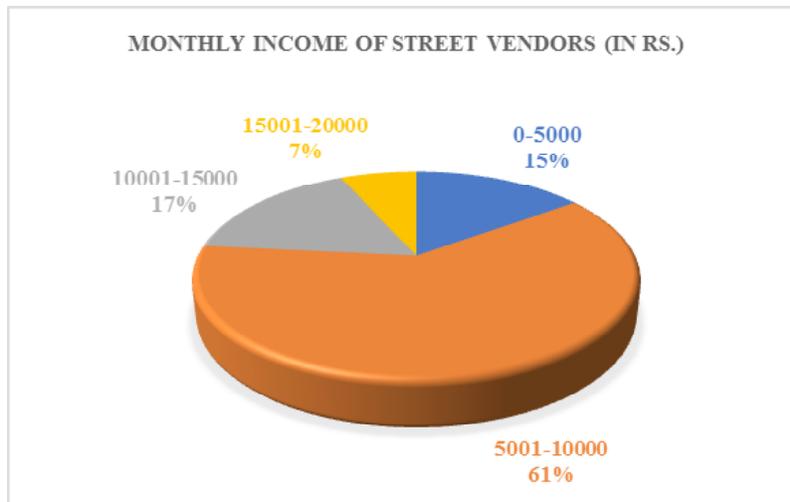
**Gender Composition of Street Vendors:** As per the survey, in this study we have found only seven female vendors out of 60, which is only 11.7 percent of total respondents. Male vendors dominate the vending occupation in the selected study area, according to the findings. Female vendors primarily sell food, whereas male vendors engage in a variety of other types of vending.



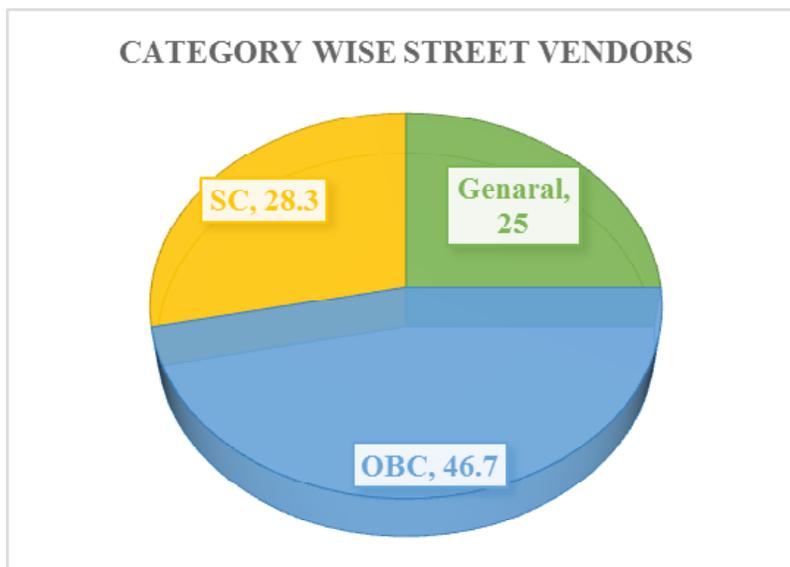
**Education Level of Street Vendors:** According to the survey, only 10% of vendors have graduated or are more educated, 45 percent have educated Upper Secondary or more, 65 percent have passed 8 or more, 6 percent have only educated at the primary level, and 28% are uneducated. .



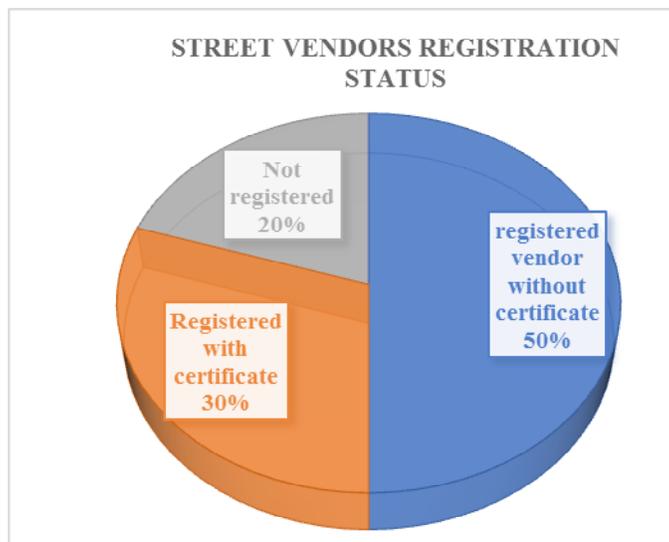
**Monthly Income of Street Vendors:** According to the survey, the average earnings of street vendors ranged between 7,000 rupees and 8,000 rupees per year. 15 percent of street vendors earned less than 5000 rupees per month, while 61 percent earned 5000-10000 rupees per month. Only 16% of street vendors earned 10000 to 15000 rupees per month, while the remaining 6 percent earned 15000 to 20000 rupees per month.



**Category of the Street Vendors:** As per the survey, in this study we have found that 46 percent of street vendors are OBC, 28 percent of street vendors are SC, and 25 percent of street vendors are in the general category; no scheduled tribe (ST) vendor was found in our survey.

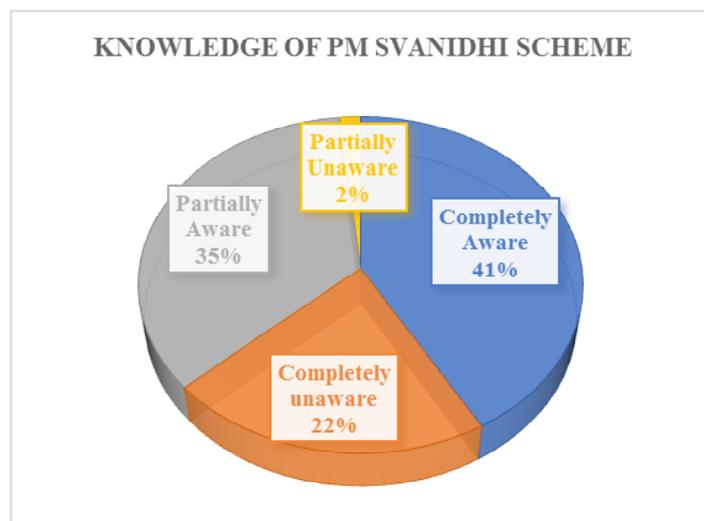


**Street Vendors Registration Status:** As per the survey, in this study street vendors registration status have classified into three category- Registered with Certificate, Registered without Certificate and neither registered and nor they had any certificate. In this study we have found that 30 percent street vendors registered with certificate and 50 percent street vendors registered without certificate and 20 percent street vendors were neither registered nor did they have any certificate.

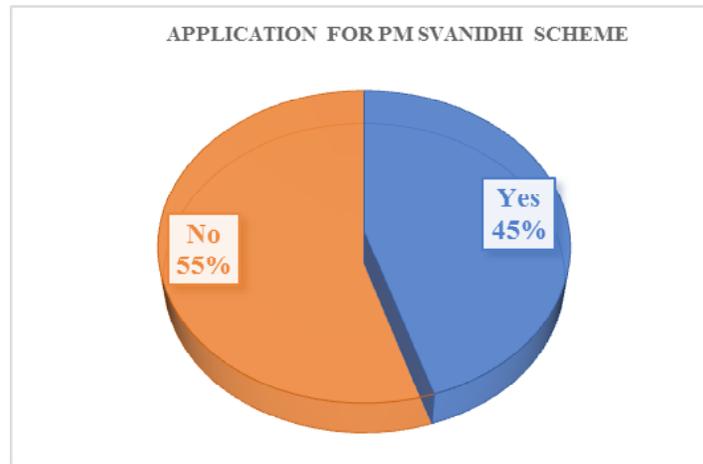


**Awareness and Perception about PM SVA Nidhi Scheme of Street Vendors in Prayagraj:**

**Knowledge of PM SVA Nidhi Scheme:** In this study, street vendors’ knowledge of the PM SVA Nidhi Scheme was divided into four categories: first, 41.7 percent of street vendors were fully aware of the PM SVA Nidhi Scheme. Second, 21.7 percent of street vendors were completely unaware of the PM SVA Nidhi Scheme. Third, street vendors who were partially aware of the PM SVA Nidhi Scheme are 35 percent, and fourth, street vendors who were partially unaware of the PM SVA Nidhi Scheme are 21.7 percent.



**Loan Application for PM SVANIDHI Scheme:** As per the survey, in this study we have found that 45 percent of street vendors have applied for loans and gotten loans under the PM SVA Nidhi Scheme, and 55 percent of vendors have not applied for loans under this scheme.



**Time Taken for Loan Approval:** In this study, we have also included the time taken for loan approval of street vendors under the PM SVA Nidhi Scheme. According to the PM SVA Nidhi Dashboard, the average time of loan approval was 16 days. But in this study, we have found a different picture. According to the survey, the 6.3 street vendors wait 31-45 days for loan approval. 43 percent of street vendors wait 30 days for loan approval, while 50 percent wait less than 20 days.



## Summary and Conclusion:

Street vendors are playing an important role in the urban informal economy. However, street vendors are an important part of the urban informal sector, even though they are facing several difficulties. The vendors are able to earn very little money (5000–7000 rupees per month), even after working hard. Their perception of government bodies was not good. In this study, we have found that only 11 percent of women participate in vending. The low participation of women in vending shows that this work is not suitable for women, and they are not feeling safe and facing several difficulties. COVID-19 and its effects were crucial for the whole economy. It affects the whole urban informal economy, including street vendors. During the lockdown, many street vendors lost their working capital.

In these conditions, the government launched a microcredit scheme (the PM SV Nidhi Scheme) for providing working capital to street vendors. The PM SVA Nidhi Scheme was viewed differently by street vendors. They were happy that the government has started a microcredit scheme for him that provides working capital in very easy installments. Many street vendors benefited from this scheme, but in my study, 55 percent of street vendors could not take advantage of this scheme due to knowledge of this scheme, procedural hurdles, and rejection of loan applications by banks. While 78 percent of the vendors in our study were fully or partially aware of the scheme, only 45 percent of them ultimately benefited from it. This demonstrates that even knowing about the scheme, many people are unable to take advantage of it. Finally, we say that the PM SVA Nidhi Scheme is an important scheme for street vendors. If the government can overcome the scheme's procedural hurdles, it could become a model for street vendors seeking working capital.

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# An analysis of Employment Generation in Rural Areas of Pratapgarh District of Uttar Pradesh

Arun Kumar Patel<sup>1</sup>

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## ABSTRACT

*India is the most populous country and has the second-highest labour productivity in the world. India, which has the second-highest productivity, should economically grow with the creation of adequate income for the labour force. The recent pandemic has devastated the livelihood of people at large in the world. As a highly populated country, India also suffered a lot to escape from the massive disaster situation. India is a labour and employment-oriented country. The economic Survey suggests that 65 per cent of the country's population lives in the rural areas and 47 per cent of the population is dependent on agriculture for livelihood. Their primary source of income is agriculture. Agricultural practices are affected by a variety of factors, including the reliance on rainfall, financial constraints, and outdated practices. Because of the abundance of employment opportunities in cities, people are moving from villages to cities in search of employment. Thus, the focus of the government on rural development is imperative. The Government's emphasis has been on improving the quality of life in rural areas to ensure more equitable and inclusive development. The aim of engagement of the government in the rural economy has been "transforming lives and livelihoods through proactive socio-economic inclusion, integration, and empowerment of rural India."*

*This study titled as "Analysis of Employment Generation in Rural Areas of Pratapgarh District of Uttar Pradesh" was conducted to analyse the various aspects related to the nature of employment and employment generation in comprehensive manner. Both the primary and secondary data have been used for the analysis. 160 respondents were randomly selected covering different age groups, gender and social categories. A simple descriptive statistics has been used for data analysis. It is found that 71.95% males and 76.31% females were self-employed while 28.04% males and 23.68% females were engaged in government employment generation programmes.*

**Key Words:** Rural area, employment generation, nature of employment, age group, respondents.

## 1. Introduction

Poverty and unemployment are two major challenges of rural areas. Whenever we solve one problem of the society, then it will be necessary to consider the other problem as well. In the present scenario, poverty and unemployment are still the most pressing problems of the Indian rural

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areas. Special income generation and socio-economic development programs were launched from time to time among selected target groups in rural areas for small farmers, landless agricultural laborers and scheduled castes and scheduled tribes. This new strategy was adopted because after a critical review of the earlier schemes and their achievements, it was found that the benefits of economic development failed to reach the low income groups and weaker sections of the society. Most of the rural poor have little or no cultivable land, are uneducated and have no skills, so they are not getting employment.

It is also more important to pay attention to the employment system in rural areas in India because about two-thirds of our country's population lives in villages, its economic foundation is very weak and the pressure of population on agriculture is increasing continuously. This labour force can play a direct role in the planning and implementation of economic policies, then it can become a valuable economic resource of the country. Therefore, economic development of rural areas cannot be achieved without creating employment opportunities in the villages. Realizing the the problem and prevalence of unemployment in the rural areas of India after liberalization, the Central Government and the State Government have been launched and implemented many general and specific schemes, programs and policies to create employment opportunities in the villages from time to time. In this context, at present, "Mahatma Gandhi National Rural Employment Guarantee Scheme" (MNREGA) and "National Rural Livelihood Mission" (NRLM) are being implemented in the rural areas of India. Many schemes and programs were conducted for timely employment generation, some of which are notable, Such as – Training and supply of equipment to rural artisans (SITRA-1992), Employment Assurance Scheme (EAS-1993), Pradhan Mantri Rozgar Yojana (PMRY-1993), Swarna Jayanti Urban Rozgar Yojana-1997, Swarna Jayanti Gram Swarozgar Yojana-1999, Employment Assurance Scheme (EAS-1993), Pradhan Mantri Gramodaya Yojana-2000, National Program of Food for Work-2004, Prime Minister's Employment Generation Program-2008, Pt. Deen Dayal Upadhyaya Grameen Kaushlya Yojna (DDU-GKY-2014), Rural Self Employment and Training Institutes (RSETIs), Pradhan Mantri Garib Kalyan Rojgar Yojna Abhiyan (PMGKRA-2020) major programs were conducted. Along with this, the role of self-employment in employment availability, such as employment related to fruits and vegetables, organic agriculture, animal husbandry and dairying, fisheries, poultry farming are also important in employment generation in rural areas. In the present time, through skill development programmes, efforts are being made to provide the skill and training to youth of urban areas also.

## **2. Employment opportunities in Rural India**

Employment opportunities in rural India are diverse and can vary significantly depending on the region, local resources, and infrastructure. Here are some key areas where employment is often available:

### **2.1 Agricultural and Allied Sector**

The agriculture sector has long been the backbone of India's economy, employing a significant portion of the population and contributing to the India's GDP. As a predominantly agrarian society, India's agricultural landscape is not only vital for food security but also serves as a major source of

employment for millions of people, particularly in rural areas. Approximately 58% of the Indian workforce is engaged in agriculture, either directly or indirectly. This sector encompasses various activities, including crop production, animal husbandry, fisheries, and agro-based industries. The diverse nature of agriculture means it provides a wide array of job opportunities, from farming and labor to roles in processing, distribution, and marketing. The agriculture sector in India holds immense potential for employment generation, serving as a vital lifeline for rural communities. Investing in sustainable practices, infrastructure, technology, and skill development will be crucial to transforming agriculture into a more productive and lucrative sector, ultimately leading to a more prosperous and self-sufficient rural India.

## **2.2 Handicraft and Cottage Industry**

The handicraft sector is a significant source of employment, particularly for women and marginalized communities. By engaging in activities such as weaving, pottery, embroidery, and woodwork, rural artisans can earn a livelihood while preserving their cultural heritage.

## **2.3 Small scale industries**

SSIs play a crucial role in employment generation in rural India. There are some key sectors and examples of SSIs that can thrive in rural areas such as food processing, sugar cane products, leather goods, repair and maintenance works etc.

## **2.4 Tourism and Eco-Tourism**

Tourism and eco-tourism have significant potential for employment generation in rural India. By focusing on sustainable practices and community involvement, these sectors can create diverse job opportunities while preserving the cultural and natural heritage of rural areas.

## **2.5 Education and Skill Development**

Skill development and training are essential for enhancing employment opportunities in rural India. By equipping individuals with relevant skills, communities can foster economic growth, reduce poverty, and empower youth. There are various schemes and training institutes for skill development of the rural people.

# **3. Schemes for employment generation in Rural areas in India**

## **3.1 Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)**

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a landmark legislation in India aimed at enhancing livelihood security in rural areas. It was enacted in 2005. The vision of Mahatma Gandhi NREGA is to enhance the livelihood security of rural households across the country by providing at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work. Mahatma

Gandhi NREGA recognizes the importance of strengthening the livelihood resource base of the poor by reaching the most vulnerable sections of rural areas, including Scheduled Castes, Scheduled Tribes, women-headed households, and other marginalized groups.

The scheme encourages a sense of community and collective responsibility by strengthening Panchayat Raj institutions. Mahatma Gandhi NREGA promotes a bottom-up approach to planning and execution, empowering local communities to take charge of their development. Through the creation of productive assets of prescribed quality and durability, the scheme addresses immediate economic needs while laying the foundation for long-term prosperity.

### **3.2 Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM)**

The National Rural Livelihood Mission, formerly known as the Swarnjayanti Gram Swarozgar Yojana, was introduced in 2011 by the Ministry of Rural Development. It is a flagship poverty alleviation program implemented by the Ministry of Rural Development, Government of India. It aims to reduce poverty by enabling the poor household to access gainful self-employment and skilled wage employment opportunities resulting in sustainable and diversified livelihood options for the poor. This is one of the world's largest initiatives to improve the livelihoods of the poor. The Mission seeks to achieve its objective through investing in four core components viz., (a) social mobilization and promotion and strengthening of self-managed and financially sustainable community institutions of the rural poor women; (b) financial inclusion; (c) sustainable livelihoods; and (d) social inclusion, social development and access to entitlements through convergence.

The Mission seeks to reach out to around 10 Crore rural poor households in a phased manner by 2022-23 and impact their livelihoods significantly.

### **3.3 Deen Dayal Upadhyaya Grameen Kaushal Yojana**

DDU-GKY was launched on 25 September on the occasion of 98th birth anniversary of Pandit Deendayal Upadhyaya. The Vision of DDU-GKY is to “Transform rural poor youth into an economically independent and globally relevant workforce”. It aims to target youth, in the age group of 15–35 years. DDU-GKY is a part of the National Rural Livelihood Mission (NRLM), tasked with the dual objectives of adding diversity to the incomes of rural poor families and cater to the career aspirations of rural youth. A corpus of ₹ 1,500 crore is aimed at enhancing the employability of rural youth. Under this programme, disbursements would be made through a digital voucher directly into the student's bank account as part of the government's skill development initiative.

### **3.4 Rural Self Employment and Training Institutes (RSETIs)**

Rural Self Employment Training Institutes (RSETIs) are government-run programs that provide training and skill upgrading geared towards entrepreneurship development to rural youth in each district throughout the country. State and central governments cooperate actively to manage RSETIs with the help of banks.

#### 4. Materials and Methods

Primary and secondary data have been used for the analysis of employment generation in rural areas of Pratapgarh district. The primary data has been collected by interview method, the total number of selected respondents is 160, which includes different age groups, scheduled castes / tribes and backward classes from each village, including both men and women. Through which a comprehensive analysis of various aspects related to the nature of employment and employment generation has been analysed. For the analysis related to employment generation in Pratapgarh district, four development blocks respectively-Gaura, Mandhata, Shivgarh and Patti have been included and 8 gram panchayats have been selected from these development blocks by random sampling method. Two villages Muar Adhar Ganj and Shahpur from development block Gaura, Sahijanpur and Belkhari from development block Mandhata, Kaserua and Birapur from development block Shivgarh and also two villages Mahdaha and Bhavpur from Patti development block were randomly selected. In which both men and women of different age groups are included, 20-20 respondents from all gram panchayats have been included i.e. a total of 160 respondents have been selected, in which 82 men (68.33%) and 38 women ( 31.66%), all the respondents are engaged in government employment programs and self-employment available in rural areas. The data has been analyzed with the help of statistical methods.

#### 4. Results and Discussion:

##### 4.1 Study area

Pratapgarh district is one of the districts of Uttar Pradesh state of India, this district is spread over 3717 square kilometers, with a population of 3209141. There are five tehsils in this district respectively - Pratapgarh Sadar, Patti, Kunda, Lalganj, Raniganj, and seventeen development blocks respectively - Pratapgarh Sadar, Sangipur, Sandwa Chandrika, Rampur Sangramgarh, Patti, Kalakankar, Vihar, Kunda, Babaganj, Lalganj, Laxmanpur, Gaura, Shivgarh, Mangaraura, Mandhata, Aspur Devsara, Bababelkhar Nath Dham. In Pratapgarh It has total urban population - 175242 (5.46 percent) and rural population - 3033899 (94.54 percent), total number of workers - 1066601, in which number of female workers - 362032 and male workers - 704569. The details of workers in Pratapgarh district are displayed in the following table.

**Table - 1 : Category wise distribution of workers in Pratapgarh district**

Worker's Category	Details		
Total workers	1066601 (33.24%)		
Non-workers	2142540 (66.76%)		
Persons employed in household industry	68642		
other workers	305650		
Agriculturist	305746	Male	212902
		female	92844
Agricultural laborers	386563	Male	221939
		female	164624

Source: Census(2011)

It is visible from the analysis of the above table-1, that the total number of workers in Pratapgarh district is 1066601, which is 33.24 percent of the total population, while the number of non-workers is 66.76 percent of the total population. It is clear from the table that the total farmers are 305746 and the number of agricultural laborers is 386563, the number of persons employed in domestic industry is 68642 and the number of other workers is 305650.

## 4.2 Nature of Employment

Table-2 shows the percentage details of people engaged in government employment and self-employment related to employment generation in rural areas of Pratapgarh district. The data obtained from the survey of selected development blocks has been displayed in the following table. It is clear from the table that out of total 120 respondents, the number of males is 82 (68.33%), out of which only 23 persons i.e. 28.04% are engaged in government employment programs and other 59 men i.e. 71.95% are engaged in self-employment. Whereas out of total 120 respondents, the number of women is 38, out of which total 9 women (23.68%) are engaged in government employment programs and other 29 women meaning 76.31% women are engaged in self-employment.

A total of 32 persons out of all 120 respondents are engaged in government employment programmes, which is only 26.66% of the total sample. And 88 persons are engaged in self-employment which is 73.33% of the total sample.

**Table-2 : Details of Nature of Employment**

Male / Female	Nature of Employment		Total
	government employment program	Self employment	
Male	23 (28.04%)	59 (71.95%)	82 (68.33%)
Female	9 (23.68%)	29 (76.31%)	38 (31.66%)
<b>Total</b>	<b>32 (26.66%)</b>	<b>88 (73.33%)</b>	<b>120(100%)</b>

Source: Field Survey( 2023)

## 4.3 Participation of different social classes in employment

Various social classes such as scheduled caste/tribe and other backward class persons have been engaged in various government employment programs as well as in self-employment. The data obtained from the selected development blocks has been presented in Table-3.

**Table-3 Participation of Social Classes in Rural Employment**

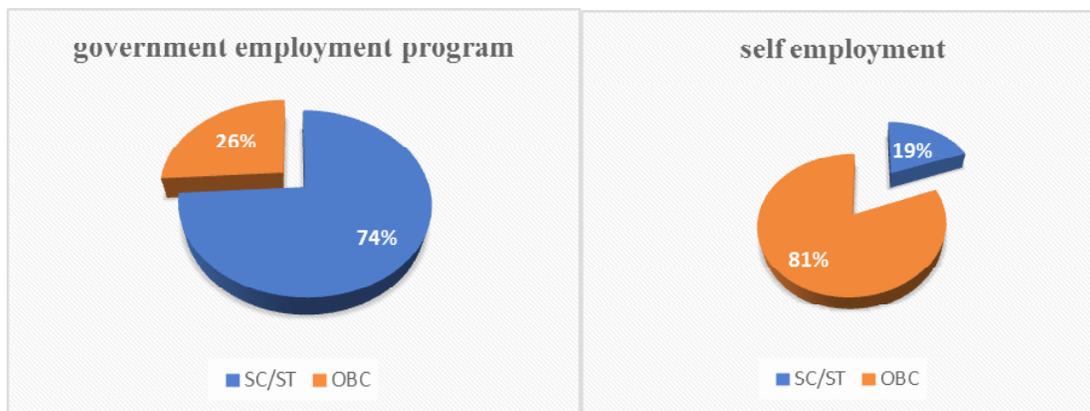
Social Class	Nature of Employment		Total
	Government Employment Program	Self Employment	
SC/ST	31 (26.25%)	15 (12%)	46 (38.25%)
Backward Classes	11 (9.25%)	63 (52.50%)	74 (61.75%)
<b>Total</b>	42 (35.50%)	78 (64.50 %)	120 (100%)

Source: Field Survey( 2023)

From the analysis of the data obtained from the field survey of the selected development blocks, it is concluded that the maximum participation in government employment programs is of Scheduled Castes/Tribes and maximum participation in self-employment is of other backward classes.

The percentage details of people engaged in government employment and self-employment are dpresented in the following diagram

**Figure 1 (A) Figure 1(B)**



Source: Field Survey( 2023)

It is visible from the figure 1(a) that the participation of OBCs in government employment programs is 26%, while the participation of Scheduled Castes/Tribes is 74%. It is clear from the figure 1(b) that the participation of OBCs in self-employment is 81%, while the participation of Scheduled Castes/Tribes is only 19%.It can be said that the maximum participation in government employment programs is of Scheduled Castes/Tribes and maximum participation of other backward classes in self-employment.

## 5. Conclusion

On the basis of the above analysis related to employment in rural areas of Pratapgarh district, it can be said that employment generation in rural areas was not possible only through government employment programmes, but apart from government employment, people were also found engaged in self-employment. From the analysis of Table-2, it is visible that only 26.66% people were engaged in government employment programs while 73.33% people were found engaged in self-employment. It is also notable that among the persons engaged in rural employment generation, where men are engaged in 68.33%, women are engaged in only 31.66%.

Table-3, which is related to the participation of social classes in rural employment, from the analysis of which it is visible that the maximum participation in government employment programs is of Scheduled Castes / Tribes (26.25%) and other backward classes is 9.25% and in self-employment The highest participation is 52.50% of other backward classes and 12% of Scheduled Castes / Tribes.

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# Economic and Social Challenges of Covid-19 in Uttar Pradesh With Special Reference to Ambedkar Nagar District

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## ABSTRACT

*The COVID-19 pandemic has had profound economic impacts globally, with rural areas facing unique challenges due to limited healthcare access, infrastructure, and economic resources. This study focuses on the rural areas of Ambedkar Nagar district in Uttar Pradesh, India, aiming to understand the specific economic repercussions of the pandemic. Utilizing a mixed-method approach, the research gathered quantitative data through structured household surveys and qualitative insights via key informant interviews and focus group discussions. Findings reveal significant disruptions in employment, income, and livelihood patterns. The majority of households, heavily reliant on agriculture and unorganized labor, experienced substantial financial strain and job losses. Additionally, the pandemic exacerbated existing vulnerabilities in small businesses and local enterprises. Despite these challenges, government interventions like the PM Gareeb Kalyan Yojana and the efficient functioning of the Public Distribution System provided some relief. The study underscores the resilience of rural communities, highlighting the necessity for targeted policies to foster economic recovery, improve employment stability, and enhance digital resource accessibility in the post-pandemic era.*

**Keywords:** *Economic Impact, Covis-19, rural, Employment, Public Distribution System, Digital resource accessibility*

## Introduction

In late December 2019, the world witnessed the emergence of acute respiratory events in Wuhan, China, which swiftly escalated into a global crisis. Initial investigations pinpointed the causative agent as a novel coronavirus, later identified as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2, 2019-nCoV). This virus shared genetic similarities of approximately 80% with the SARS-CoV virus responsible for the 2002–2003 outbreak (Cucinotta et al., 2020). By mid-March

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2020, the World Health Organization (WHO) declared the situation a pandemic, setting in motion an unprecedented series of challenges worldwide. Presently, global statistics present staggering figures, with 704.7 million confirmed cases and 7.01 million deaths attributed to COVID-19 (www.worldometers.info, Feng et al., 2020).

Scholarly research, including contributions by Ghose (2020) and Kurosaki et al. (2021), underscores the disproportionate impact of the pandemic on rural areas. Rural regions, characterized by limited access to healthcare, infrastructure, and economic resources, have faced heightened vulnerability. In Ambedkar Nagar, a district where agriculture prevails, disruptions in labor supply chains and reduced demand for agricultural produce have precipitated job losses and income insecurity (Rajput et al., 2020).

Moreover, studies by Banerjee and Duflo (2020) and Das et al. (2021) accentuate the vulnerability of small businesses in rural areas to economic shocks. The closure of local enterprises and movement restrictions have compounded employment challenges in the district. Additionally, the global trend towards remote work and digitalization may have limited applicability in rural contexts due to infrastructural constraints and low digital literacy rates (UNDP, 2020).

Understanding the specific economic challenges and opportunities facing rural communities in Ambedkar Nagar is imperative for guiding targeted interventions and policy responses. Through an examination of the effects of COVID-19 on employment patterns, income levels, and livelihood strategies in rural areas, this study aims to provide insights into the intricate dynamics of rural economies. These insights can inform evidence-based decision-making to foster resilience, sustainability, and inclusive development in the post-pandemic era.

In conclusion, this study endeavors to illuminate the economic realities of rural employment in the aftermath of COVID-19, with a focus on Ambedkar Nagar district in Uttar Pradesh, India. By engaging in methodological exploration, presenting findings, and discussing policy implications, we aspire to contribute to the discourse on post-pandemic recovery and resilience-building efforts. Ultimately, our aim is to promote inclusive development and sustainable livelihoods in rural areas, thereby forging a more equitable and resilient future for all.

### **Study Area:**

Ambedkar Nagar district in northeastern Uttar Pradesh spans 26° 09' to 26° 40' N latitudes and 82° 12' to 83° 05' E longitudes. It borders Basti, Sant Kabir Nagar, Gorakhpur, Sultanpur, Ayodhya, Azamgarh, and Jaunpur, covering 2,520 sq km. Key irrigation sources include the Sarayu river and smaller streams. The district's main commercial hub is Akbarpur, situated along the River Tons. As of the 2011 Census, the population was 2,397,888, with a literacy rate of 72.23%. The sex ratio was 978 females per 1000 males, and the child sex ratio was 932 girls per 1000 boys. The climate features a cold season (Nov-Feb), a hot season (Mar-Jun), and a rainy season (Jun-Oct), essential for agricultural planning and socio-economic development.

### **Methodology:**

To study the economic repercussions of COVID-19 in rural Ambedkar Nagar, Uttar Pradesh, a comprehensive research methodology combining quantitative and qualitative approaches was

employed. Using stratified random sampling, the study gathered representative data across diverse rural settings, considering geographical variations, agricultural productivity, and socio-economic factors. Structured household surveys provided quantitative data on employment, income, expenditure, and resource access. This was complemented by key informant interviews with farmers, small business owners, community leaders, and officials for qualitative insights. Focus group discussions further explored the economic impacts. Quantitative data analysis was conducted using SPSS, while qualitative data underwent thematic analysis. Findings from both data sets were triangulated for a thorough understanding of COVID-19’s economic impact on the district.

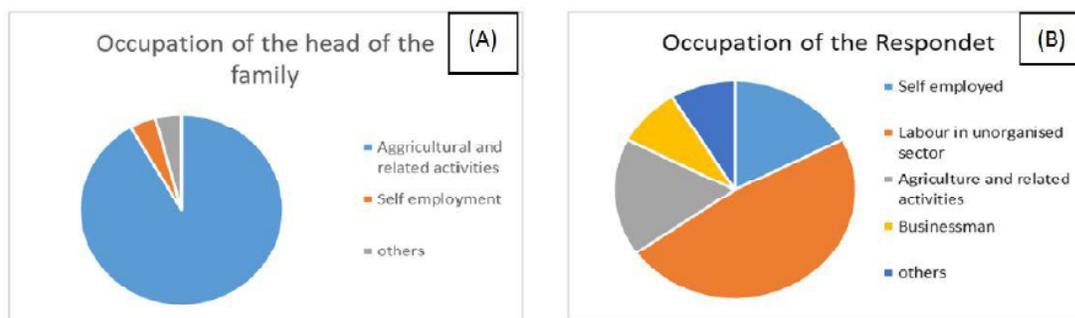
**Result**

The survey conducted on the impact of COVID-19 in rural areas reveals a comprehensive view of the socioeconomic and health challenges faced by the respondents.

**Occupation of the Head of the Family:** The majority of the heads of families were involved in agricultural and related activities, accounting for 91.67% of the respondents. A smaller portion, 4.17%, were engaged in self-employment, while another 4.17% were involved in other unspecified occupations (Figure: 1 A).

**Resident of Respondent:** All respondents resided in rural areas, with no respondents from urban areas, indicating that the survey focused exclusively on rural populations.

**Occupation of the Respondent:** Among the respondents, 44% were laborers in the unorganized sector, 32% worked in agriculture and related activities, 16% were self-employed, and 8% were businessmen. This distribution shows a significant reliance on the unorganized sector and agriculture for employment (Figure 1. B).



**Figure 1: (A) Occupation of the Head of the Family; (B) Occupation of the Respondent**

**Occupation During COVID-19 Period:** During the COVID-19 period, 52.17% of respondents were involved in contact-based services, while 47.83% engaged in other forms of occupation. This highlights a significant portion of the population dependent on services requiring direct interaction, which were heavily impacted by the pandemic (Figure 2. A)..

**Role of Respondent During COVID-19:** The responses show that 58.33% of individuals had roles categorized under “others,” 20.83% had migrated and suffered during the lockdown, and

another 20.83% had no specific role change. This data underscores the varied experiences of individuals during the pandemic (Figure 2. B).

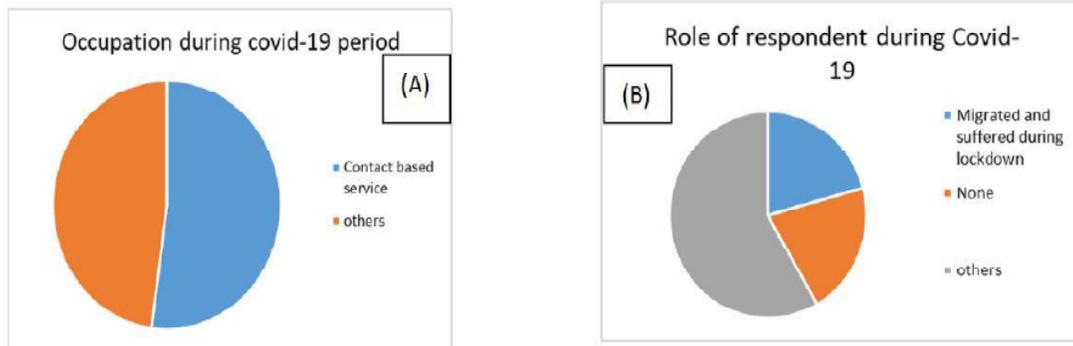


Figure 2: (A) Occupation During COVID-19 Period; (B) Role of Respondent During COVID-19

**Suffered Economically and Financially During COVID-19:** A significant 70.83% of respondents reported economic and financial suffering during the COVID-19 pandemic, while 16.67% did not face such issues. Additionally, 4.17% experienced minor impacts, and 8.33% faced huge losses, indicating widespread financial strain (Figure 3. B).

**Type of Business Activities Suffered:** Of those who suffered, 50% indicated closed work opportunities due to the lockdown, 34.62% were involved in contact-based services, 7.69% were in business, and another 7.69% were contractors. This highlights how the lockdown specifically affected certain business activities more than others (Figure 3. B).

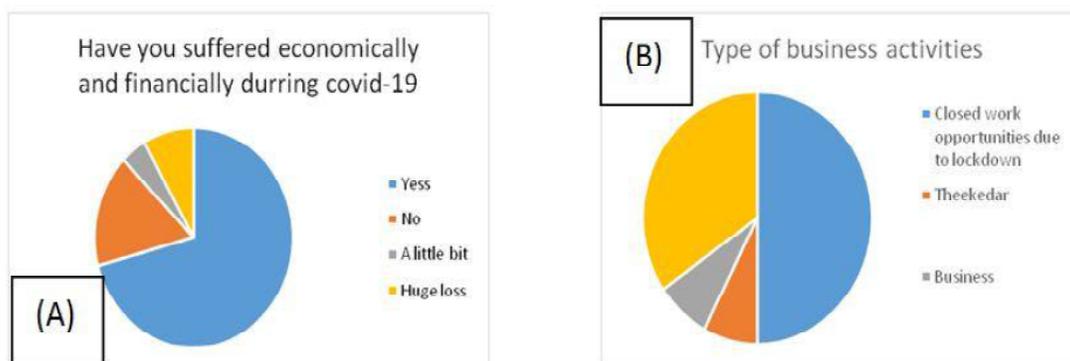


Figure 3: (A) Occupation During COVID-19 Period; (B) Role of Respondent During COVID-19

**Calculated Loss During COVID-19:** Financial losses varied, with 33.33% of respondents losing between 50 thousand to 1 lakh, 16.67% each losing either 10-50 thousand or 3-5 lakhs, 8.33% losing between 1-3 lakhs or above 5 lakhs, and 16.67% reporting no loss. This shows a wide range of financial impacts experienced by different households (Figure 4)..

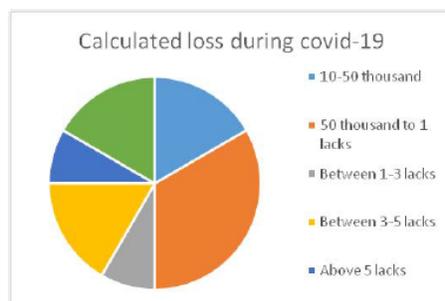


Figure 4: Calculated Loss During COVID-19

**Duration of Losses During COVID-19:** The majority, 65%, experienced financial loss only during the lockdown period. Others faced losses for about 6 months (20%), between 6-12 months (12%), and more than 12 months (5%), indicating that the economic impact of the pandemic varied in duration for different households (Figure 5 A).

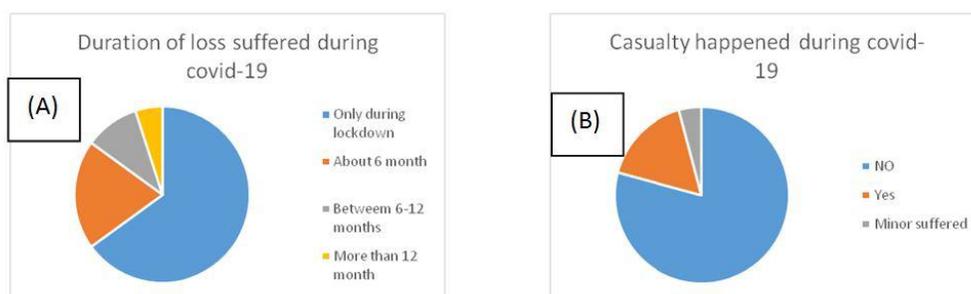


Figure 5: A) Duration of Losses During COVID-19; B) Casualty During COVID-19

**Casualty During COVID-19:** During the COVID-19 pandemic, 79.17% of families did not experience any casualties, indicating that most households avoided severe health impacts. However, 16.67% reported a family member suffered significantly, and 4.17% experienced minor health issues, showing that a notable minority faced serious health challenges. (Figure 5 B).

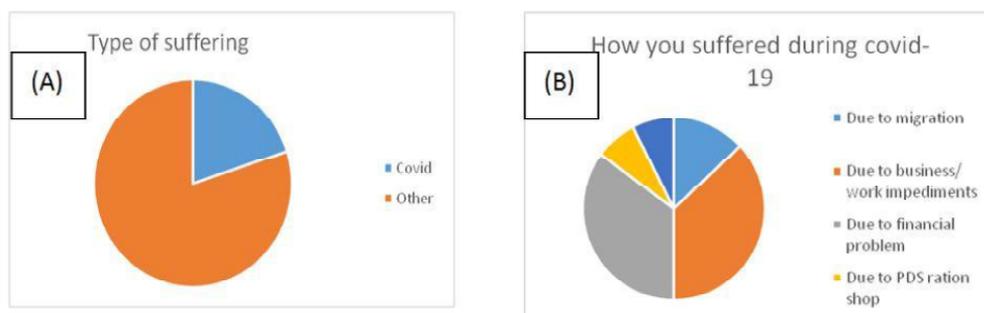


Figure 6 A) Type of Suffering; B) How Suffered During COVID-19

**Type of Suffering:** Among those who reported suffering, only 20% attributed their hardships directly to COVID-19, such as health complications or death. This indicates that the majority of suffering (80%) was due to other socio-economic factors, emphasizing that while the pandemic was a major disruptor, other issues significantly contributed to the difficulties faced by families (Figure 6 A).

**How Suffered During COVID-19:** Respondents reported various challenges during the COVID-19 pandemic: 37.04% faced business or work impediments, 35.19% experienced financial problems, 12.96% dealt with migration-related issues, 7.41% had problems with the PDS ration shop, and 7.41% cited other unspecified issues (Figure 6 B)

**How Managed to Reach Home During COVID-19:** During the pandemic, respondents faced significant challenges in reaching home. Half (50%) traveled by foot, indicating considerable hardships and long journeys. Another 37.5% used cycles, and 12.5% managed to return by train. This highlights the severe mobility and transportation issues during lockdowns (Figure 7 A).

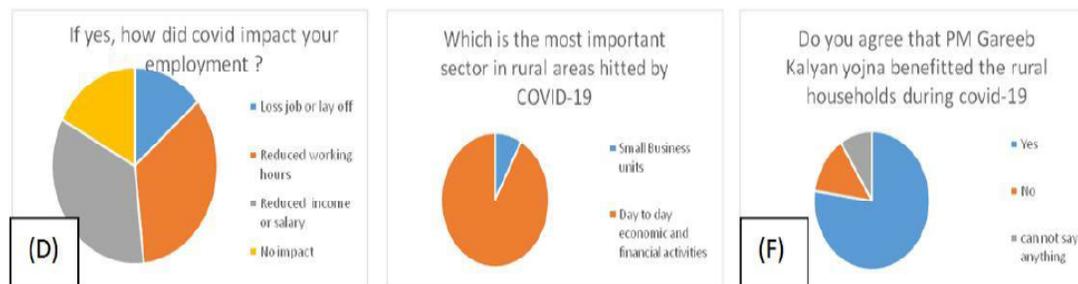
**Employment Status Prior to COVID-19:** Before the pandemic struck, all respondents, accounting for 100%, were employed, suggesting that employment was a standard and expected part of life among the surveyed population. This high employment rate before the pandemic highlights the substantial disruption caused by COVID-19.

**Employment Status Pre-Pandemic:** Among those employed before the pandemic, 73.68% worked full-time, 21.05% part-time, and 5.26% were self-employed, indicating most had stable full-time jobs (Figure 7 B).

**Changes in Employment During COVID-19:** The pandemic altered the employment situation for 62.5% of respondents, while 37.5% reported no change, showing a significant impact on job security and conditions (Figure 7 C).

**Impact on Employment Due to COVID-19:** COVID-19's employment impact varied: 34.48% faced reduced working hours, 34.48% experienced reduced income, 13.79% lost jobs, and 17.24% reported no impact, highlighting diverse economic hardships (Figure 7 D).

**Most Important Sector in Rural Areas:** 92% of respondents identified day-to-day economic and financial activities as crucial in rural areas, while 8% considered small business units most important, underscoring the significance of daily economic activities over small businesses (Figure 7 E).



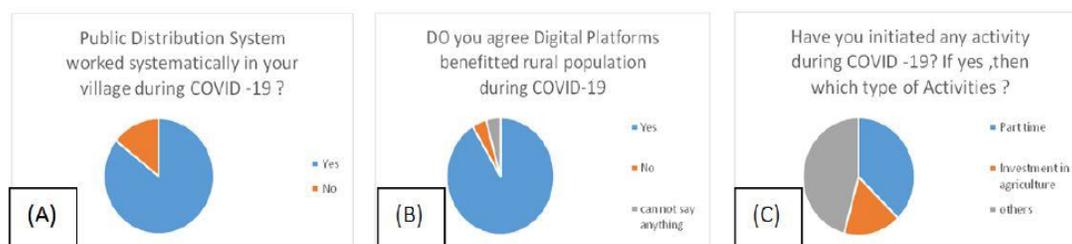
**Figure 7: (A) How Managed to Reach Home During COVID-19; (B) Employment Status if Employed; (C) Changes in Employment During COVID-19; (D) Impact on Employment Due to COVID-19; (E) Most Important Sector in Rural Areas; (F) PM Gareeb Kalyan Yojana Benefits**

**PM Gareeb Kalyan Yojana Benefits:** 77.27% of respondents found the PM Gareeb Kalyan Yojana beneficial during the pandemic, indicating substantial relief for most rural residents. However, 13.64% did not benefit, and 9.09% were uncertain, suggesting some gaps in its effectiveness. (Figure 7 E).

**Public Distribution System Working Systematically:** 85.71% of respondents reported the Public Distribution System (PDS) worked systematically during the pandemic, showing high satisfaction. Yet, 14.29% felt it was ineffective, indicating some distribution issues (Figure 8 A).

**Benefits from Digital Platforms:** 91.30% of respondents benefited from digital platforms during the pandemic, highlighting their crucial role. However, 4.35% did not find them beneficial, and 4.35% were uncertain, suggesting limited accessibility or usefulness for so (Figure 8 B).

**Activities Initiated During COVID-19:** In response to the pandemic, 37.5% of respondents initiated part-time activities, 16.67% invested in agriculture, and 45.83% engaged in other activities, demonstrating rural resilience and adaptability. (Figure 8 C)



**Figure 8: (A) Public Distribution System Working Systematically; (B) Benefits from Digital Platforms; (C) Activities Initiated During COVID-19**

## Discussion

The findings from this survey provide a nuanced understanding of the impact of COVID-19 on rural communities, particularly highlighting socioeconomic and health challenges. This discussion aims to contextualize these findings within existing literature and other research studies.

The overwhelming engagement in agricultural activities (91.67%) among the heads of families underscores the centrality of agriculture in rural economies. This is consistent with findings from other studies that highlight the predominant role of agriculture in rural livelihoods. For instance, a study by The World Bank (2020) noted that agricultural activities form the backbone of rural economies in many developing countries, making these communities particularly vulnerable to disruptions such as those caused by COVID-19.

The financial hardships reported by 70.83% of respondents align with other research showing significant economic impacts of the pandemic on rural economies. A study by the International Labour Organization (2020) indicated that informal workers, who constitute a large part of the rural workforce, were among the hardest hit by the pandemic due to job losses and reduced incomes. This survey's finding that 50% of respondents faced financial losses due to closed work opportunities during the lockdown further corroborates these broader trends.

The diverse range of financial losses reported, with significant proportions experiencing substantial monetary losses, reflects the widespread economic hardship documented in other studies. For example, the International Food Policy Research Institute (IFPRI) reported that rural households experienced severe income losses, particularly those reliant on non-farm income sources which were disrupted by lockdown measures .

Health impacts, while significant, were mixed, with 20% of families experiencing COVID-19 related suffering. This is somewhat lower than figures reported in some urban studies but aligns with findings from rural-focused studies that indicate a varied health impact of COVID-19 depending on local health infrastructure and access to healthcare services (Riley et al., 2021) .

Employment disruptions were profound, with 62.50% of respondents experiencing changes in employment status. This finding is supported by other research indicating widespread job losses and reduced working hours in rural areas during the pandemic. For instance, a report by the Food and Agriculture Organization (FAO) highlighted that rural workers faced significant disruptions in their employment, with many turning to alternative livelihoods to cope with the crisis .

The perception that day-to-day economic activities were the most affected sector (92%) aligns with findings from other studies that highlight the critical impact of COVID-19 on informal and small-scale economic activities in rural areas. The positive reception of government interventions, such as the PM Gareeb Kalyan Yojana (77.27%), mirrors findings from other research that underscores the importance of social safety nets during the pandemic (Bhattacharya & Mundle, 2021) .

The survey results highlight the efficient functioning of the Public Distribution System (85.71%), aligning with other studies emphasizing its role in mitigating food insecurity during the pandemic (Kumar et al., 2020). Significant appreciation for digital platforms (91.30%) suggests a positive shift towards digital adaptation, corroborating research on increased reliance on digital tools for education, healthcare, and economic activities during the pandemic (Bailey et al., 2021).

Proactive measures taken by respondents, such as initiating part-time activities (37.50%) and investing in agriculture (16.67%), reflect global trends of resilience and adaptation in rural communities, as noted by the International Fund for Agricultural Development (IFAD, 2020). These findings underscore the profound impact of COVID-19 on rural communities and the need for targeted interventions to support economic recovery, enhance employment stability, and improve access to healthcare and digital resources. The demonstrated resilience provides valuable insights for policymakers aiming to build more resilient rural economies.

## Conclusion

The economic impact of COVID-19 on the rural areas of Ambedkar Nagar district in Uttar Pradesh has been profound, affecting employment, income, and overall livelihood stability. The pandemic has highlighted the critical vulnerabilities in rural economies, especially those heavily dependent on agriculture and informal labor. Significant financial losses and job disruptions were common, reflecting broader trends observed globally. However, government initiatives like the PM Gareeb Kalyan Yojana and the robust Public Distribution System played a crucial role in mitigating some of the adverse effects. The study also emphasizes the adaptive strategies employed by rural

communities, such as diversifying income sources and leveraging digital platforms. These findings provide valuable insights for policymakers aiming to build more resilient and inclusive rural economies. Future efforts should focus on enhancing digital infrastructure, supporting small businesses, and ensuring sustainable agricultural practices to foster long-term economic resilience in rural areas.

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# Demographic Transition, Intergenerational Contracts, and Old-Age Security in India: A Critical Analysis

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## ABSTRACT

*This paper critically examines the demographic transition in India and its implications for intergenerational contracts and old-age security. As India experiences shifts in population structure due to declining fertility and increasing life expectancy, the dynamics of intergenerational support systems are changing. The paper explores how traditional familial support systems are evolving in the face of modern economic pressures, urbanization, and migration. Furthermore, it analyzes the impact of these transitions on old-age security, examining the roles of social security, pensions, and policy responses. The analysis concludes with suggestions for strengthening old-age security in India. India is undergoing significant demographic shifts, primarily driven by a decline in fertility rates and an increase in life expectancy. This process, known as demographic transition, has far-reaching implications for the economy and society, particularly regarding old-age security. Traditionally, intergenerational contracts—implicit agreements within families where younger generations provide support to the elderly—have been the backbone of old-age security in India. However, as urbanization, migration, and economic changes alter family structures, these traditional contracts are under strain. This paper aims to critically analyze the interrelationship between demographic transition, intergenerational contracts, and old-age security in India. It explores how the changing population dynamics impact familial support systems.*

**Keywords:** Demographic transition, intergenerational contracts, old-age security, India, social security, pensions, population aging

*JEL Classification Codes:* J11, H55

## Overview of the Problem

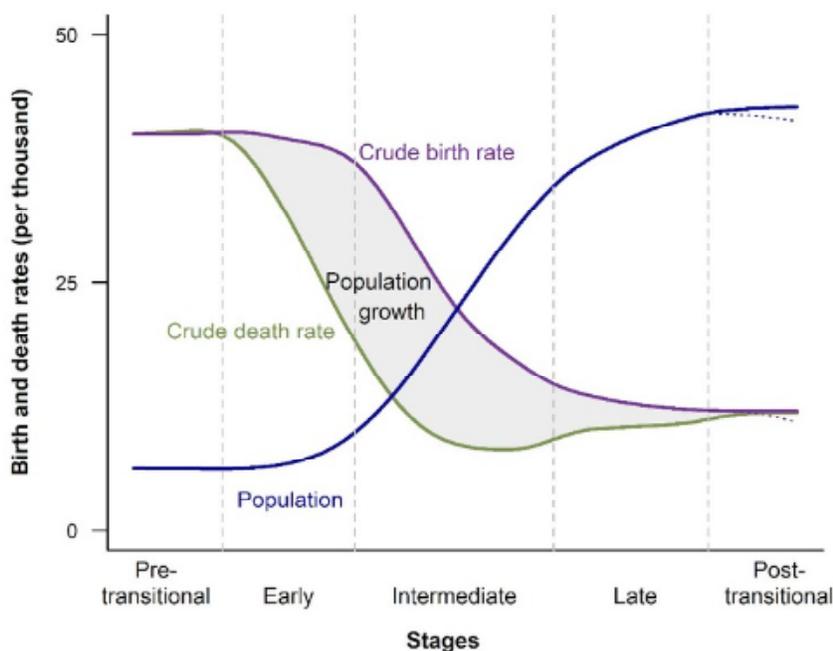
India is experiencing a significant demographic transition, marked by declining fertility rates and increasing life expectancy, leading to an aging population. Traditionally, intergenerational contracts—where younger family members provide economic and caregiving support to the elderly—

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have served as the backbone of old-age security. However, with rapid urbanization, migration, and economic changes, these traditional family-based systems are weakening. The shift towards nuclear families, alongside the limited coverage of formal social security measures like pensions and healthcare, poses serious challenges for old-age security in India. This research aims to critically examine these issues and propose policy solutions to address the growing needs of the elderly population.

### Introduction

India, like many other developing countries, is undergoing a profound demographic transformation. This process, commonly referred to as demographic transition, describes the shift from high birth and death rates to lower birth and death rates, resulting in significant changes to population structure. Historically, in the early stages of development, countries experience high fertility and mortality rates. As healthcare, education, and overall living standards improve, these rates gradually decline, marking the transition towards an aging population. In India, this demographic transition has been characterized by a substantial reduction in fertility rates and a concurrent increase in life expectancy, leading to a growing elderly population. Demographic transition specifically refers to the progression of a population through four distinct stages, each defined by changes in fertility, mortality, and the age composition of society.



Schematic representation of demographic Transition

Source: Calculations by the United Nations.

An intergenerational contract is an implicit social and familial agreement where younger generations care for and support their aging parents. In India, this has historically ensured old-age security, especially in rural areas, where elderly parents rely on their children, often sons, for financial support, housing, and caregiving. This system, rooted in cultural norms, reinforces strong generational ties within joint families.

Old-age security in India has traditionally relied on family-based support, where children, particularly sons, provide financial and caregiving assistance to elderly parents. However, urbanization and migration have led to a shift towards nuclear families, weakening these informal systems. According to the 2011 Census, nearly 70% of Indian households are now nuclear, reducing the traditional support network for the elderly. With the elderly population projected to rise from 104 million in 2011 to 300 million by 2050, formal old-age security remains limited. Only 10-12% of the workforce in the organized sector has access to pensions, leaving the majority, especially in rural areas, without adequate support. Thus, expanding formal social security systems is crucial for India's aging population.

### **Objectives of the Study :**

- Analyze India's demographic transition and its effects on population structure, focusing on declining fertility and rising life expectancy.
- Examine intergenerational contracts as traditional family-based systems of old-age security in India.
- Evaluate the impact of urbanization, migration, and economic pressures on the sustainability of these traditional support systems.
- Assess challenges in old-age security amid India's aging population and limited formal social security coverage.
- Propose policy recommendations to enhance old-age security and meet the needs of India's elderly.

### **Review of Literature**

Kabeer, Naila (2002) - Demographic Transition, Intergenerational Contracts and Old Age Security: Emerging Challenges for Social Policy. This paper explores the complex relationship between demographic changes and old-age security, focusing on how shifting family structures and social policies are impacted. It argues that the transition from high to low fertility and mortality rates significantly alters intergenerational contracts—traditional agreements where younger generations support the elderly. As countries undergo demographic transitions, traditional support systems are increasingly strained.

Bloom, David E., and David Canning (2004) - Global Population Ageing: Facts, Fiction, and the Future. This paper explores the global phenomenon of population aging and its implications for economic and social policies. Bloom and Canning provide a comprehensive analysis of how demographic transitions affect economic growth and old-age security. They argue that while aging

populations present challenges, they also offer opportunities for policy innovation. Their findings are relevant for understanding the global context of demographic transitions and applying these insights to the Indian scenario.

Simmons, Alan (2008) - Pension Systems and Old Age Security in Developing Countries. They examines pension systems in developing countries, focusing on how they adapt to changing demographic structures. The paper provides insights into various models of pension systems and their effectiveness in ensuring old-age security. It is useful for comparing India's pension system with those of other developing nations and understanding potential reforms needed to address old-age security issues.

Desai, Sonalde, and S. Rajan (2013) - Changing Family Structures and Economic Security in India. This study analyzes the impact of changing family structures on economic security in India. Desai and Rajan investigate how the shift from joint to nuclear families affects elderly care and support systems. Their findings highlight the increasing importance of formal social security mechanisms as traditional family-based support systems become less reliable.

### **Research methodology**

This study utilizes a conceptual framework to analyze the interplay between demographic transition, intergenerational contracts, and old-age security in Descriptive and Theoretical way . By synthesizing information from various sources, the research identifies and examines the key concepts, trends, and challenges associated with each aspect of the study. This analysis helps in understanding the broader implications of demographic shifts on old-age security.

### **Demographic Transition in India**

Stages of Demographic Transition: The demographic transition model outlines four stages that a country typically experiences as it develops economically and socially. In the first stage, high birth and death rates lead to slow population growth. The second stage sees declining death rates due to improvements in healthcare, while birth rates remain high, resulting in rapid population growth. The third stage is characterized by declining birth rates, leading to a slowdown in population growth. Finally, in the fourth stage, both birth and death rates are low, stabilizing the population growth at a low rate. India is currently transitioning between the third and fourth stages. The country has experienced a significant decline in birth rates and continues to see improvements in healthcare and living standards. However, with the Total Fertility Rate (TFR) projected to decrease to 1.94 for 2021-2025 and to 1.73 for 2031-2035, India is expected to move towards a more stabilized population growth, potentially stabilizing below 1.7 billion before 2065 (UN Population Division, 2023; Lancet Report, 2023).

Impact of Fertility Decline: The decline in fertility rates has profound implications for India's demographic structure. A lower fertility rate reduces the proportion of the young population, which shifts the dependency ratio. As fertility rates decline, the working-age population (ages 15-64) increases relative to the dependent population (children and elderly), potentially leading to a demographic dividend. This shift provides an opportunity for economic growth if the country invests in education and employment opportunities for the growing working-age population.

Population Aging: Increasing life expectancy contributes to a higher proportion of elderly individuals within the population. According to the UN Population Division, the elderly population in India is projected to reach 20% by 2050. The aging index, which is the ratio of people aged 60+ to children under 15, has been rising, reflecting the growing proportion of the elderly. The Census 2011 highlighted that the elderly population was around 8.6% of the total population, and projections indicate that this will increase significantly in the coming decades. The rising proportion of elderly underscores the need for robust social security systems and healthcare services to support this demographic shift.

### Demographic Transition and Demographic Dividend:

Stage	Period	Characteristics	Data
Pre-Independence	Before 1947	<ul style="list-style-type: none"> <li>• High birth and death rates</li> <li>• Slow population growth</li> <li>• Limited healthcare and sanitation</li> </ul>	<ul style="list-style-type: none"> <li>• Life expectancy: ~33 years</li> <li>• Total fertility rate (TFR): ~6 births per woman</li> </ul>
Post-Independence	1947 - 1970s	<ul style="list-style-type: none"> <li>• Decline in death rates due to improved healthcare and sanitation</li> <li>• High birth rates</li> <li>• Rapid population growth</li> </ul>	<ul style="list-style-type: none"> <li>• Life expectancy: ~50 years by 1970</li> <li>• Total fertility rate (TFR): ~5.9 births per woman in 1960</li> </ul>
Mid Post-Independence	1970s - 2000s	<ul style="list-style-type: none"> <li>• Continued decline in death rates</li> <li>• Gradual decline in birth rates</li> <li>• Slower population growth</li> </ul>	<ul style="list-style-type: none"> <li>• Life expectancy: ~63 years by 2000</li> <li>• Total fertility rate (TFR): ~3.3 births per woman in 2000</li> </ul>
Current	2000s - Present	<ul style="list-style-type: none"> <li>• Low birth and death rates</li> <li>• Stabilizing population growth</li> <li>• Aging population</li> </ul>	<ul style="list-style-type: none"> <li>• Life expectancy: ~70 years</li> <li>• Total fertility rate (TFR): ~2.3 births per woman in 2016</li> </ul>

### Intergenerational Contracts in India

India's intergenerational contract, traditionally rooted in the joint family system, especially in rural areas, relied on children—particularly sons—for elderly support and caregiving. This system is grounded in cultural norms of familial duty and reciprocity. Multiple generations cohabiting under one roof allowed families to share resources and caregiving roles (Census of India, 2011). The reciprocity theory in sociology explains this as a social exchange, with future benefits like inheritance in mind. Urbanization, migration, and changing family structures have disrupted these traditional systems, leading to a shift toward nuclear families and increased reliance on external caregiving services (Singh, 2020; Census of India, 2011; NFHS-5, 2021).

Urban migration, economic independence, and logistical challenges have fueled the rise of nuclear families. The elderly population, projected to reach 20% by 2050, will further strain these family contracts, reversing the declining dependency ratio. As women, traditionally the primary caregivers, migrate for work or education, elder care is increasingly outsourced to professional services (NFHS-5, 2021).

**Case Study:** Intergenerational Contracts in Other Asian Countries Japan Japan faces a similar strain on its intergenerational contract due to rapid societal aging and shifting family dynamics.

Traditionally, Japanese families followed a model similar to India, where elderly parents lived with their children. However, the rise of nuclear families and increased participation of women in the workforce have altered these caregiving dynamics. To address this, Japan introduced long-term care insurance (LTCI) in 2000, which aimed to relieve the burden of elder care on families (Kawakami, 2007). Comparative Analysis Both India and Japan have experienced shifts from traditional joint family systems to nuclear family models due to urbanization and economic change. However, Japan has adopted structured social policies, such as LTCI, to support elder care, while India continues to depend largely on family-based caregiving. Additionally, in both countries, the feminization of migration has led to a redefinition of caregiving roles, with Japan relying more on external care services compared to India

### **Challenges to Old-Age Security in India**

The transformation in family structures, marked by the rise of nuclear families and increased rural-to-urban migration, has significantly impacted old-age security in India. As individuals relocate to urban centers seeking improved employment opportunities, traditional intergenerational support systems are weakening. This migration often results in elderly parents remaining in rural areas without the familial support they once depended on. Data from the 2011 Census reveal that the proportion of nuclear families increased from 52% in 2001 to 58% in 2011. This shift, combined with economic and social pressures, exacerbates the challenge of providing adequate care for the elderly, as urban residents often face difficulties balancing work commitments and financial constraints with caregiving responsibilities.

Formal old-age security mechanisms, such as pension schemes, are crucial in supporting the elderly. The National Pension System (NPS) and the Indira Gandhi National Old Age Pension Scheme (IGNOAPS) are significant initiatives, yet they often fall short in addressing the needs of the aging population. For example, the IGNOAPS offers a monthly pension of ₹ 200 for individuals aged 60-79 and ₹ 500 for those aged 80 and above, which is insufficient to cover basic living expenses. Coverage gaps are particularly pronounced for workers in the unorganized sector, who make up over 80% of India's workforce and lack pension security. The Economic Survey 2023 reported that only 30% of the elderly population receives any form of pension, leaving a large segment without financial support.

Further illustrating the inadequacies in pension coverage, the National Sample Survey Office (NSSO) data indicate that only 26% of elderly individuals in rural areas and 12% in urban areas receive pensions. The World Bank projects that the proportion of elderly individuals in India will rise from 8% in 2015 to 19% by 2050, highlighting the urgent need for comprehensive reforms. Additionally, the Economic Survey 2023 noted that the average pension amount covers only 45% of the average monthly per capita consumption expenditure (MPCE), underscoring the insufficiency of current pension schemes.

## Pension Plans in India Post-Independence

### 1. Employees' Provident Fund (EPF) (1952)

Established under the EPF Act, this mandatory savings scheme for organized sector employees provides a lump sum at retirement through contributions from both employer and employee (Government of India, 1952).

### 2. Employees' Pension Scheme (EPS) (1995)

Amended from the EPF Act, EPS offers pensions by diverting part of the employer's EPF contribution to support organized sector employees (Government of India, 1995).

### 3. Public Provident Fund (PPF) (1968)

A long-term savings scheme with tax benefits, maturing in 15 years, governed by the PPF Act (Government of India, 1968).

### 4. National Pension System (NPS) (2004)

A voluntary retirement plan for all citizens, including unorganized sector workers, offering two account types: Tier I and Tier II (Government of India, 2013).

### 5. Atal Pension Yojana (APY) (2015)

Under NPS, APY provides guaranteed pensions ranging from ₹ 1,000 to ₹ 5,000 for unorganized sector workers based on contributions (Government of India, 2015).

### 6. Indira Gandhi National Old Age Pension Scheme (IGNOAPS) (1995)

Provides a monthly pension for elderly citizens below the poverty line, with ₹ 200 for ages 60–79 and ₹ 500 for 80+ (Government of India, 1995).

### 7. Pradhan Mantri Vaya Vandana Yojana (PMVVY) (2017)

Administered by LIC, it offers senior citizens an 8% guaranteed return for 10 years with flexible payout options (Government of India, 2017).

### 8. Gratuity (1972)

Provides a lump sum to employees upon retirement, resignation, or death, after five years of service (Government of India, 1972).

### 9. Varishtha Pension Bima Yojana (VPBY) (2003, relaunched 2014)

A pension scheme offering a 9% annual return, providing monthly pensions for 15 years (Government of India, 2003).

**Policy Reforms:** In light of India's demographic transition and its impact on intergenerational contracts and old-age security, the following policy recommendations are proposed. These recommendations aim to enhance old-age security while respecting Indian cultural and societal norms and improving the effectiveness of pension schemes.

To address the growing elderly population and their financial needs, pension schemes must be expanded to include informal sector workers, who make up over 80% of India's workforce (International Labour Organization, 2023). Currently, only 10-12% of the organized sector has

access to pensions, leaving many elderly without financial security (World Bank, 2020). Expanding pension coverage, particularly through schemes like the National Pension System (NPS), which had 4.5 million subscribers in 2023, will be essential. Programs like the Pradhan Mantri Vaya Vandana Yojana (PMVVY) provide stable income but are limited, offering a maximum of ₹10,000 per month—insufficient for low-income groups (Ministry of Finance, 2020). Similarly, the National Policy for Older Persons (NPOP), which includes the Indira Gandhi National Old Age Pension Scheme (IGNOAPS) targeting 22.1 million beneficiaries, must be expanded to ensure financial and healthcare security (Ministry of Rural Development, 2021). Currently, only 30% of India's elderly population receives any form of pension (Economic Survey of India, 2023), highlighting a significant coverage gap. Additionally, healthcare for the elderly is inadequate, with only 26% in rural areas and 12% in urban areas having access to pensions and related services (National Sample Survey Office, 2022).

### **International Comparisons**

Countries like Japan, through the Long-Term Care Insurance (LTCI) scheme, have shifted elder care from family-based to insurance-based systems, offering comprehensive support (OECD, 2021). Similarly, Sweden and Germany provide expansive social security systems that ensure pensions, healthcare, and elder care services are accessible to all (World Bank, 2020). These models can offer valuable lessons for India in strengthening its old-age security infrastructure.

### **Recommendations for Strengthening Old-Age Security**

To improve old-age security, India must focus on expanding pension schemes to include informal workers, adjusting pension amounts to keep pace with inflation, and implementing universal healthcare that includes geriatric care. Subsidizing health insurance premiums for low-income elderly populations is crucial to ensuring access to medical care. Developing more elder care homes and community centers through public-private partnerships can enhance support for elderly individuals. Furthermore, promoting digital platforms for remote support and telemedicine can bridge healthcare access gaps in rural areas. Strengthening intergenerational bonds through tax benefits, subsidies, and awareness campaigns will also help reinforce social support for the elderly.

### **Promoting Family-Based Support Systems and Intergenerational Solidarity**

Strengthening family-based elder care systems aligns with traditional Indian values, which emphasize familial responsibility towards the elderly. Despite the shift toward nuclear households—70% as per the 2011 Census—families can still play a critical role in supporting elderly members. Providing tax incentives and financial benefits to families who take on caregiving responsibilities would incentivize this support system, reinforcing cultural norms while easing the pressure on formal pension and healthcare systems. Additionally, developing community-based programs that foster intergenerational interactions can enhance emotional and social support for the elderly, ensuring they remain connected to their families and communities. Offering resources and training to family caregivers can also improve the quality of care, addressing both emotional and practical caregiving needs.

## Policy Integration

It is vital to integrate policies that address demographic transition, intergenerational contracts, and pension schemes to create a comprehensive old-age support system. By doing so, India can manage the challenges posed by its rapidly aging population.

## Examples from Other Countries

Japan's LTCI ensures the elderly receive care without burdening their families (OECD, 2021). Sweden provides universal pensions and healthcare services, maintaining a high quality of life for the elderly (World Bank, 2020). Germany's public-private pension schemes and community-based elder care also offer valuable insights for India (International Social Security Association, 2021).

## Conclusion

India's demographic transition, characterized by declining fertility and increasing life expectancy, is straining old-age security. The erosion of traditional intergenerational support due to urban migration and nuclear families has made formal pension and healthcare systems crucial. However, existing schemes like the National Pension System (NPS) and Indira Gandhi National Old Age Pension Scheme (IGNOAPS) are inadequate, especially for informal sector workers. Global models such as Japan's LTCI and European welfare systems offer valuable lessons. Expanding pension coverage, implementing universal healthcare, and strengthening intergenerational ties are essential. Without urgent policy reforms, India's aging population will face insufficient care and financial support. Comprehensive policies addressing demographic changes, social security, and intergenerational dynamics are vital to ensuring a secure future for India's elderly.

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# Demographic Changes and its Socio-economic Effects (With Special Reference to the State of Uttarakhand)

Gokulanand Pandey<sup>1</sup>

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## ABSTRACT

*Demographic transition is related to the change in population structure of a particular place in different time periods. Changes in the birth and death rates along with migration and socio-economic changes are the key responsible factors for demographic transition. Demographic dividend is a positive aspect of demographic transition. It refers to the increasing proportion of working age population in a country. Whereas in any of the country or state a high unemployment rate, lack of resources, illiteracy and widespread poverty are some of the reasons that can turn this demographic dividend into a demographic disaster as well. The age group of 15 to 64 years is considered as working age population. India is in a state of demographic dividend since 2005, which will continue till 2055. At present about 68 percent Population of India comes under the working age group. Now population growth is not considered as a disaster like before. Demographic dividend reflects the positive and sustainable development of human resources in the economy. In this case population pyramid is formed inverted. In the context of Uttarakhand having money order economy the demographic transition is in various stages. Here, due to inter - caste migration regional differences are seen in decadal population growth. The main reason for this difference is migration to the plain districts in the search of better prospects for advanced education and employment. As per the census 2011 data the decadal growth rate has been positive in all the eleven districts of Uttarakhand except Almora and pauri. Although it is believed that the rapid increase in population will create adverse conditions for the coming generations, hence it needs to be controlled. At the same time, it is also true that if population growth is taken from a positive perspective and policies are made accordingly, then it will be helpful in the development of the country and states as well. Thus, there is need to be a beneficiary of population growth.*

**Keywords** - Demographic dividend, Migration, Regional differences, Money order economy.

## Introduction

Demographic transition is a complex phenomenon. The concept of demographic transition arose due to changes in the structure of population in many parts of Europe and North America in the 19th

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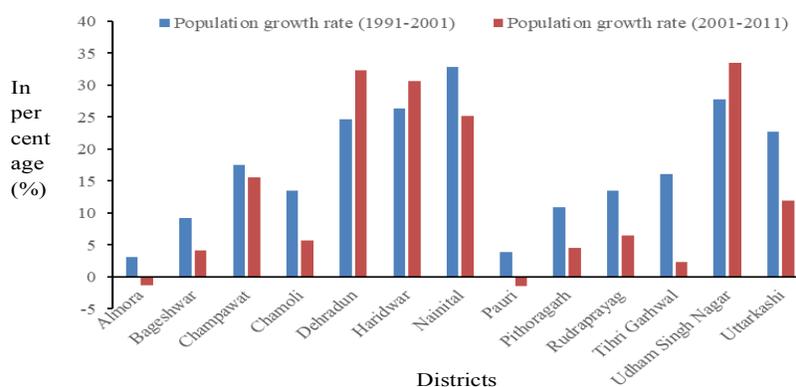
and early 20th centuries. Demography is directly related to the change in population size over the time, birth rate, death rate, migration, ratio of the number of men and women and other people of different age groups. The size of population is studied under the formal demography while various social, economic and political aspects of the population are studied under social demography. Malthus states in his “essay on population 1788” that the population growth increases at a faster rate than the resources available. According to the malthus man has always been condemned to live in poverty therefore some scholars consider his theory pessimistic. India has not only gone through a situation of population explosion after independence but also there have been extensive changes in the population structure along with the decline in total fertility rate. As per the world population prospect report 2019 released by the United nations India will be world’s most populous country by 2027 and the world population will increase to 9.7 billion by 2050.

According to this report the total population of only nine countries will exceed half of the total world population. The land area, natural resources of the country are limited and the environment is also under deep pressure due to global warming. In such a situation the population of the country is estimated to be 273 million by 2050 is not a good sign for the future of upcoming generations. Thus with the rapid population growth, it will be a very difficult challenge to provide clean drinking water, two times of meal in a day, employment and housing to every citizen in the country.

### Uttarakhand and Demographic Changes

There are various biological, demographic and socio-economic factors in Uttarakhand which influence population growth. There has been a change in the demographic structure of the plain districts Dehradun, Haridwar, Udham Singh Nagar and Nainital of the state within the last two decades. The population density in the plain districts is continuously increasing while people from the hilly areas are migrating for the sake of good health, quality education and better living standard. The rate at which people of the hills are migrating from here due to lack of basic facilities is in the same proportion that outsiders are coming here and living in these places. Thus demographic change has become a sensitive issue in the state of Uttarakhand.

The decadal population growth of various districts of Uttarakhand over the decades are given below



Source: Census Data 2001

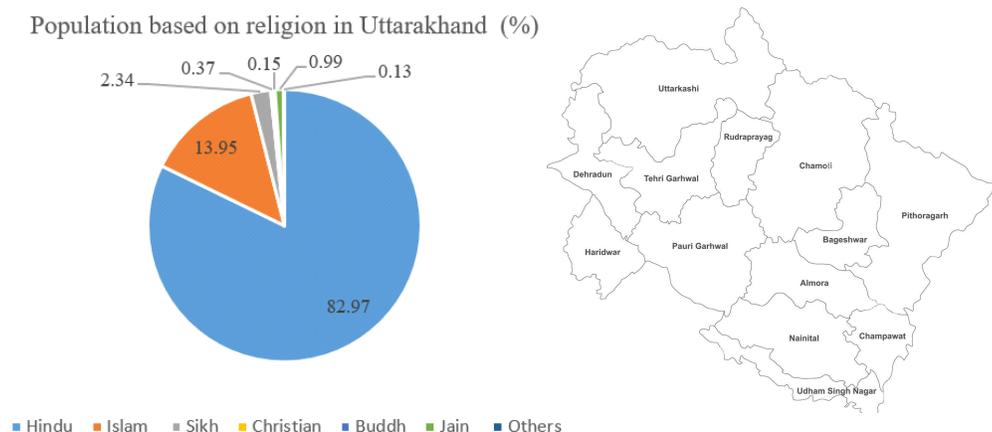
District wise decadal population growth rate of Uttarakhand in percentage (From the year 1991 to 2011)

S. No.	District	Population growth rate (1991-2001)	Population growth rate (2001-2011)
1	Almora	3.14	-1.28
2	Bageshwar	9.21	4.18
3	Champawat	17.56	15.63
4	Chamoli	13.51	5.74
5	Dehradun	24.71	32.33
6	Haridwar	26.3	30.63
7	Nainital	32.88	25.13
8	Pauri	3.87	-1.41
9	Pithoragarh	10.92	4.58
10	Rudraprayag	13.444	6.53
11	TihriGarhwal	16.15	2.35
12	Udham Singh Nagar	27.79	33.45
13	Uttarkashi	22.72	11.89

Thus a comparative study of the population growth data obtained from the last two censuses reveals that the growth rate of population was positive in all the districts of state from the year 1991 to 2001, whereas the population growth rate in almora and pauri was negative from the year 2001 to 2011.

If the demographic change of last decade considered on the basis of religion we get the number of Hindus in the total population of uttarakhand was 84.95 percent, which was reduced to 82.97 percent from the year 2001 to 2011. Similarly as per the census data 2001, the Muslim population in uttarakhand was 11.92 percent which has increased to 13.95 percent according to the census data 2011.

The graphical presentation of the population on the basis of religion is as follows

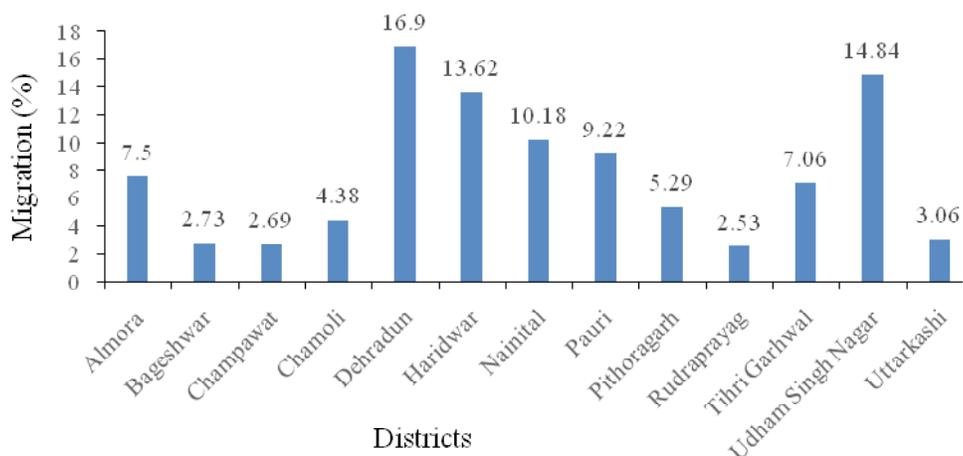


Demographic change has been adversely affected by migration from hilly areas in uttarakhand. Migration has not only increased the population density of the districts of plains in uttarakhand but also has given rise to problems like unemployment and excessive exploitation of resources.

Let us take a look at the district wise migration data in Uttarakhand

S. No.	District	Migration (%)
1	Almora	7.5
2	Bageshwar	2.73
3	Champawat	2.69
4	Chamoli	4.38
5	Dehradun	16.9
6	Haridwar	13.62
7	Nainital	10.18
8	Pauri	9.22
9	Pithoragarh	5.29
10	Rudraprayag	2.53
11	TihriGarhwal	7.06
12	Udham Singh Nagar	14.84
13	Uttarakashi	3.06

District wise migration in Uttarakhand



Source: Uttarakhand migration report 2001

### Conclusion and Suggestions

In uttarakhand, despite the increase in working age population it has not been completely transformed into the labour force. Due to excess of working age population at present most of the

population in the state appears to be a demographic dividend in nature but in terms of human resources it is still like an unskilled crowd. This problem is increasing further due to lagging behind in the field of education and health. The number of women in the total population of uttarakhand is 49 percent, while their participation in the labour force is very low which has a negative impact on the total production. Apart from this, the following challenges are being faced in availing the benefits of demographic dividend in uttarakhand.

From higher education to vocational education all the deficiencies in education, lack of food security, lack of desired skills in the work force are major obstacles in providing employment to the rapidly growing population of the state. Health and nutrition related problems adversely affect the effectiveness of education and learning.

Employment generation in the state is a big challenge, for this the government should have to develop strong infrastructure in the manufacturing sector. At the national level, the share of employment in manufacturing sector has remained almost stable for many years while the other most populous country of the world have created more employment in the manufacturing sector through their demographic dividend. Even in the formal sector, employment is not being created as per the demand.

Government should promote labour- based industries like small and cottage industry, traditional businesses, food processing and tourism industry to take full advantage of demographic dividend. Socio - economic policy should be formulated on the basis of age and gender structure so that women can be developed as human resources. There is a need to make a new policy for the control and efficient management of increasing population so that future challenges can be dealt efficiently.

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# Impact of Demographic Transition on Gender inequality in India

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## ABSTRACT

*This study investigates the impact of demographic transition on gender inequality in India, focusing on how shifts in population dynamics influence socio-economic disparities between men and women. The research aims to analyze historical and current trends in gender inequality, examining the effects of demographic factors such as population growth, and an aging population. By utilizing both quantitative and qualitative data, the study seeks to identify the socio-economic factors contributing to gender inequality. Aim of this Research Paper is to investigate how demographic transition influence gender inequality in India and to identify the socio-economic factors contributing to this inequality. Descriptive analyses are employed to identify trends and determine the relationship between demographic transition and gender inequality. The findings will be able to reveal that demographic transition significantly impact gender inequality in various sectors, including education, employment, and health. For instance, urbanization has led to increased educational opportunities for women but has not necessarily translated into equitable employment outcomes.*

*The study concludes with actionable policy recommendations aimed at mitigating gender inequality in the context of ongoing demographic transition. These recommendations emphasize the need for targeted interventions that address the socio-economic to gender equality. The research also acknowledges limitations, such as data availability and potential biases in qualitative analysis, and suggests areas for future research to build on these findings. By providing a nuanced understanding of the interplay between demographic transition and gender inequality, this study contributes to the development of more effective policies and interventions to promote gender equality in India.*

**Keywords:** Demographic transition, Gender inequality

## Introduction

Demographic transition refers to the process by which a country moves from high birth and death rates to low birth and death rates as part of its economic development. This transformation,

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which typically unfolds over several decades, brings about profound changes in social structures, including family size, labor force participation, and access to resources such as education and healthcare. India, like many developing nations, has experienced a unique trajectory in its demographic transition, marked by a sharp decline in fertility and mortality rates, especially in recent decades.

Currently, India is in the later stages of this demographic transition, with birth rates steadily decreasing and life expectancy increasing. As the country moves closer to stabilizing its population growth, the effects of this transition are visible not only in the demographic makeup but also in socioeconomic patterns, including shifts in labor markets, educational attainment, and household structures. One area where these changes are particularly consequential is gender inequality. Despite economic progress, the country continues to grapple with significant gender disparities in areas such as education, employment, and political representation.

In the work “The Demographic Transition and Its Effects on Gender Inequality in India”, **Amartya Sen**, explores the link between demographic changes and gender inequality, particularly focusing on how reduced fertility rates and increased educational opportunities impact women’s status in India.

### **Linking Demographic Transition to Gender Inequality:**

Demographic transition profoundly influences gender inequality in several ways. In the Indian context, each phase of the transition has had distinct effects on women’s roles in society:

- 1. Fertility Decline:** With fewer children, women have greater opportunities to invest in education and participate in the labor market. In India, declining fertility has been associated with rising female literacy and a shift toward smaller family sizes, giving women more control over reproductive choices and household resources. However, access to these opportunities is often unequal, particularly along rural-urban and class lines, which perpetuates gender inequality in specific contexts.
- 2. Economic Participation and the Demographic Dividend:** As India has entered the later stages of demographic transition, with a large working-age population, there is a potential for a demographic dividend—a period where the labor force grows faster than the dependent population. This could lead to significant economic gains, but gender inequality remains a major obstacle. Women’s labor force participation in India remains low despite educational gains, primarily due to entrenched patriarchal norms, unequal access to employment opportunities, and the burden of unpaid care work. While the demographic transition could, in theory, provide more opportunities for women to engage in the economy, social and structural barriers continue to limit their participation, thus exacerbating gender inequality.
- 3. Health, Longevity, and Gender Disparities:** As mortality rates decline and life expectancy increases, women, who generally live longer than men, are more likely to face challenges

associated with old age, such as poverty, healthcare access, and social isolation. In India, this is particularly concerning, as elderly women often lack adequate financial resources and social support, given the gendered nature of inheritance laws and caregiving responsibilities. Additionally, maternal health remains a critical issue, with access to healthcare still limited for women in poorer regions, despite overall improvements in life expectancy.

- 4. Educational Gains and Gender Gaps:** The demographic transition has brought improvements in educational attainment across India, particularly for women. Yet, significant gender gaps remain in secondary and higher education, which can influence women's long-term career prospects and economic independence. In rural areas and marginalized communities, girls are still more likely to drop out of school due to cultural norms and economic pressures, reinforcing cycles of gender inequality.

### Review of Literature

- **Schultz (2002)** "*The Education Gender Gap and Demographic Transition*": examines the relationship between demographic transition and the gender gap in education. The study finds that as countries undergo demographic transitions, the demand for educated labor increases, leading to higher investments in girls' education. This, in turn, reduces the gender gap in education and promotes gender equality in the labor market. The paper emphasizes the role of policy interventions in accelerating these positive outcomes.
- **Klasen and Lamanna (2009)** "*Gender Inequality as a Barrier to Economic Growth*": This review explores how gender inequality in education and employment can impede economic growth. The authors argue that gender inequality reduces the pool of talent available in the labor market, leading to inefficiencies and slower economic development. They highlight that demographic transitions, characterized by declining fertility and mortality rates, can exacerbate or mitigate these effects depending on the level of gender inequality in a society.
- **World Bank review (2012)** "*Gender, Poverty, and Demography*": This focuses on the interplay between gender inequality, poverty, and demographic changes. It discusses how gender inequalities in access to resources, education, and healthcare can exacerbate demographic stresses, such as high fertility rates and rapid population growth. The review suggests that addressing gender inequality is crucial for harnessing the demographic dividend and achieving sustainable economic development.
- **Duflo (2012)** "*Gender Inequality and Economic Development*" surveys the theoretical and empirical literature on the relationship between gender inequality and economic development. The review emphasizes that gender equality is not only a moral imperative but also an economic necessity. It discusses various mechanisms through which gender inequality affects economic outcomes, such as labor market participation, fertility decisions, and human capital

investments. The paper concludes that promoting gender equality can lead to more inclusive and sustainable economic growth.

- **Buvinic et al. (2013)** "*Promoting Gender Equality: A Systematic Review of Interventions*": provide a systematic review of interventions aimed at reducing gender inequality. The review covers a wide range of interventions, including education, health, and economic empowerment programs. It finds that successful interventions often involve multi-sectoral approaches and community engagement. The review highlights the importance of addressing social norms and structural barriers to achieve lasting gender equality.

### **Aim**

The primary aim of this research paper is to analyze the impact of India's demographic transition on gender inequality across various sectors, including education, labor force participation and healthcare access.

### **Objective**

- 1) To investigate how Demographic Transition influence Gender inequality in India.
- 2) To identify the Socio-Economic factors contributing to Gender inequality.
- 3) To recognize the actionable policy recommendation to mitigate Gender inequality in the context of ongoing demographic transition.

### **Research Question**

What are the trends in gender inequality indicators (e.g., education, employment, health) during various stages of demographic transition in India?

### **Research Methodology**

**DATA TYPE AND SOURCE**-The study is descriptive in nature. The type of data is quantitative in nature and whole part of the data is collected from secondary source. The main sources of the secondary data used in the study are from the human development report mainly.

**SOFTWARE TOOLS & STATISTICS** -Excel software was used for data analysis and descriptive statistics was used for analysis the data.

**Limitation of the Study** - The study's scope is limited to India. Data on gender inequality and demographic transition was inconsistent/incomplete. Limited availability of long-term data can hinder the ability to track changes over time. Cultural norms and patriarchal values can obscure the true impact of demographic changes on gender inequality.

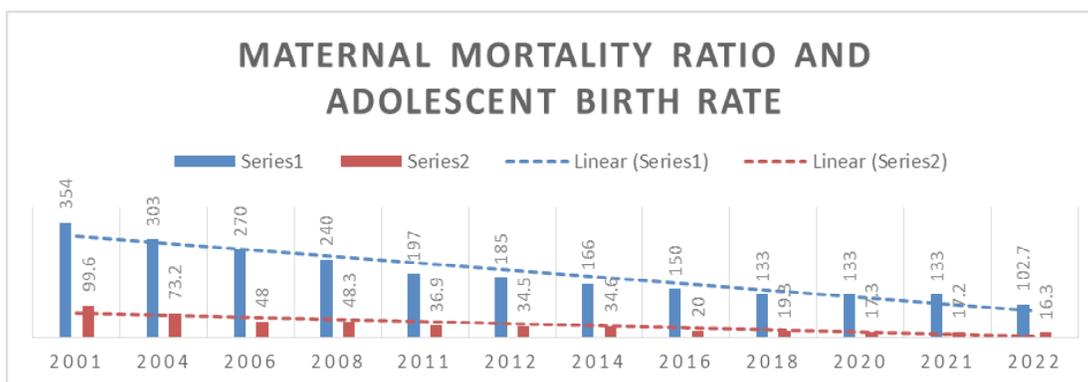
## Data Analysis

### Gender inequality Index

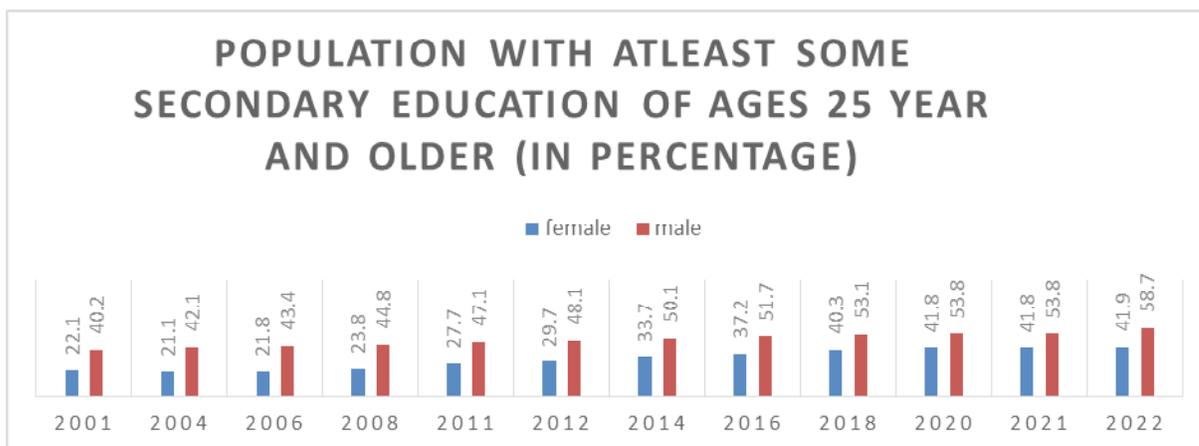
Years	1	2	3	4	5	6	7	8	9
Year	Maternal mortality ratio (deaths per 100,000 live births)	Adolescent birth rate (births per 1,000 women ages 15–19)	Share of seats in parliament		Population with at least some secondary Education (%) of ages 25 and older.		Labour force participation rate		Gender inequality index
			F	M	F	M	F	M	
2001	354	99.6	8.9	91.1	22.1	40.2	30.8	82.2	0.660
2004	303	73.2	9.3	90.7	21.1	42.1	31.7	82.1	0.636
2006	270	48.0	9.0	91.0	21.8	43.4	30.7	81.5	0.610
2008	240	48.3	9.2	90.8	23.8	44.8	28.3	80.5	0.606
2011	197	36.9	10.9	89.1	27.7	47.1	24.5	78.8	0.576
2012	185	34.5	10.9	89.1	29.7	48.1	23.1	78.2	0.571
2014	166	34.6	11.8	88.2	33.7	50.1	22.2	76.7	0.558
2016	150	20.0	11.7	88.3	37.2	51.7	21.4	75.1	0.516
2018	133	19.3	11.7	88.3	40.3	53.1	20.5	73.6	0.505
2020	133	17.3	13.4	86.6	41.8	53.8	18.6	69.4	0.493
2021	133	17.2	13.4	86.6	41.8	53.8	19.2	70.1	0.490
2022	102.7	16.3	14.6	85.4	41.9	58.7	28.3	76.1	0.43

Source: Human Development Report (UNDP)

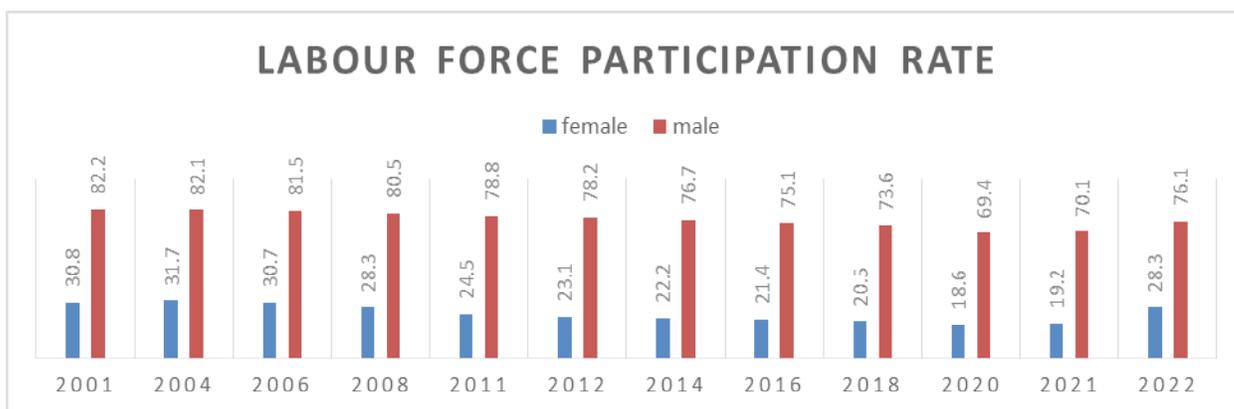
- **Health**



• Education



• Employment



From 2001-2012

Column1	Column2	Column3	Column4	Column5
Mean	258.1667	Mean	56.75	Mean
Standard Error	26.30515	Standard Error	10.23682	Standard Error
Median	255	Median	48.15	Median
Mode	#N/A	Mode	#N/A	Mode
Standard Deviation	64.4342	Standard Deviation	25.07499	Standard Deviation
Sample Variance	4151.767	Sample Variance	628.755	Sample Variance
Kurtosis	-0.92314	Kurtosis	0.577438	Kurtosis
Skewness	0.387319	Skewness	1.199151	Skewness

Column6		Column7		Column8		Column9	
Mean	44.28333	Mean	28.18333	Mean	80.55	Mean	0.609833
Standard Error	1.224586	Standard Error	1.471602	Standard Error	0.697973	Standard Error	0.013987
Median	44.1	Median	29.5	Median	81	Median	0.608
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	2.999611	Standard Deviation	3.604673	Standard Deviation	1.709678	Standard Deviation	0.03426
Sample Variance	8.997667	Sample Variance	12.99367	Sample Variance	2.923	Sample Variance	0.001174
Kurtosis	-1.26487	Kurtosis	-1.72368	Kurtosis	-1.83601	Kurtosis	-0.97242

**From 2001-2012**-Average mean of all column is 592.88

**From 2014-2022**

Column1		Column2		Column3		Column4		Column5	
Mean	136.2833	Mean	20.78333	Mean	12.76667	Mean	87.23333	Mean	39.45
Standard Error	8.6244	Standard Error	2.821278	Standard Error	0.49576	Standard Error	0.49576	Standard Error	1.364979
Median	133	Median	18.3	Median	12.6	Median	87.4	Median	41.05
Mode	133	Mode	#N/A	Mode	11.7	Mode	88.3	Mode	41.8
Standard Deviation	21.12538	Standard Deviation	6.910692	Standard Deviation	1.214359	Standard Deviation	1.214359	Standard Deviation	3.343501
Sample Variance	446.2817	Sample Variance	47.75767	Sample Variance	1.474667	Sample Variance	1.474667	Sample Variance	11.179
Kurtosis	1.087156	Kurtosis	5.156102	Kurtosis	-1.39551	Kurtosis	-1.39551	Kurtosis	0.562946
Skewness	-0.29147	Skewness	2.231983	Skewness	0.55946	Skewness	-0.55946	Skewness	-1.28601

Column6		Column7		Column8		Column9	
Mean	53.53333	Mean	21.7	Mean	73.5	Mean	0.498667
Standard Error	1.185655	Standard Error	1.428286	Standard Error	1.26412	Standard Error	0.017013
Median	53.45	Median	20.95	Median	74.35	Median	0.499
Mode	53.8	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	2.90425	Standard Deviation	3.498571	Standard Deviation	3.09645	Standard Deviation	0.041673
Sample Variance	8.434667	Sample Variance	12.24	Sample Variance	9.588	Sample Variance	0.001737
Kurtosis	2.24017	Kurtosis	3.239691	Kurtosis	-1.88446	Kurtosis	1.809335
Skewness	1.117444	Skewness	1.684511	Skewness	-0.54348	Skewness	-0.45706

**From 2014-2022**-Average mean of all column is 445.72

**Note**—Column1 indicate: Maternal mortality ratio, Column 2 Adolescent birth rate, Column 3 Share of seats in parliament for female Column 4 Share of seats in parliament for male, Column 5 Population with at least some secondary Education for female, Column 6 Population with at least some secondary Education for male, Column 7 Labour force participation rate for female, Column 8 Labour force participation rate for male Column 9 Gender inequality index

Table-2

Phase	TFR	IMR	LIFE EXPECTANCY	FEMALE LITERACY RATE	FLFPR	GII
Pre-Transition (Before 1950s)	6.0	150	40	10%	20%	0.7
Early Transition (1950s-1970s)	5.5	120	50	20%	25%	0.65
Mid-Transition (1980s-2000s)	3.5	80	60	40%	30%	0.55
Late Transition (2000s-Present)	2.3	30	70	65%	35%	0.45

Source: Human development report (UNDP)

## Phases of Demographic Transition in India

### Pre-Transition (Before 1950s)

**High Birth and Death Rates:** Limited access to healthcare, high infant mortality, and low life expectancy.

**Gender Inequality:** Patriarchal norms, limited educational and employment opportunities for women.

### Early Transition (1950s-1970s)

**Declining Death Rates:** Improvements in healthcare and sanitation.

**Gender Inequality:** Slow progress in women’s education and employment; traditional gender roles persist.

### Mid-Transition (1980s-2000s)

**Declining Birth Rates:** Increased use of family planning, rising female literacy.

**Gender Inequality:** Gradual improvement in women’s education and workforce participation, but significant disparities remain.

### Late Transition (2000s-Present)

**Low Birth and Death Rates:** Stabilization of population growth.

**Gender Inequality:** Continued progress in education and employment, but challenges like gender pay gap and underrepresentation in leadership roles persist.

## Gender inequality is influenced by a variety of socio-economic factors

**Education:** Differences in access to education between genders can lead to disparities in literacy rates, skill development, and employment opportunities. In many regions, girls are less likely to complete their education due to cultural norms, early marriage, or economic constraints<sup>1</sup>.

**Employment Opportunities:** Women often face barriers to entering the workforce, including discrimination, lack of childcare, and societal expectations. Even when employed, women are more likely to be in lower-paying jobs and industries.

**Income and Wealth:** The gender pay gap, where women earn less than men for the same work, is a significant factor. This gap can be attributed to differences in work experience, job types, and discrimination.

**Health and Reproductive Rights:** Limited access to healthcare and reproductive rights can affect women's ability to participate fully in economic activities. Health issues related to pregnancy and childbirth can also impact women's economic stability.

## Policy Recommendations

### Policy Recommendations and Historical Changes

To address gender inequality influenced by demographic transitions in India, it's essential to understand past policy efforts and identify areas for improvement. Historical Policy Efforts

### Education Policies

**National Policy on Education (1986, 1992):** Focused on universalizing elementary education and promoting education for girls.

**Sarva Shiksha Abhiyan (2001):** Aimed at universalizing elementary education, with special provisions for girls.

**Beti Bachao Beti Padhao (2015):** Launched to address the declining child sex ratio and promote girls' education.

### Employment Policies

**Equal Remuneration Act (1976):** Ensured equal pay for equal work for men and women.

**National Rural Employment Guarantee Act (2005):** Provided employment opportunities for rural women.

### Healthcare Policies

**National Population Policy (2000):** Emphasized reducing fertility rates and improving maternal health.

**Janani Suraksha Yojana (2005):** Promoted institutional deliveries to reduce maternal and infant mortality.

## Legal Reforms

**Dowry Prohibition Act (1961):** Aimed to curb the practice of dowry.

**Protection of Women from Domestic Violence Act (2005):** Provided protection to women from domestic violence.

## Current Policy Recommendations

### Education

**Enhance Access:** Improve access to quality education for girls, especially in rural and marginalized communities.

**STEM Focus:** Encourage girls to pursue education in Science, Technology, Engineering, and Mathematics (STEM) fields.

**Scholarships and Incentives:** Provide scholarships and financial incentives to retain girls in schools.

### Employment

**Workplace Policies:** Implement policies that support work-life balance, such as flexible working hours and remote work options.

**Skill Development:** Promote vocational training and skill development programs tailored for women.

**Entrepreneurship Support:** Provide financial and mentorship support for women entrepreneurs.

### Healthcare

**Reproductive Health:** Improve access to reproductive health services, including family planning and maternal care.

**Nutrition Programs:** Implement nutrition programs targeting adolescent girls and pregnant women.

**Mental Health:** Address mental health issues through awareness campaigns and accessible services.

### Changes Needed

**Effective Implementation:** Ensure that policies are effectively implemented at the grassroots level.

**Monitoring and Evaluation:** Establish robust monitoring and evaluation mechanisms to assess the impact of policies.

## Inclusive Policies

**Intersectional Approach:** Develop policies that consider the intersectionality of gender with caste, class, and other social factors.

**Community Involvement:** Involve local communities in the design and implementation of policies to ensure they are culturally relevant and accepted.

## Data Collection and Research

**Comprehensive Data:** Collect comprehensive and disaggregated data on gender inequality to inform policy decisions.

**Research and Innovation:** Encourage research on innovative solutions to address gender inequality.

By building on past efforts and addressing current challenges, these policy recommendations aim to create a more equitable society where demographic transitions positively influence gender equality.

## Conclusion

This research paper explores how India's demographic transition has impacted gender inequality. India's demographic transition, characterized by declining fertility and mortality rates, has led to significant changes in population structure. This shift has influenced gender roles and expectations, particularly in urban areas where lower fertility rates often correlate with increased educational and employment opportunities for women. As fertility rates decline, families tend to invest more in the education of their children, including girls. This has contributed to higher female literacy rates and greater participation of women in higher education, which can reduce gender inequality by empowering women with knowledge and skill. The demographic transition has also impacted women's economic participation with fewer children to care for, women have more opportunities to enter the workforce. This economic empowerment is crucial for reducing gender inequality, as it allows women to gain financial independence and decision-making power within households. Despite these positive trends, deeply entrenched patriarchal norms and gender roles continue to pose challenges. In many parts of India, especially rural areas, traditional views on gender roles persist, limiting the full potential of demographic transition to reduce gender inequality. Effective policies that support women's health, education, and economic participation are essential to harness the benefits of demographic transition.

Government initiatives aimed at improving maternal health, providing access to education, and promoting gender equality in the workplace can further mitigate gender disparities. While demographic transition in India has created opportunities for reducing gender inequality through improved education and economic participation for women, persistent social norms and regional disparities continue to challenge these gains. Comprehensive policies and societal shifts are necessary to fully realize the potential of demographic transition in addressing gender inequality.

## Suggestion for Future Research

Investigate the impact of demographic changes on women's mental health, considering factors like stress, work-life balance, and social support. By focusing on these areas, future research can provide deeper insights into the complex relationship between demographic transition and gender inequality in India, and help formulate more effective policy recommendations.

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# Evaluating the Impact of the Prime Minister's Employment Generation Programme (PMEGP) on Demographic Dividend and Employment Generation in Uttar Pradesh

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## ABSTRACT

*This research evaluates the impact of the Prime Minister's Employment Generation Programme (PMEGP) on employment generation and the utilisation of the demographic dividend in Uttar Pradesh. The state holds a significant position in India's demographic landscape with nearly half of its population within the working-age group. However it faces substantial challenges, including lack of employment, financial issues, particularly among youth and women. Utilising a quantitative research methodology, this study relies on secondary data sourced from PMEGP Annual Progress Reports, encompassing the fiscal years 2017-18 to 2023-24. The findings indicate a significant upward trend in project initiation, from 5,432 projects in 2017-2018 to 11,689 in 2023-2024. Concurrently, margin money utilisation increased from Rs. 16,865.66 lakhs to Rs. 43,528.99 lakhs during the same period. The employment generated through the PMEGP exhibited substantial growth, rising from 58,186 jobs to an estimated 112,217 jobs, thereby demonstrating the program's effectiveness in mitigating unemployment.*

*The statistical analyses, including correlation and regression, indicate a strong positive relationship between the no. of projects initiated and margin money utilisation with employment generation, exhibiting correlation coefficients of 0.9774 and 0.9733, respectively. Furthermore, regression analysis suggests that approximately 94.72% of the variability in employment generation can be attributed to margin money utilisation, while 95.53% is explained by the no. of projects initiated. ANOVA confirms the statistical significance of these relationships, with significance F values significantly lower than 0.05, thereby accepting the alternative hypotheses.*

*In overall, PMEGP emerges as a crucial tool for leveraging Uttar Pradesh's demographic dividend and fostering sustainable economic growth. By aligning employment initiatives with the state's*

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*demographic characteristics, significant potential exists to transform Uttar Pradesh into a thriving economic center.*

**Keywords** - *Employment Generation, Demographic Dividend, Entrepreneurship, Economic Development*

## Introduction

India's demographic dividend, characterized by a substantial working-age population projected to reach 68% by 2025, presents a critical opportunity for economic growth, particularly in Uttar Pradesh (UP), the most populous state with nearly 50% of its residents in this age group. Despite this potential, UP faces significant challenges, including high unemployment rates among youth and women, inadequate skill development, and limited employment opportunities and financial issues. The Prime Minister's Employment Generation Programme (PMEGP), launched in 2008, aims to address these issues by promoting self-employment and entrepreneurship through financial support and skill training. By aligning employment initiatives with UP's demographic landscape, the PMEGP aspires to empower the working-age population, reduce unemployment, and foster sustainable economic development, ultimately transforming Uttar Pradesh into a dynamic economic hub.

## Prime Minister's Employment Generation Programme (PMEGP)

PMEGP is a pivotal initiative launched by the Government of India in 2008, aimed at promoting self-employment and entrepreneurship. This scheme is managed by KVIC as the nodal agency, alongside various state governments and financial institutions that facilitate its implementation. PMEGP provides financial assistance in the form of credit link (mm) subsidy to new and existing enterprises, thus enhancing access to credit and supporting the establishment of small-scale industries. By fostering entrepreneurship, PMEGP plays a crucial role in generating sustainable employment opportunities, thereby contributing to economic growth and the empowerment of marginalised sections of society.

## Literature Review

**Dr. Nagaraj V. Gudaganavar & Dr. Rajashri S. Gudaganavar (2022)** emphasize that India's demographic transition, characterised by a significant youth bulge, necessitates improvements in education, skill development, and health initiatives to enhance workforce productivity and global competitiveness.<sup>1</sup>

**Muttur R. Narayana (2022)** employs a modified National Transfer Accounts framework to demonstrate that income inequality negatively impacts the size and duration of India's demographic dividend, highlighting the need for redistributive policies to achieve UN-SDG 2030 targets and bolster economic growth.<sup>2</sup>

**Abhishek & Kshamanidhi Adabar (2022)** analyse population growth and age structure disparities across Indian states, revealing a declining contribution of the working age population to economic growth from 2011 to 2018 and underscoring the need for policies to enhance youth labor absorption and productivity.<sup>3</sup>

**P. Sudhakar, NallaBalaKalyan Kumar, & A. Padmavathi (2012)** investigate employment trends in India's organized sector from 1998 to 2010, highlighting disparities between population growth and employment growth while emphasising the importance of these trends for economic and social development.<sup>4</sup>

**Shukla, S. S., & Mishra, A. (2013)** discuss the Indian government's economic policies post-independence aimed at creating employment opportunities and alleviating poverty through targeted programs and macroeconomic reforms, which focus on promoting growth and reducing regional disparities.<sup>u</sup>

**Nikhilesh Sonker & Krishna Kumar Agarwal (2023)** examine the role of MSMEs sector in employment generation in rural and semi-urban areas, identifying challenges such as limited access to finance and infrastructure and recommending policies to enhance growth and employment potential.<sup>v</sup>

**Choudhury & Ghosh (2015)** evaluate the PMEGP in Jharkhand, finding significant national correlations among key indicators but weaker local relationships, indicating regional influences on project initiation and employment outcomes.<sup>7</sup>

**Shiralashetti and Bhustali (2016)** explored how development institutes support rural entrepreneurship in Karnataka. Their evaluation highlighted PMEGP's effectiveness in fostering entrepreneurship, particularly among male entrepreneurs and within the manufacturing sector.<sup>x</sup>

**Kaur & Kaur (2017)** assess various banking types' contributions to PMEGP implementation across India. Their study indicates declining trends in project numbers and employment generation, recommending increased awareness initiatives to enhance scheme effectiveness.<sup>y</sup>

**Kumar and Ozukum (2022)** evaluated the PMEGP's impact on the entrepreneurial development of tribal beneficiaries in Kohima, Nagaland, aiming to provide insights into the program's contributions to socioeconomic advancements among beneficiaries.<sup>p</sup>

## Research Gap

The present research significantly diverges from the existing literature on the demographic dividend and employment generation, particularly in relation to the PMEGP. While previous literature has primarily focused on broader demographic trends and their implications for economic outcomes, this study specifically examines the quantitative impacts of PMEGP on employment generation within Uttar Pradesh from 2017 to 2024. By focusing on specific timeframes and statistical evaluations.

## Significance of this Study

The significance of this study lies in its evaluation of the PMEGP in Uttar Pradesh by analysing the program's effectiveness, the research provides valuable insights that can inform policymakers and enhance resource allocation strategies. Additionally, the study highlights the critical role of targeted financial support in fostering entrepreneurship and job creation, emphasising the potential of PMEGP to leverage the state's demographic advantages for economic development.

### Objectives of the Study

- To evaluate the effectiveness of the PMEGP in generating employment opportunities in Uttar Pradesh.
- To Examine PMEGP’s role in leveraging the demographic dividend in Uttar Pradesh by enhancing the employability and entrepreneurship development.

### Hypothesis of the Study

**H<sub>01</sub>**: There is no significant impact of the utilisation of margin money on employment generation in Uttar Pradesh, not fostering the demographic dividend and economic development.

**H<sub>11</sub>**: There is a significant impact of the utilisation of margin money on employment generation in Uttar Pradesh, fostering the demographic dividend and economic development.

**H<sub>02</sub>**: There is no significant impact of PMEGP project implementation on employment generation in Uttar Pradesh, with no contribution to the demographic dividend or economic development.

**H<sub>12</sub>**: There is a significant impact of PMEGP project implementation on employment generation in Uttar Pradesh, contributing to the demographic dividend and economic development.

### Methodology of Research

The methodology of this study employs a quantitative research design to evaluate the impact of the PMEGP on demographic dividend and employment generation in Uttar Pradesh. The research utilises secondary data sourced from PMEGP’s Annual Progress Reports spanning from years 2017-18 to 2023-24, Key indicators such as project initiation, margin money utilisation, and employment outcomes are analysed. Advanced statistical techniques, including correlation and regression analyses, are conducted using Excel software.

**Table 1: Overall performance of PMEGP in Uttar Pradesh (2017-2024)**

Year	State	Number of Projects	Margin Money (Rs. in Lakhs)	Employment Generated
2017-2018	UTTAR PRADESH	5,432	16,865.66	58,186
2018-2019	UTTAR PRADESH	5,243	19,032.48	71,312
2019-2020	UTTAR PRADESH	6,118	21,647.05	73,560
2020-2021	UTTAR PRADESH	9,994	32,983.49	102,636
2021-2022	UTTAR PRADESH	12,594	41,163.38	123,100
2022-2023	UTTAR PRADESH	11,601	37,865.82	106,596
2023-2024	UTTAR PRADESH	11,689	43,528.99	112,217

Sources – PMEGP Annual Progress Report 2017-2018 to 2023-2024

### Overview of PMEGP on Demographic Dividend and Employment Generation in Uttar Pradesh (2017-2024)

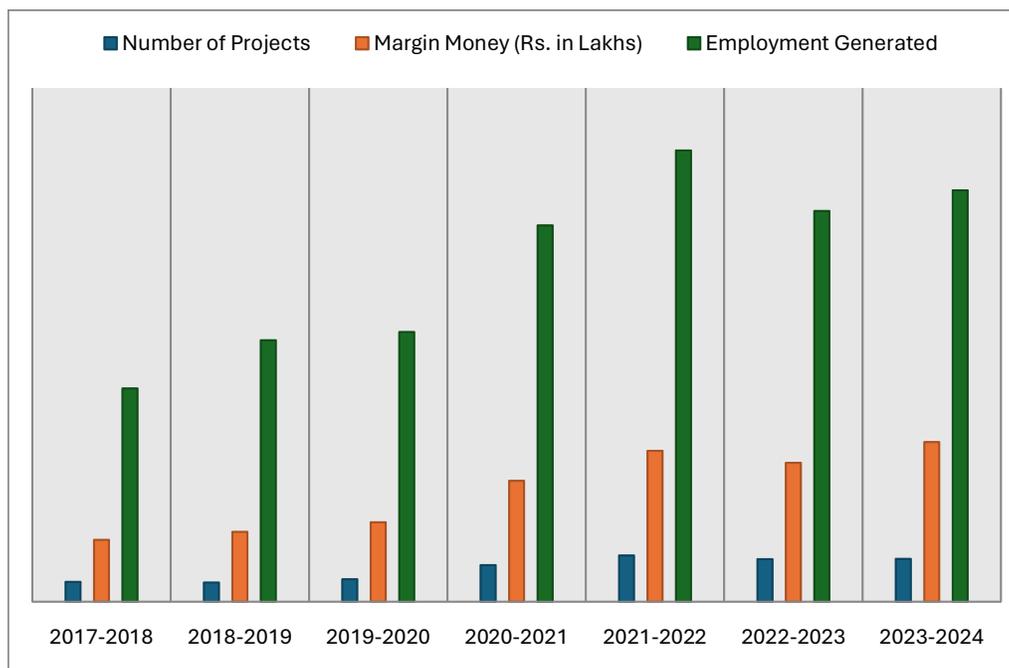


Figure 1- performance of PMEGP in Uttar Pradesh (2017-2024)

Sources – PMEGP Annual Progress Report 2017-2018 to 2023-2024

The figure 1 represents an overview of the overall performance of the PMEGP's in Uttar Pradesh from 2017 to 2024. Highlighting key trends in project numbers, margin money allocation, and employment.

**Project trends:** The no. of projects supported under PMEGP in Uttar Pradesh has exhibited a consistent upward trajectory, increasing from 5,432 in 2017-18 to a peak of 12,594 in 2021-22. This growth indicates a robust demand for self-employment initiatives and an encouraging entrepreneurial spirit among the populace. Although there was a slight decline to 11,601 projects in 2022-23, a marginal recovery was observed in 2023-24, with 11,689 projects approved.

**Financial support:** The allocation of margin money has also shown significant growth, from <sup>1</sup> 16,865.66 lakhs in 2017-18 to <sup>1</sup> 43,528.99 lakhs in 2023-24. This consistent increase demonstrates the government's commitment to enhancing financial support for entrepreneurial ventures, which is crucial for the PMEGP projects to be successful. The substantial allocation in the latest year indicates a strategic focus on sustaining economic development through financial empowerment.

**Employment dynamics:** Employment generation, a primary objective of PMEGP, has witnessed a remarkable rise over the years. Starting from 58,186 jobs created in 2017-18, the number peaked

at 123,100 in 2021-22 before experiencing a decline to 106,596 in 2022-23. However, employment numbers rebounded to 112,217 in 2023-24. This upward trend signifies the programme’s effectiveness in addressing employment challenges, particularly in rural and partially-urban areas of Uttar Pradesh.

The fluctuations observed in the no. of projects and employment generated post-2021-22 can be attributed to external economic factors, including the residual impacts of the COVID-19 pandemic and its associated disruptions.

**Table 2: Correlation Result of Margin Money Utilisation And Employment Generation.**

	<i>M.M (Rs.in lakhs)</i>	<i>EMP</i>
M.M (Rs.in lakhs)	1	
EMP	0.973252144	1

Source – Excel output

**Table 3: Regression result of Margin Money Utilisation on Employment Generation**

<i>Regression Statistics</i>	
Multiple R	0.973252144
R Square	0.947219735
Adjusted R Square	0.936663682
Standard Error	6174.534089
Observations	7

Source – Excel output

**Table 4: Analysis of Variance Outcome of Margin Money Utilisation and Employment Generation**

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	3421035349	3421035349	89.73237786	0.000221526
Residual	5	190624356.1	38124871.21		
Total	6	3611659705			

Source – Excel output

### **Interpretation And Analysis of The Impact of Margin Money Utilisation On Employment Generation In Uttar Pradesh**

The correlation analysis between Margin Money utilisation and employment generation, as presented in Table 2, reveals a highly positive relationship, with a correlation coefficient of 0.973252144. This indicates that as the utilisation of Margin Money increases, there is a corresponding increase in employment generation. Such a highly positive correlation underscores the importance of Margin Money in driving employment growth, particularly in the context of fostering the demographic dividend and economic development in Uttar Pradesh.

The regression analysis results are presented in Table 3. The multiple R-value of 0.973252144 demonstrates a robust linear relationship between Margin Money utilisation and employment generation. The R-square value of 0.947219735 indicates that approximately 94.72 percent of the variation in employment generation is explained by changes in Margin Money utilisation. This high percentage suggests a significant predictive capacity of the regression model. The adjusted R-square value of 0.936663682 further supports the strength of the model by accounting for the degrees of freedom, reinforcing the reliability of the findings. The standard error of 6174.534089 represents the average deviation of the observed employment generation values from the predicted values, and its relatively low magnitude signals a well-fitted model.

Table 4 provides the ANOVA results, which assess the statistical significance of the regression model. The F-statistic of 89.73237786, with a corresponding significance F value of 0.000221526, confirms that the relationship between Margin Money Utilisation and employment generation is statistically significant. This implies that the model provides a reliable explanation for the variation in employment generation due to changes in Margin Money Utilisation.

**Table 5: Correlation result of Employment Generation and No. of Project**

	<i>No of Project</i>	<i>EMP</i>
No of Project	1	0.977395706
EMP	0.977395706	1

Source – Excel output

**Table 6: Regression result of No. of Project on Employment Generation**

Regression Statistics	
Multiple R	0.9774
R Square	0.9553
Adjusted R Square	0.9464
Standard Error	5682.12
Observations	7

Independent variable – No. of Project

Dependent variable – Employment Generation

Source – Excel output

**Table 7: Analysis of Variance Outcome of No. of Project and Employment Generation**

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	3450227062	3450227062	106.8627444	0.000145764
Residual	5	161432643.4	32286528.69		
Total	6	3611659705			

Source – Excel output

## Interpretation And Analysis of The Impact of PMEGP Project Implementation on Employment Generation In Uttar Pradesh

In table 5 shows the correlation analysis between the no. of projects implemented under the PMEGP and employment generation reveals a highly positive correlation, with a coefficient of 0.977395706. This suggests a highly significant relationship between the no. of projects and the no. of jobs created, indicating that as the number of PMEGP projects increases, employment generation also experiences a notable rise. Table 6 represents the regression statistics provide further insights into the influence of project implementation on employment generation. The multiple R-value of 0.9774 reflects a robust positive relationship between the two variables. The R-square value of 0.9553 indicates that approximately 95.53% of the variance in employment generation can be explained by the number of PMEGP projects. This high percentage confirms that project implementation is a significant driver of employment growth. The adjusted R-square value of 0.9464, which adjusts for the number of predictors in the model, corroborates the strong association between the two variables. Standard error of 5682.12 suggests a relatively low degree of deviation of the observed employment values from the predicted values, confirming the model's reliability and accuracy.

The ANOVA results in Table 7, provide a comprehensive understanding of the statistical significance of the regression model. With an F-statistic of 106.8627444 and a significance F value level of 0.000145764, the model is statistically significant at the 5% level. This indicates that the relationship between the no. of projects and employment generation is not coincidental, but a meaningful and substantive connection.

Both analyses demonstrate F-values that are statistically significant, well below the conventional threshold of 0.05. Consequently, the study accepts the alternative hypotheses  $H_{11}$  and  $H_{12}$ , affirming that the utilisation of margin money and implementation of the PMEGP projects significantly impact employment generation in Uttar Pradesh. Overall, the findings highlight that both the effective utilisation of margin money and the successful implementation of PMEGP projects are vital in enhancing employability, promoting the demographic dividend, and driving the economy.

## Conclusion

The analysis of PMEGP schemes in Uttar Pradesh from 2017 to 2024, demonstrates its substantial impact on employment generation and economic development. The findings reveal a highly positive correlation between both margin money utilisation and the no. of projects initiated with employment outcomes, evidenced by high correlation coefficients of 0.973 and 0.977, respectively. Regression analysis further confirms this relationship, with  $R^2$  values of 0.947 and 0.955, indicating that approximately 94.72% and 95.53% of the variability in employment generation can be attributed to these factors. ANOVA results further substantiate the significance of these relationships, as indicated by F-statistics of 89.73 and 106.86, both of which demonstrate statistical significance with significance F values well below 0.05. These insights underscore the critical role of targeted financial support and project initiatives in enhancing job creation, reinforcing the necessity for ongoing investment in the PMEGP to leverage Uttar Pradesh's demographic dividend and foster sustainable economic development in the region.

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# Assessing the Health Impact of Brick Kiln Labour: A Review of Occupational Risks and Health Challenges

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## ABSTRACT

*Workers in brick kilns are exposed to a variety of health hazards because of their living and working environments. Although brick kilns are essential to the building sector, the process of creating bricks frequently exposes workers to dangerous conditions. Workers often put in lengthy shifts in subzero conditions, undergo physically demanding work, and are exposed to smoke and dust. These ailments raise the risk of musculoskeletal problems, heat-related illnesses, and respiratory diseases. Furthermore, the chance of developing chronic lung disorders is increased by exposure to dangerous substances like carbon monoxide and sulfur dioxide. The health challenges they encounter significantly impact the general living conditions and general well-being of brick kiln laborers. This study will attempt to shed light on the direct connection between poor health and the socioeconomic status of these labourers. Health problems not only make it harder for them to work effectively, but they also make them more likely to miss work, earn less money, and incur more medical costs, which keeps them in a cycle of debt and poverty. This research can assist policymakers and labor organizations by creating targeted interventions to disrupt these loops through better working conditions, more access to healthcare, and the introduction of financial support systems. This study can lead to more fair labour practices and higher living conditions for brick kiln workers by demonstrating the combined effects of health and economic vulnerability.*

**Keywords:** Health, Brick kiln labour, Occupational risks, Health issues.

## INTRODUCTION

Brick kiln labours have to face several occupational and health hazards. The demanding conditions of brick kiln workers experience severely impact worker health and well-being. Long-term exposure to harmful gases, dust, and high temperatures can cause skin conditions, respiratory disorders, and other work-related risks. These workers, who are frequently employed in informal

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settings, have limited access to healthcare, which puts them at risk for long-term health issues. Inadequate protection and hard physical labour pose a serious threat to public health in the brick kiln business.

Working in brick kilns exposes workers to repetitive duties like lifting heavy brick loads, which can lead to musculoskeletal ailments in addition to respiratory illnesses. Long workdays, frequently in the sweltering sun or around potentially dangerous chemicals, increase the hazards to their health. Because labourers frequently receive pitiful pay, which restricts their access to wholesome food and clean drinking water, malnutrition and dehydration are also prevalent. In many brick kiln operations, worker safety measures and health awareness are worryingly lacking, notwithstanding the gravity of these problems. This emphasizes how urgently action must be taken to enhance working conditions and protect these workers' health.

Dehydration and heat stress are two serious health problems that brick kiln workers must deal with. The workers are frequently exposed to great heat for extended periods of time since the kilns run at extremely high temperatures. The lack of appropriate rest periods, shade, and clean drinking water exacerbates heat-related disorders like heat exhaustion, heat stroke, and dehydration. Extended exposure to intense heat without sufficient recuperation periods might cause internal organ damage over time, increasing the risk of chronic health issues for labourers. Addressing the appalling working and health conditions that brick kiln workers endure requires government engagement. Because employment in this sector is often informal, workers frequently lack access to basic health care and legal safeguards. Enforcing labour regulations, enhancing working conditions, and guaranteeing that brick kiln workers receive fair and dignified treatment all depend on government intervention. Such intervention must be implemented for multiple reasons.

## **JUSTIFICATION**

### **1. High Occupational Hazards**

Workers in brick kilns are subject to a number of health hazards, such as heat stress, musculoskeletal injuries, and respiratory issues from dust. Creating efficient safety procedures requires an understanding of these risks.

### **2. Chronic Health Issues**

Due to extended exposure to dangerous conditions, a large number of brick kiln workers have chronic ailments. Research can be used to pinpoint these problems and direct treatment plans.

### **3. Impact on Productivity**

The state of one's health directly affects productivity. A healthy workforce is economically advantageous to both employers and employees since it boosts productivity.

### **4. Economic Implications**

Inadequate health might lead to lower income and higher medical expenses. Policies that enhance working conditions and maintain economic stability can be informed by an understanding of these issues.

## 5. Policy Development

Better health outcomes can be ensured by studying health in this setting and using the information to inform national and local policies that aim to improve worker rights and labour conditions.

## 6. Community Health

Families and communities are impacted by the health of brick kiln workers. Initiatives and support networks for community health might result from an understanding of health patterns.

## 7. Awareness and Education

Research can promote a culture of prevention by increasing knowledge of the value of health and safety precautions among employees, employers, and legislators.

## 8. Long Term Sustainability

The sustainability of the brick kiln sector depends on protecting workers' health. Employee stability is correlated with worker health.

### Objective of Study

1. To assess the working conditions in the brick kilns.
2. To study the health issues faced by labourers working in brick kilns.

## LITERATURE REVIEW

This study examined the variables that impact migration, the labour migration procedure, and the situation of migrant workers in the unorganized sector, namely those employed in brick kiln companies. It made clear how unstable their employment was, frequently consisting of verbal and informal agreements. The impact of occupational and environmental health hazards on labourers' well-being was explored in this article along with the susceptibility of women in these precarious work situations and the health risks that are linked with them in brick kiln industries in India. Men, women, and children who worked as migrants all had serious health problems and were subjected to the same risks related to their jobs. Internal migratory women workers were particularly susceptible because of their poor working circumstances and restricted access to healthcare, which put their health at serious risk during pregnancy in host communities. Adverse outcomes, including spontaneous abortion, premature delivery, and aberrant postnatal development, were caused by a variety of factors, including hard work, long hours, poor nutrition, and inadequate maternal care. (Sahu, S. 2024)

Spirometric evaluations showed that 78.33% of workers had impaired lung function, with 95% of them having restrictive impairments and 5% having obstructive impairments. This pollution was associated with significant decreases in lung function. The frequency of respiratory symptoms among workers was also troubling; 50% of participants reported regular coughs, whereas 11.67% reported chronic coughs, 21.67% reported frequent phlegm, and 38.33% felt shortness of breath. These results demonstrate a strong link between respiratory problems and pollution from brick kilns, underscoring the urgent need for action to reduce health hazards in this susceptible group. (Raza A and Ali Z 2021)

This research uses a strong approach that supports the psychological aspects put out by Martin Woodhead to examine the psychosocial profiles of children employed in brick manufacturers across four countries. The unanticipated emergence of attachment as a concern for child workers coincided with the development of a trustworthy assessment method to evaluate psychosocial well-being, emphasizing six components, including stress and personal security. Employing youngsters in brick kilns increases their risk of emotional discomfort and feelings of insecurity compared to their classmates who do not work, according to statistical study that found a substantial correlation between the two.

The study found that there were unsanitary conditions in some brick kiln units, with 56.71% of workers lacking access to restrooms and 43.28% of workers lacking potable water. Although 52.24% of them used solar panels, all of them lived in semi-pucca dwellings without electricity. Poor hygiene was prevalent in the workplace, and there was no paid medical leave, medical insurance, or protective gear for workers. The temperature was extremely high, the SPM and CO<sub>2</sub> levels were over permissible limits, and the overall climate was hostile. The need for improved protection and better living and working conditions for workers was highlighted by the heat stress index, which showed significant risks of heat-related illnesses. (Gahlot, Rana & Singh 2020)

Even though Bangladesh's brick business is vital to the country's urbanization and building, its workforce nevertheless faces several obstacles. Workers face dangerous working conditions, little pay, and subpar living circumstances while kiln owners reap large profits. Studies show that the manual nature of their work causes musculoskeletal injuries, respiratory problems, and a high rate of accidents. Additionally, hazardous chemicals from kiln emissions are exposed to workers, eventually impairing their health. To safeguard the health of employees and mitigate environmental hazards, immediate preventative actions are required. These steps include mechanization, enhanced safety standards, and more stringent environmental restrictions. (Das, S., Hasan, M. S. Q., Akhter, R., Huque, S., Khandaker, S., Gorapi, M. Z. H., & Shahriar, M. 2017)

Significant occupational dangers, including silica dust at construction sites and carbon monoxide in kilns, were present for women working in the brick kiln and construction industries. These health risks were serious. To safeguard these workers, the study highlighted the necessity of improved ventilation, protective gear, and routine health monitoring, along with focused safety measures during times of peak exposure. (Vaidya, V. G.; Mamulwar, M. S.; Ray, S. B.; Beena, R.; Bhatlawande, P. V.; Ubale, S. 2015)

## **MATERIAL AND METHODOLOGY**

This study is based on reviewed articles, reports and various research papers. This study is explorative and descriptive in nature. This study focuses on the health effects of labourers, which is important for performing the task efficiently. This study tries to shed light on how health is an important factor for labourers being human capital. This study shows the impact of different health issues for instance respiratory problems, musculoskeletal disorders, heat stress and heat-related illness, eye and skin problems and mental health issues such as stress, and anxiety on brick kilns labour.

## Research Design

For this Review paper on “Health and Brick Kilns Labour: A Review of Health Impact”, we employed a systematic review approach. This involved conducting a comprehensive search of relevant literature from various database such as PubMed, Google Scholar, and academic journals specializing in economics, labour studies and related fields. The review process followed established guidelines to ensure rigor and reliability in selecting and analyzing the included studies.

## Data Collection Methods

The data collection process primarily focused on identifying and gathering peer-reviewed articles, policy papers and reports published between 2010 to 2024. Keywords related to health, brick kilns workers, healthcare services, occupational hazards and livelihood conditions were used to narrow down the results. Additionally, we utilized citation tracking and reference list of key publications to identify additional relevant studies.

## Inclusion and Exclusion Criteria

To maintain the quality and relevance of the included studies, we set specific inclusion and exclusion criteria. Included studies needed to peer reviewed, written in English and focused on analyzing the health and brick kilns labour. Studies that lacked empirical data, were not directly related to health of brick kilns labourers, or were based on outdated information were excluded from the review.

## Ethical Consideration

Ethical consideration were integral throughout the review process. We ensured that all sources cited were properly credited, adhered to copyright laws, and respected intellectual property of the authors. Additionally, the synthesis and analysis the data were conducted ethically, without any biases or misinterpretation of the findings from the included studies.

## RESULT AND DISCUSSION

### 1. Unstable Employment Conditions

The study draws attention to how unstable migrant workers’ jobs are in the unorganized brick kiln industry. Employees frequently create verbal or informal agreements with their bosses, leaving them open to abuse and job insecurity. The informal character of contracts and agreements, which frequently results in disagreements about compensation, working conditions, and hours, makes this instability worse.

### 2. Occupational Health Hazards:

The serious health concerns that brick kiln facilities provide to their employees, particularly respiratory issues brought on by the low air quality, are an important finding. Pollutant levels of PM2.5, PM10, NO2, and SO2 were found to be significantly higher than acceptable limits in the

Kasur region of Pakistan. The immediate negative health effects of poor air quality were demonstrated by spirometric examinations, which revealed that 78.33% of workers had decreased lung function. Because of the constant exposure to pollution, both brick kiln workers and locals in Bangladesh experience skin conditions, respiratory problems, and other health issues.

### **3. Gender-Specific Vulnerabilities**

Due to their difficult jobs during pregnancy, restricted access to healthcare, and unfavorable working circumstances, internal migrant women were shown to be especially vulnerable. Serious health problems include spontaneous abortions, preterm births, and aberrant postnatal development are the outcome of this. The psychosocial effects of child work, especially on girls who are more likely to experience mental discomfort and uncertainty, are another area where gender differences are clearly visible.

### **4. Child Labor and Psychosocial Impact**

Another key area of concern was the psychological health of child workers in brick kilns. Emotional insecurity and child labor were revealed to be significantly correlated by the study. Youngsters employed in brick kilns have no psychosocial advantages and are at higher psychological risk than their classmates who do not work in these environments. Child labourers' low levels of education make this problem worse, emphasizing the necessity of focused interventions to safeguard their mental health.

### **5. Unsanitary Living Conditions**

A significant portion of workers lack access to basic amenities like drinkable water and restrooms, and many live in unsanitary circumstances. Their living conditions are still subpar, with terrible sanitation, no medical leave, no insurance, and no protective gear—even though they use solar panels to generate power. The danger of respiratory issues and heat-related disorders is further increased by extreme heat and air pollution.

### **6. Impact on Women in Occupational Health**

Studies reveal that serious occupational health risks, including silica dust and carbon monoxide, are present for women employed in brick kilns. In addition to skin and ocular discomfort, many women have musculoskeletal and respiratory issues. It is imperative to enhance ventilation and supply protective gear since seasonal fluctuations, particularly in the winter and summer, intensify exposure to dangerous compounds.

## **CONCLUSION**

This study concludes by exposing the harsh reality that migrant workers in the brick kiln sector must contend with, especially in light of their precarious employment and serious health hazards. With limited job security and little legal protection, workers who rely on verbal and informal agreements are left open to exploitation. The health concerns are particularly concerning because

workers are exposed to harmful air pollutants that have a substantial influence on respiratory health and general well-being. Unfavorable pregnancy outcomes can result from women's increased risks, especially during pregnancy, from hard labour, inadequate nutrition, and restricted access to healthcare. Children suffer from psychological distress and uncertainty, which is made worse by a lack of educational options, particularly for female child laborers.

Furthermore, unhygienic living and working situations, such as limited access to sanitary facilities, clean water, and protective gear, are linked to several health concerns, ranging from musculoskeletal disorders to respiratory illnesses. These results demonstrate how urgently legislative changes are needed to enhance living conditions, enforce worker protection laws, improve air quality, and provide healthcare tailored to each gender. By addressing these important problems, brick kiln workers' health and safety will improve, and this industry's cycle of exploitation and poverty will be broken.

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# The Impact of Automation and AI on the Future Employment Opportunities of Youth

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## ABSTRACT

*Automation and AI have defined the Fourth Industrial Revolution. These technologies optimize operations, boost productivity, and inspire innovation in industries worldwide. However, their rapid growth has raised concerns about the future of work, especially for youth entering the workforce. Automation and AI promise new opportunities, but they may also eliminate jobs and skills. Younger generations may see a very different future of work. To thrive in a technology-shaped world, they must understand these changes. This article examines how automation and AI will affect youth employment, including job displacement, skill demand, and economic and social impacts. It also examines how education systems and policy frameworks must change to help young people adapt.*

**Keywords:** Automation and AI, Employment, Job Transition, Skills

## 1. Introduction

Automation and artificial intelligence (AI) are revolutionizing industries worldwide, heralding profound changes in the job market. As we move deeper into the Fourth Industrial Revolution, these technologies are transforming the way businesses operate changing the nature of work and redefining future employment landscapes with implications that extend to every area of society. As AI-driven technologies automate repetitive tasks and enhance decision making, sectors across industries are experiencing increasing efficiency and productivity. For the youth, who are at the threshold of their professional lives, this evolving landscape represents both opportunities and challenges. On the one hand, automation and AI promise unprecedented levels of productivity, new industries, and job opportunities. On the other hand, they pose the threat of displacing many traditional jobs, leaving young workers vulnerable if they are not adequately prepared. In this context, examining the impact of AI and automation on youth employment opportunities is critical in understanding how the future of work will shape the prospects of this generation.

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This paper is divided into following sections, Introduction, Impact of automation and AI, which includes positive and negative effects on employment, Suggestion and Conclusion.

## 2. Social and Economic Consequences of AI and Automation

Automation benefits businesses, but its social consequences are more complex. The displacement of human workers by machines raises important questions about the future of work, income inequality, and the role of education. For the younger generation, these shifts mean that the jobs available to them may look very different from those of previous generations.

### 2.1 Challenges

**Job Polarization** -Automation affects middle-skill professions including data entry, bookkeeping, assembly line work, and basic administration. These jobs are most susceptible to automation because they include predictable, machine-compatible procedures. However, high-skill employment that demand advanced problem-solving, creativity, and social contact and low-skill jobs that involve physical labour are less susceptible to automation.

Due to employment polarization, the labour market is increasingly divided between high-skill, high-paying occupations and low-skill, low-paying ones. Middle-skill jobs, the labour market's backbone, are decreasing. Since many entry-level jobs are middle-skill, this affects youngsters.

**Impact on wages** - Automation and AI adoption can also drive pay stagnation for jobs affected by these technologies. As automation replaces mundane tasks, companies may value humans less, reducing pay growth. However, individuals with the abilities to design, install, and manage automated systems will certainly earn more due to strong demand. For young workers entering the job market, this dynamic presents a challenge. Those without the technical skills to work in AI and automation-related fields may find themselves competing for lower-paying jobs, while those who are skilled in technology could command premium salaries.

**Job Displacement and Vulnerability of Youth**- Automation and AI have the potential to displace a significant number of jobs globally. According to a 2017 report by McKinsey Global Institute, by 2030, up to 800 million jobs could be lost to automation, with 375 million workers needing to switch occupations. For young workers, who are typically employed in entry-level, routine-based positions, the threat of job displacement is particularly acute.

**Youth Employment**- Young people are more likely to hold jobs that are susceptible to automation. Entry-level positions, such as retail workers, cashiers, administrative assistants, and customer service representatives, often involve repetitive tasks that can easily be automated. For example, the retail sector has seen a surge in self-checkout kiosks, reducing the need for cashiers, while customer service roles are increasingly being filled by AI-powered chatbots. In addition to this Youth have less job experience than older workers, leaving them more vulnerable in a competitive labour market. Young workers may be at a disadvantage if they lack the abilities to run and maintain automated technology.

**Economic Inequality**- In a developing country like India countries with low-skill jobs, automation is likely to worsen inequality. Agriculture, textiles, and manufacturing employ a

considerable section of the population in many developing countries, making them vulnerable to automation. As businesses in these locations automate to save money, young workers may lose their jobs. However, young people in wealthy economies may have more education and training to adapt to automation and AI. This resource disparity could worsen the economic divide between wealthy and developing nations.

## 2.2 Opportunities

**New Job Categories and Sectors**-AI and automation are driving the creation of new industries, such as the development of autonomous vehicles, AI-driven healthcare solutions, and renewable energy technologies. These industries require workers with specialized skills, creating demand for roles such as AI engineers, data scientists, roboticists, and renewable energy technicians.

For example, the rise of autonomous vehicles is expected to create jobs in vehicle design, infrastructure development, and logistics management. Similarly, the growing use of AI in healthcare is driving demand for professionals skilled in medical technology, data analysis.

**Growth in STEM Fields** -One of the most significant effects of automation and AI is the growing demand for STEM (Science, Technology, Engineering, and Mathematics) professionals. As businesses increasingly rely on AI-driven solutions, the need for workers with expertise in areas such as machine learning, data analysis, and software development is surging. Jobs such as data scientists, AI specialists, and robotics engineers are in high demand, offering young people lucrative career opportunities. STEM fields are expected to see sustained growth in the coming decades as AI continues to advance. For young people with the right skills, this represents a major opportunity to secure high-paying jobs in future-oriented industries.

**The Rise of Entrepreneurship and the Gig Economy** -AI and automation are also creating new opportunities for entrepreneurship. AI-powered tools and platforms make it easier for individuals to start and scale businesses, enabling young people to leverage technology for entrepreneurial ventures. From e-commerce to app development, automation technologies are streamlining many aspects of running a business, allowing entrepreneurs to focus on innovation and growth. In addition, the gig economy—characterized by short-term, freelance, or contract work—is expanding. Automation allows for greater flexibility in how people work, and AI-powered platforms connect workers with clients more efficiently than ever before. This shift presents young workers with the opportunity to pursue freelance careers in areas such as graphic design, content creation, digital marketing, and software development.

## 3. Suggestions

As automation and AI reshape the job market, the skills required for future employment are changing. To thrive in an AI-driven world, young people will need to acquire both technical and soft skills that align with the needs of modern employers.

**Digital Literacy and Technical Skills** - Automation and AI are making digital literacy essential in most industries. Employers value technical skills like programming, data analysis, machine learning, and cybersecurity, making them vital for young people entering the workforce. Along with

computer jobs, many non-technical businesses are looking for digital expertise. Data analytics technologies are increasingly used by marketers, and HR managers must comprehend AI algorithms to optimise recruitment.

**The importance of Soft Skills-** Automation and AI are also elevating the importance of soft skills—qualities that are uniquely human and difficult to automate. These include critical thinking, problem-solving, creativity, and emotional intelligence. As machines take over routine tasks, jobs that involve human interaction, complex decision-making, and creativity are expected to grow. Human labour will remain essential in healthcare, education, and the arts. Soft skills are crucial in the future job market, especially for jobs that need empathy, communication, and leadership.

**Learning and Adaptability-**In a rapidly evolving technological landscape, adaptability is key. The pace of change means that workers will need to continuously update their skill sets to remain competitive in the job market. The concept of lifelong learning—constantly acquiring new knowledge and skills throughout one's career—is becoming a necessity in an era where automation and AI can quickly render certain tasks or roles obsolete.

For young people, this means understanding that their education does not stop with a college degree or vocational training. Instead, they will need to be open to retraining and upskilling to stay relevant. This is especially important in industries that are likely to see significant AI and automation integration, such as finance, healthcare, and manufacturing.

**Micro-Credentials and Online Learning-** Online platforms like Coursera, edX, and Udemy make it easy to acquire new skills on your own time. Many of these sites provide micro-credentials, short courses in coding, AI, data analysis, and digital marketing. These qualifications let workers keep up with technology without a degree. Young individuals familiar with digital tools and platforms benefit from online learning's accessibility and flexibility. This can help people learn new skills faster and cheaper than traditional schooling.

**STEM Education-** STEM (Science, Technology, Engineering, and Mathematics) education is central to preparing young people for the future job market. STEM subjects are important for employment because of the growing need for coders, data scientists, roboticists, and AI experts. To address the skills gap, educational systems must encourage more students, especially women and under-represented groups, to seek these jobs.

**Incorporating AI and Automation into Curricula-** Beyond traditional STEM education, schools need to integrate AI and automation-related subjects into their curricula. Understanding how to work with AI tools, develop machine learning models, and interpret data will be essential for students entering a wide range of professions. By incorporating AI into the curriculum at an early stage, educational systems can ensure that students are not only familiar with the technology but also understand its potential applications and

**Workforce Upskilling and Retraining -**Governments must also fund large-scale retraining and upskilling initiatives to prepare workers for future occupations. These initiatives should be available to young individuals and elderly workers at danger of automation. Governments, educational institutions, and the commercial sector can collaborate to give industry-relevant skills training and certifications. These programs should teach critical thinking, problem-solving, and leadership in an

AI-driven environment in addition to technical abilities. These services must be widely available and cheap to assist people navigate the shifting employment market.

**Addressing Inequality and Ensuring Access to Education-** One of the most pressing challenges posed by automation and AI is the risk of deepening economic inequality. Automation and AI threaten economic inequality, a major issue. AI prospects are more likely to benefit wealthy people and countries, while lower-income people may struggle to get the education and skills they need to compete in the job market. Governments must prioritise equal education and employment training for all, regardless of socioeconomic background. This may include expanding public education financing, offering scholarships and grants for low-income students, and giving rural and underprivileged populations the same educational opportunities as metropolitan centres.

#### 4. Conclusion

The impact of automation and AI on the employment opportunities of youth presents a complex and multifaceted challenge. Automation and AI technologies are transforming industries, often leading to increased efficiency and productivity but also displacing traditional job roles. For young people entering job market, this shift can result in both opportunities and obstacles. In conclusion, while automation and AI present opportunities for innovation and new job roles, it also necessitate a proactive approach to education and workforce development. Societies can better harness the benefits of these technologies by preparing youth for the demands of tech-driven economy.

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# Fulfilling the Dreams of Constitution: Kasturba Gandhi Balika Vidyalaya

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## ABSTRACT

To attain the Gender equality in a country like India, women empowerment and female education are the key variables. Since 1950s, policy makers, academicians, educators etc. are paying attention on Socio economic development of the nation. Women have been given a special focus because in British India, even in prior periods of Muslim era, Indian women had been treated as secular grade citizen. They did not have any facility in education, health and political leadership. The literacy rate of women was less than Indian men. So when nation got freedom, women were given special attention. During Five Year Plans, focus was transformed from women welfare to Development and then to Empowerment (Eighth FYP 1992-97) . Women Empowerment became one of the important primary objective in Ninth FYP (1997-2002). For women empowerment Universalisation of Elementary Education (UEE) was made the part of the Tenth Five Year Plan (2002-2007) which was based on 5 pillars: (i) Universal Access, (ii) Universal Enrollment, (iii) Universal Retention, (iv) Universal Achievement, and (v) Equity. In order to attain the universalisation in elementary education reaching out to the girl child. The SarvaShikshaAbhiyan (SSA), the District Primary Education Programme, DPEP and the Kasturba Gandhi Balika Vidyalaya Scheme (KGBV) were started by Government during the Tenth Plan to transform Indian women.

But unfortunately, even after seven decades of independence, the dreams of Dr Ambedkar could not be fulfilled as the literacy rate of SC is 66.1% and 58.95% of ST. The overall literacy rate India is more than 75% which is much higher than that of SC and ST, but more disturbing fact that literacy rate for female is only 56.4% while for ST is only 49.80% as compared to overall female literacy rate of 66% (Census of India 2011). One must remember there is great difference between literacy and education. If one look at the educational enrolment, the enrolment of marginal sections at school and intermediate level is alarming to say the least, 19.3%, for SCs, 9.7% for STs women are enrolled in comparison to about 71% for the non-SC/ST population in India. And similarly, in higher education, the position of marginal communities is comparatively much lower than non-SCs/STs (ESAG, 2018). The enrolment of SC/ST in higher education is extremely low i.e. 14.9% for SCs and 5.5% for the STs, compared to 79.6% for the non-SC/ST population. It must be

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remembered that enrolment of marginal community's male is also low i.e. 14.8% for SCs and 5.4 % for STs in comparison to 79.8 % non-SCs/STs. But, for females enrolment in higher education for the marginal communities is lower at 15% for SCs and 5.5% for STs in comparison to 79.5% non-SC/ST categories (AISHE, 2019).

The figures presented above are alarming and the government is aware of it. That is why it has begun various programs. One of the most important plan especially for marginalised girls is **Kasturba Gandhi Balika Vidyalaya** which was launched by the Ministry of human resource development (MHRD), government of India in 2004. On April 2007, it was merged into the (SarveShikshaAbhiyan) SSA programme.

SAMAGRA scheme (2018-19) has been continued for a period of five years with effect from 01-04-2021 to 31-03-2026. SamagraShiksha is an overarching programme for the school education sector extending from pre-school to class 12 has been, prepared with the broader goal of improving school effectiveness measured in terms of equal opportunities for schooling and equitable learning outcomes.

The **Goal SDG-4.1** states that “By 2030, ensure that all boys and girls complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.

Further the **SDG 4.5** states that “By 2030, eliminate gender disparities in education and ensure equal access to all levels of Education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations”

One component of Samagra Scheme is **Kasturba Gandhi Balika Vidyalaya .KGBV** provides boarding, facilities for girls belonging, predominantly to the schedule, caste and schedule Tribes, other backward class and minorities in the educationally backward areas. The objective of this schemes is to facilitate education environment which is safe for female students . Also to provide equal opportunity for backward class girls to read and write. Increasing the girl child education rate is an important goal of this scheme. An Important feature of this plan is creating residential school in a place where at least 50 girls belonging to SC / ST / OBC / minority communities are ready or available for primary education. It also aims to motivate and prepare parents and girls for sending girls to residential schools.

SAMAGRA Scheme categorised KGBV in Four Types.

- Type I - Class VI to VIII (School with Hostel/ Hostel only) •
- Type II - Class VI to X (School with Hostel/ Hostel only) •
- Type III - Class VI to XII (School with Hostel/ Hostel only) •
- Type IV- Class IX to XII (Hostel only)

Through this program, not only girls enrolment rate is likely to increase in quantitative figures but also help in qualitative improvement in the life of girls by motivating and provide counselling to the vulnerable section. These girls can be better decision maker, critical thinker, empowered and fearless women in future and the nation as such would benefit by such strong leaders.

## Review of Literature-

**Rout, A. (2013). The problem of girls education and the role of SarvaShikshaAbhiyan: A case from Odisha (India).** *International Journal of Research in Sociology and Social Anthropology*, 1(1), 57-61.

In this research paper, author focused on the problem of girl education and efficacy of samagra scheme with special reference to Odisha. The results indicate that KGBVs helps to reduce the dropout ratio in tribal students.

**SARANGI, P. K., & DASH, S. (2021) A Study on Implementation of KGBV Scheme in Odisha.** *International journal of applied social sciences:238-248*, the researcher attempts to examine the implementation of KGBV scheme in Odisha. The results shows that kgbv students dropout rate has been gradually decreased in subsequent years. It's leave a tremendous impact to improve on girl education.

**Vijayavardhini, S., & Kumari, T. A. (2020) Impact of Study Habits on the Academic Achievement of KGBV Students at Secondary Level.** *International journal of advance in engineering and management:2395-5252* study habits plays an important role in academic achievements. Generally, good study habits will help academic achievements of learners. This research study is based on costal Andhra and Rayalaseema of Andhra Pradesh state. **Parihar, P. S., & Khan, W. A. (2021). A Study Of Education Policies & Impact Of Kgbv On Girl Child Education.** *NVEO-NATURAL VOLATILES & ESSENTIAL OILS Journal| NVEO, 3064-3070*. This research study focused on the concern that fewer females are married off as minors. When women will educated it would have been better Decision Maker.

**Agrawal, M., Nagar, P., & Jain, D. (2018). Health and nutritional profile of adolescent girls from underprivileged communities residing in Kasturba Gandhi Balika Vidyalaya in Rajasthan.** *Asian Journal of Dairy and Food Research*, 37(3), 237-241. This research paper is based on health and nutritional profiles of KGBV students from underprivileged communities in Jaipur and tonk district of Rajasthan. Health and nutritional profiles take into account that help students to take right decision, think critically and creatively and cope with managing their lives in a healthy and productive manner.

## Research Objectives:-

The research objectives could be described in brief as follows

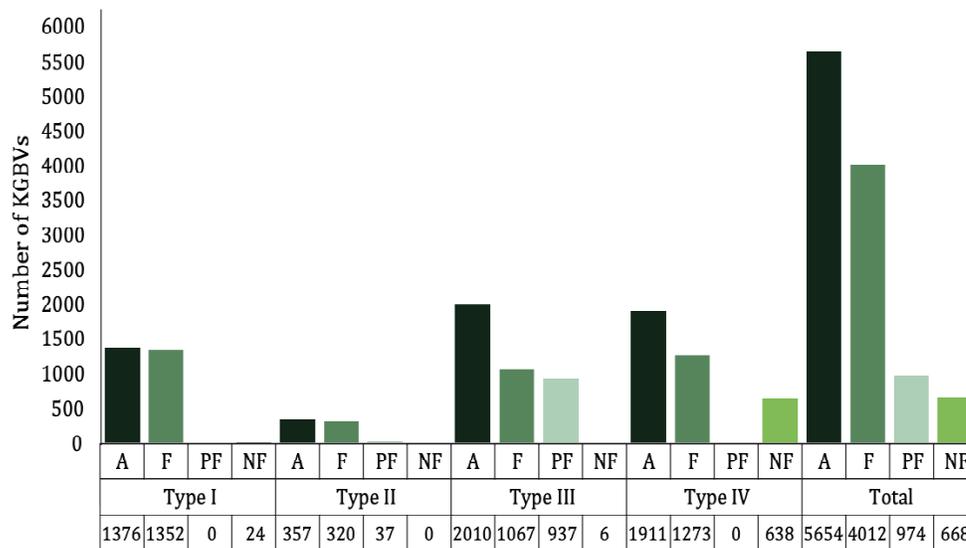
1. To study the KGBV scheme.
2. To study financial norms under KGBV.
3. To analyse the changes in overall personality of girls student enrol in KGBV

## Research Methodology

The methodology adopted in this paper is multifaceted. The analysis would be made on the basis of both Secondary data and primary data. Secondary data is taken from Prabandh Portal, NCERT reports, MHRD reports, SAMAGRA portal. Primary survey is conducted to study the

psychological well being of KGBV students. KGBV school from Prayagraj district is taken to apply GAD-7 test on class 6<sup>th</sup> and 9<sup>th</sup> students. Generalized Anxiety Disorder (GAD-7) is a psychological test to check the anxiety level among the students. The use of statistical tools is limited as the paper is descriptive and analytical. Yet graphs and tables have been used for better understanding.

**Table 1: Number and Type of KGBVs as on June 2023.**



**A – Approved, F – Functional, PF – Partial Functional and NF – Non-functional**

**Table 2: Growth of Functional Type of KGBV's 2018-19 to 2023-24**

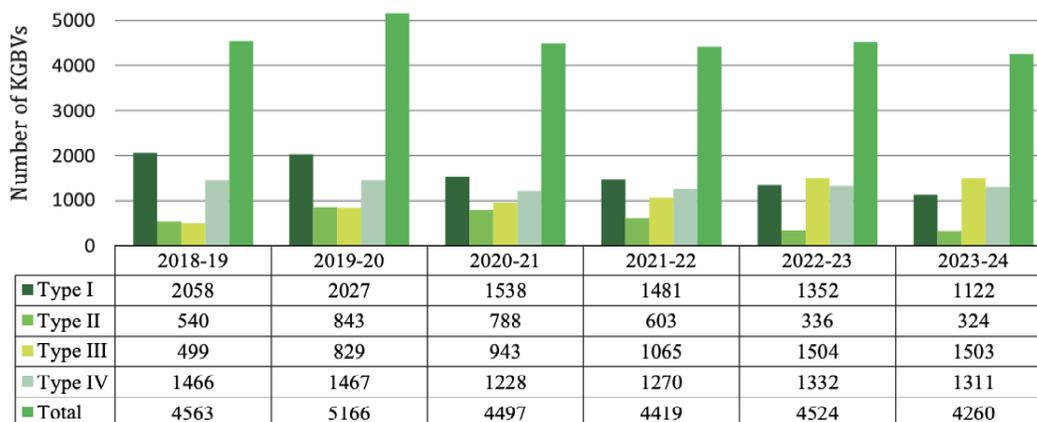
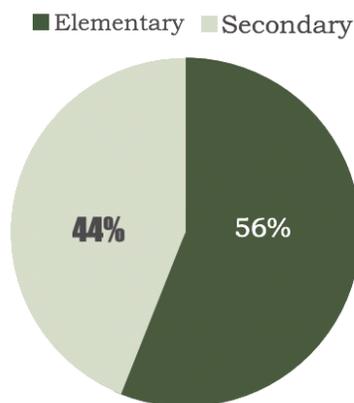


Table 1 gives a picture of total number of KGBV in India, their types and functionality while Table 2 analyses the growth of the KGBV since 2018-19 to 2023-24.

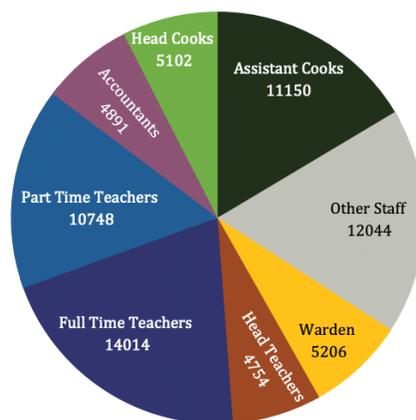
Graph 1: Enrolment of Girls according to school stage in KGBV (2023)



The pie diagram explains the enrolment structure of KGBV. 44% students are enrolled in elementary section, while 56% in secondary classes. This shows the volume of success of these schools that many students are getting enrolled even after class sixth. One must remember that secondary education is the base of higher education.

It must be noted that most technocrats, bureaucrats, and medical practitioner are those whose interest is created during secondary education. Students have to choose a particular stream i.e. Biology, Maths or Social Sciences at this level. Effective teaching in secondary leads to success and that is why Kasturba Gandhi Balika Vidyalaya has been upgraded. A welcome step that government could take is to transform all Kasturba Gandhi Balika Vidyalaya to intermediate College.

Graph 2: KGBVs Distribution of Staff (2023)



Pie graph 2 gives a snapshot of reason as to why KGBVs are not doing as well as they were expected. One can look only take a glance to find out that number of part-time teacher is almost equal to full-time teachers. Number of cooks and head cokes is equal to number of teachers and

head teachers. Even other staff, MTS is equal to teachers. It can be seen that as per given number of schools functional 5639. The teaching staff is just 25,000 (both full time and part-time.). The ratio is less than five per school of intermediate residential school. The number of vacancies are more than actual working staff. Naturally, the vacancies need to be filled at the earliest.

**Table 3: Increase in number of Approved and functional KGBVs in some selected States (2006-2023)**

S. No	States/UT	Number of KGBVs						2006-2023			
		2006		2023				A	A	F	F
		A	F	A	F	PF	NF	Absolute increase in number	Number of Time increase	Absolute increase in number	Number of Time increase
1.	Andhra Pradesh	94	94	587	499	0	88	493	6	405	4
2.	Arunachal Pradesh	14	12	82	46	24	12	68	6	58	5
3.	Bihar	62	59	727	549	46	132	665	12	536	9
4.	Chhattisgarh	51	51	121	110	11	0	70	2	70	1
5.	Gujarat	30	30	170	120	47	3	140	6	137	5
6.	Haryana	1	0	72	51	16	5	71	72	51	51
7.	Himachal Pradesh	9	9	14	14	0	0	5	2	5	1
8.	Jammu And Kashmir	14	2	176	92	0	84	162	13	90	45
9.	Jharkhand	74	74	203	203	0	0	129	3	129	2
10.	Karnataka	58	58	146	142	3	1	84	3	87	2
11.	Madhya Pradesh	70	70	408	398	10	0	338	6	338	5
12.	Maharashtra	27	15	86	86	0	0	59	3	71	5
13.	Meghalaya	1	1	19	2	8	9	18	19	9	9
14.	Odisha	49	49	355	279	0	76	306	7	230	5
15.	Punjab	2	2	29	28	1	0	27	15	27	14
16.	Rajasthan	56	56	316	278	38	0	260	6	260	5
17.	Tamil Nadu	37	37	105	104	1	0	68	3	68	2
18.	Tripura	2	2	15	15	0	0	13	8	13	7
19.	Uttar Pradesh	32	28	841	194	569	78	809	26	735	26
20.	Uttarakhand	13	13	40	40	0	0	27	3	27	2
21.	West Bengal	54	1	169	144	9	16	115	3	152	152
	Total	750	663	5639	4260	799	580	4889	8	4396	7
<b>A – Approved, F – Functional, PF – Partial Functional and NF – Non-functional</b>											

Table 3, discusses the regional distribution of KGBV. One finds that there is great disparity in region wise. e.g. Karnataka has only 87 schools while Jharkhand has 129. This could be because of variety of reasons. There could be a very good public school run by state governments as is the case in Delhi. In such cases, KGBV scheme can only supplement for children of slums and migrants. The

number of partial and non-functional schools is too high for comfort(799+580) (1379) almost one third. One must remember that even 75 years after independence, nearly 70 lakh children do not have any kind of schooling.

Table 4: Prayagraj District KGBV Enrolment Information 2024-25

Enrollmet Information KGBV WISE 2024-25												
Distric- Prayagraj												
Date 05-08-2024 till Now Suchna												
S.No	Name Of KGBV	UDISE CODE	Class 6	Class 7	Class 8	Total 6 to 8	Class 9	Class 10	Class 11	Class 12	Total 9 to 12	Total (6 to 12)
1	KAURIHAR	09451208501	36	22	42	100	0	0	0	0	0	100
2	SHANKAR GARH	09450100116	36	21	43	100	15	0	0	0	15	115
3	'HANDIA	09452008202	29	35	36	100	0	0	0	0	0	100
4	BAHADURPUR	09450811602	37	44	19	100	0	0	0	0	0	100
5	SAIDABAD	09451110202	40	29	31	100	0	0	0	0	0	100
6	MAUAIMA	09450904107	30	46	24	100	0	0	0	0	0	100
7	JASARA	09450307903	44	28	28	100	0	0	0	0	0	100
8	KARCHANA	09451806512	31	35	34	100	0	0	0	0	0	100
9	URUA	09452100502	31	41	28	100	0	0	0	0	0	100
10	BAHARIYA	09451910602	34	33	33	100	30	11	15	9	65	165
11	DHANUPUR	09451501405	34	35	31	100	0	0	0	0	0	100
12	PRATAP PUR	09450407905	29	32	39	100	0	0	0	0	0	100
13	KAUNDHIYARA	09450205602	38	32	30	100	9	19	23	17	68	168
14	SORAON	09450706810	47	34	19	100	38	0	0	0	38	138
15	HOLAGARH	09451700105	27	33	40	100	0	0	0	0	0	100
16	MEJA	09450502809	36	40	24	100	26	0	0	0	26	126
17	MANDA	09451602605	42	27	31	100	0	0	0	0	0	100
18	CHAKA	09451306504	21	39	40	100	0	0	0	0	0	100
19	KORAON	09451004806	34	42	24	100	0	0	0	0	0	100
20	PHOOLPUR	09450601304	41	29	30	100	0	0	0	0	0	100
total			697	677	626	2000	118	30	38	26	212	2212

This particular study is Prayagraj based. The distribution of the students in 20 different KGBV is given above total students upto class 6<sup>th</sup>upto 8<sup>th</sup> are 2000 while alone IX class is only 212. The ratio seems between students of junior high school and intermediate is 10 is to 1. The reason is also very clear in the table. Only 4 out of 20 schools have facilities above class VIII. In major, the intermediate has begun in 2023-24 and so is the case of Shankar Garh. In Kaudhiyara admission have dropped only because of number of available seats, which is 100. So the main hindrance in admission, to these schools is the limited number of seats in which admissions could be granted. Everyone must remember that any nation with fastest GDP growth could develop only if 100% education upto secondary level is made available.

Table 5: Allotted Budget for Prayagraj KGBV 2024-25

जनपद में संचालित करतूरबा गांधी आवासीय बालिका विद्यालय की संख्या शैक्षिक सत्र 2024-24 में नामांकित बालिकाओं की संख्या एवं कार्यरत स्टाफ की संख्या तथा राज्य परियोजना कार्यालय द्वारा स्वीकृत बजट एवं उपलब्ध कराये जाने वाली सुविधाओं का संक्षिप्त विवरण

क्र०सं०	विवरण	अंशुक्ति
1	के०जी०बी०वी० की संख्या	20
2	कुल नामांकित बालिकाओं की संख्या (कक्षा 6 से 12 तक)	2212
3	कार्यरत वाइडेन	18
4	कार्यरत पूर्ण कालिक शिक्षिका	26
5	कार्यरत अंशकालिक शिक्षिका	36
6	लेखाकार	15
7	मुख्य रसोइया	18
8	सहायक रसोइया	26
9	वीफीपार	1/
10	चपरासी	17
11	पी०आर०डी०	9.48 लाख
12	भोजन मद में स्वीकृत धनराशि (प्रति बालिका रु० 60/- की दर से 11 माह हेतु )	57.42 लाख
13	स्टेशनरी मद में स्वीकृत धनराशि (प्रति बालिका रु० 1200/- की दर से प्रति वर्ष )	34.80 लाख
14	स्टाफेन्ड मद में स्वीकृत धनराशि (प्रति बालिका रु० 1100/- की दर से )	31.90 लाख
15	वाटर इलेक्ट्रिकसिटी प्रति विद्यालय रु० 1.50 लाख की दर से	43.50 लाख
16	मेडिकल कन्टिजेन्सी प्रति विद्यालय रु० 1.50 लाख की दर से	43.50 लाख
17	छात्रावास रख-रखाव हेतु प्रति विद्यालय रु० 02 लाख की दर से	58.00 लाख
18	दैनिक उपभोग की सामग्री हेतु प्रति विद्यालय रु० 02 लाख की दर से	58.00 लाख
19	प्रिपेटरी कैम्प रु० .07 लाख की दर से प्रति विद्यालय	2.03 लाख
20	पी०टी०ए० स्कूल फर्कसन रु० 0.10 लाख की दर से प्रति विद्यालय	2.90 लाख
21	फिजिकल सेल्फ डिफेन्स ट्रेनिंग रु० 0.10 लाख	2.90 लाख
22	परीक्षा शुल्क रु० 551/- की दर से प्रति बालिका	4.95 लाख
12	ट्रांसपोर्ट शुल्क रु० 4500/- की दर से प्रति बालिका	31.50 लाख

नोट- अध्ययनरत बालिकाओं को भोजन, साबुन तेल गंजन, स्टेशनरी, अण्डर गारनेट, रवेटर , रलीपर , जूता गोजा , रकूल बैग की व्यवस्था विद्यालय स्तर पर एवं 02 रोड यूनिफार्म हेतु धनराशि डी०बी०टी० के माध्यम से राज्य परियोजना कार्यालय स्तर से स्थानान्तरित की जाती है।

In the table 5, one can find the government expenditure sector wise for 2212 students of all classes. There are purely residential schools. The permanent teachers are 26 and temporary 36 a total of 61, which is not sufficient because at secondary level, specialised teacher are required for natural sciences. While according to table 162, teachers are available in 20 colleges. Even the MTS staff is not sufficient. It is prominent to note that these colleges are not only under staffed but also under funded. The girl child are tender by nature and when they have to live in hostels, they requirements in terms of funding and other emotional psychological support are greater. All the medical contingencies are ₹ 1.50,lakh but no psychological support is made available. This is reflected in the GAD 7 test.

## Hypotheses

- (1) Ho: There is no significance difference between anxiety level of class 6<sup>th</sup> and class 9<sup>th</sup> girl students in KGBV.
- H1: There is significance difference between anxiety level of class 6<sup>th</sup> and class 9<sup>th</sup> girl students in KGBV.

Table 6: Anxiety Score of Class 6<sup>th</sup> and 9<sup>th</sup> students of KGBV in Prayagraj

Anxiety Score of Class 6th Students	Anxiety Score of Class 9th students
12	14
11	16
10	16
1	13
7	12
10	16
14	15
11	13
11	15
11	19
15	18
11	18
12	14
9	12
12	15
9	13
13	13
10	6
13	7
12	13

	<i>6<sup>th</sup> students</i>	<i>9<sup>th</sup> students</i>
Mean	10.632	13.895
Variance	8.9123	10.988
Observations	19	19
Pooled Variance	9.9503	
Hypothesized Mean Difference	0	
df	36	
t Stat	-3.188	
P(T<=t) one-tail	0.0015	
t Critical one-tail	1.6883	
P(T<=t) two-tail	0.003	
t Critical two-tail	2.0281	

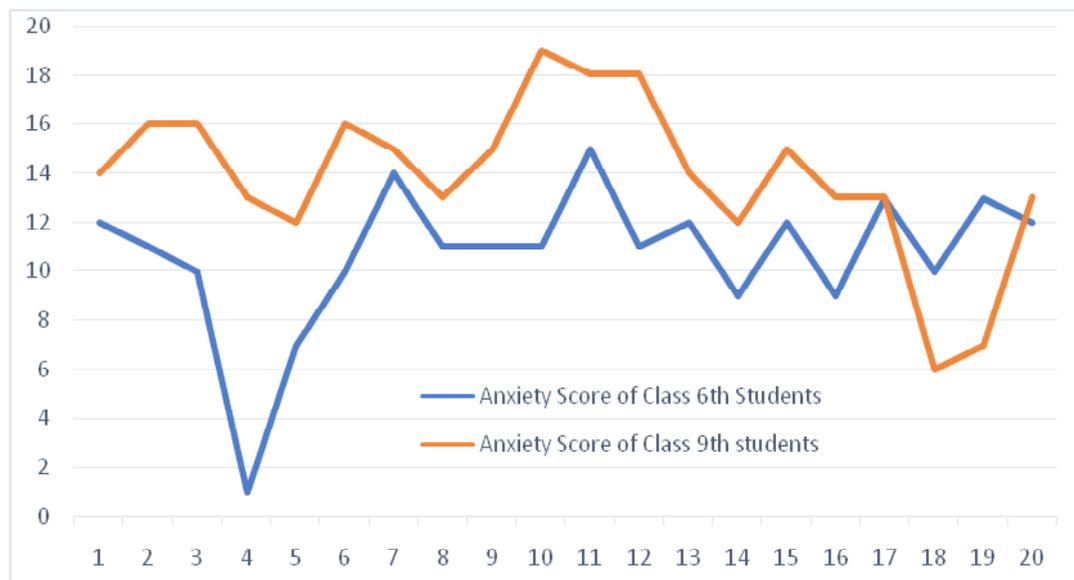


Table 6 shows the anxiety score of class 6<sup>th</sup> and class 9<sup>th</sup> students in KGBV of Soraon and Bahariya Block in Prayagraj district. By applying the t- test it is found that p-value is less than 0.05, null hypothesis is rejected and alternative hypothesis is accepted. Hence it can be concluded that **There is significance difference between anxiety level of class 6<sup>th</sup> and class 9<sup>th</sup> girl students in KGBV**. Above mentioned chart presents that anxiety norms of girl students in KGBV. the anxiety norms divided into four parts of the basis of anxiety score. They are 0-4,5-9,9-15,15-21 it has been represents minimal anxiety, mild anxiety, moderate anxiety and severe anxiety.

(2) **Ho: There is no significant growth of Functional KGBV over the years.**

**H1:** There is significant growth of Functional KGBV over the years.

**Table 7: Year wise Progress of Total Number of Functional KGBV in India**

Financial Year	Total Number Of KGBV
2018-19	4563
2019-20	5166
2020-21	4497
2021-22	4419
2022-23	4524
2023-24	4260

Source: KGBV Report 2022-23 (NCERT)

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.606077
R Square	0.36733
Adjusted R Square	0.209162
Standard Error	275.9947
Observations	6

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	176905.2	176905.2	2.3224	0.202199
Residual	4	304692.3	76173.09		
Total	5	481597.5			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	207718.3	133303.3	1.558239	0.194178	-162391.5	577827.5	162391.5	577827.5
Finanace Year	-100.543	65.97536	-1.52395	0.202199	-283.72	82.634	-283.72	82.634

Table 7 depicts Year wise Progress of Total Number of Functional KGBV in India . Regression is applied to check whether significant growth in functional KGBV since 2018. The p value is 0.2. means less than 0.05 level of significance. So, Null hypothesis is accepted that there is no significant growth of Functional KGBV over the years. What one finds that growth of functional school has been fluctuating throughout this period. The reason has been the delay issue of funds by different organisations, institutions which also affect efficiency.

**Conclusion**

KGBV programme was started as standalone programme in August 2004 with the objective of establishing residential school at upper primary level, especially for SC, ST and OBC 25% states could be allotted to or families living of EWS. Later it was integrated into SSA and RTE was enacted in 2009. KGBV was operated under the provision of RTE act. KGBV provides a residential

set up to ensure that girls have a safe and accommodative education to promote female empowerment. It is evident from various studies made by NITI AYOOG and other that growth of KGBV has not been satisfactory with respect to infrastructure, academic and non-academic staff as well as in quantum of schools required. But no analysis has been done on two areas. (1) Accommodation of SC/ST and special children in mainstream education curriculum. Children come from different social, cultural background, different festivities and tradition while teacher, warden come from different background. One finds a large dropout ratio, especially of tribal girls for which specific planning is required (2) more importantly, no study has been made on impact of modern education on psychology of girl children which is one of the most important reason for dropping out. Once these girls enter into class VI, how teaching method is required with similarity of girls background. Learning language, especially English, create psychological disorders, which impact growth. The GED test clearly demonstrates the less level anxiety of these girls, but greater difficulty arrives when these girls reach class IX and have to study modern maths, physics, chemistry, and biology. Although correction classes are held, but girls, emotional aspect are not dealt. These girls are away from homes so family support is not available. One must remember that, girls face many difficulties in teens and are may shy of discussing their personal problems with anyone outside the family and then getting acclimatized to modern education techniques and methods create more stress. In board exams of class 10<sup>th</sup>, many do not admitted into main stream colleges. Government has done well to upgrade KGBV up to intermediate level so that most of these get admission. As teachers are mostly ladies, girls can get help to accommodate, but in most cases, one finds that stress level are too high. A full-fledged study of mental illness among girls of IX and above, along with girls of 10<sup>th</sup> is required to find out various factors that impact stress levels. It could be concluded that stress level of KGBV girls is quite high and needs further researches to diminish the level of stress so that these girls could be transformed into leaders of the nation.

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# Demographic Transition in India: Navigating Social Sector Challenges and Opportunities

Samishtha Singh<sup>1</sup>

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## ABSTRACT

*With over 65% of the population under the age of 35 India is undergoing a Demographic Dividend which projects the way forward to an accelerated economic growth and every developed country had at some time gone through a demographic dividend which they used effectively and achieved high economic growth by now many developed countries have a larger proportion of Older population also there are few Sub-Saharan countries and parts of South Asia that failed to realise the true potential of Demographic Dividend and could not utilise their Human Resource effectively because of which they currently lag behind in terms of Growth and Development perspective. This paper will delve into the social sector challenges that India faces in terms of lagging education sector, inadequate healthcare facilities and insufficient employment opportunities for the youth which hinders the true utilisation of demographic dividend followed by a SWOT (Strength, Weakness, Opportunities and Threats) Analysis to evaluate India's demographic transition. India entered the Demographic Dividend Window from 2005-06 and this will last till 2055-56, during this period India has an opportunity to reach at its maximum growth but this will only be possible if adequate investments in social sectors are promoted and also Human Resource is utilised by various initiatives which will be discussed later in this paper. Also to fully capitalize the demographic dividend female participation in the workforce is crucial; in order to fully understand this this paper presents a correlation analysis between female literacy and female workforce participation followed by analysing the outputs and this paper will also address the challenges and impact of female literacy over female workforce participation. Thus, by strategical investments in human capital and adoption of inclusive policies India can turn its Demographic advantage into sustained and equitable economic development.*

**Keywords:** Demographic Dividend, Social Sector Challenges, Female Workforce Participation, SWOT Analysis.

## LITERATURE REVIEW

1-Basil Hans, V; "India's Demographic Dividend: Opportunities and Policies". This paper reveals that Demographic Dividend in India is a golden opportunity with a sizable, young and working-age

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population, however taking advantage of this demographic dividend is not automatic since unemployment and gender inequities and regional differences highlight the need for targeted and comprehensive measures and demographic dividend is also accompanied by an implicit timer, as the existing working age population ages, India will face new issues associated with an aging society.

2-Adabar Kshamanidhi and Abhishek; “Demographic Dividend and Economic Growth: Evidence from India”; Vol.51, no.-1; (2022); Demography India. This paper discusses that the contribution of age-structure in India’s economic growth remains an under-researched area, an attempt has been made to establish the association between age-structure and economic growth using a panel-data for 15 states for the period 1981 to 2018 as the study reveals that huge variation in age composition is observed across the States with Kerala and Tamil Nadu already have passed through the second stage of the demographic transition, but opportunity awaits for some of the largest States such as Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh where the share of working age population will continue to increase .

3-Mishra, Ramraj Mahendra; A Review: “Does Demographic Dividend lead to economic growth in India”? K.J Soumya College of Arts and Commerce, (2023, November). This paper reveals that India is facing one of the major problems in the context of education and health as the level of education and health in India is not upto the mark as compared to a developed nation.

4-Narayana M.R and Ladusingh Laishram; Demographic Dividends for India: Evidence and Implications based on National Transfers Accounts; ADB Economics Working Paper Series, (December 2011). This paper reveals that the link between demographic dividends and income growth is policy dependent, the first dividend is the consequence of the working- age population and can be realized only if employment opportunities expand. The second dividend arises largely because prime- working age population have to save to support long retirements.

## **OBJECTIVES**

1. To analyse the implications of Demographic Dividend on India’s Economic Growth and study the social sector challenges.
2. To study the impact of Female literacy on Female Workforce Participation in India through Correlation Analysis.
3. To propose suggestive measures and policy interventions in order to fully harness this economic opportunity for India.

## **RESEARCH METHODOLOGY**

This paper basically accounts for secondary data which is descriptive in nature. Correlation Analysis is done through data collected from various Government websites such as through World Bank, PLFS, NSSO, RBI Reports, Microsoft Excel is used to perform regression and correlation analysis. Microsoft Power point is used to draw tables and figures to present the statistics sourced from Government Websites.

## INTRODUCTION

Demographic Dividend is both an opportunity and a challenge to India. The path to capitalize this demographic dividend window needs urgent attention and strategic investments in Education, Healthcare and Employment. According to National Skill Development Corporation (NSDC) only 10% of India's Workforce has received formal training compared to 96% in South Korea, 75% in Germany and 52% in the United States. Also, an alarming situation is that India's healthcare spending is approximately 3.01% of India's GDP which is one of the lowest amongst emerging economies of the world. A projected working age population of over 1 billion by 2050, India has the potential to become a Global Economic Powerhouse, however it is highly dependent on pressing social sector challenges.

## IMPLICATIONS OF DEMOGRAPHIC DIVIDEND ON ECONOMIC GROWTH AND SOCIAL SECTOR CHALLENGES

Demographic dividend an economic opportunity that arises when there is a rise in working age population in comparison to the dependent population, it offers an opportunity for accelerated economic growth provided the population is educated and employed. In India there is a need to counter these pressing social sector challenges in order to harness the demographic dividend but the social sector challenges remain in education, employment and healthcare sector, in India the Demographic shift is marked by declining fertility and an increasing working age population. Our country has a median age of 28 years emerging as one of the youngest nations globally. A large labour supply due to high working age population is expected to contribute to high economic growth. In terms of Innovation and Entrepreneurship India is witnessing significantly higher growth.

If we see social sector challenges in terms of Education, Employment and Healthcare they can be listed as follows:

### CHALLENGES IN EDUCATION:

India has made strides in improving school enrolment rates. According to the Annual Status of Education Report (ASER) 2022 over 50% Indian students in grade- five cannot read a two-level text highlighting severe learning deficiency.

- The Education system is highly mismanaged due to the existence of rote learning methods, poor curricula and lack of proper teacher training which leads to low quality learning for the students. While there is a significant improvement in Girl's Enrolment Ratio, gender disparity still persists. The Gross Enrolment Ratio for Girls in secondary education is 79.6% as compared to 81.6% for boys according to Ministry of Education Report 2022.
- Rural areas and marginalized areas face significant teacher shortages and inadequate infrastructure for proper education. According to Unified District Information Systems for Education Plus 2021-22 Report, India faces a shortage of over 1million teachers in school affecting student teacher ratio. UDISE Plus 2021-22 also revealed that only 76% of schools in India have functional electricity and only 59% have internet facilities.

- The education system does not cater to the job requirements of individuals as it does not impart application based and skill-oriented teaching to students. The World Economic Forum's Future of Jobs Report 2020 highlighted that 48% of Indian Employers report difficulty finding workers with the right skills indicating skill gap between education and labour market needs. The Ministry of Skill Development and Entrepreneurship's 2021-22 report states that only 5.5% of India's Youth receive formal vocational training far below the levels in other emerging economies such as China (24%) and Brazil (14%).

### **CHALLENGES IN HEALTHCARE**

Healthcare system faces significant challenges due to weak management by the system and extremely low budget allocation in comparison to other developing and developed nations.

- India has inadequate healthcare infrastructure with only 0.9 hospital beds per thousand people and a doctor to population ratio of 1:1,456, both below the WHO Recommendations, this leads to lack of quality healthcare especially in rural and remote areas. There is sharp rural-urban divide in healthcare access, as per the National Family Health Survey (NFHS-5) 2019-21 rural areas have fewer healthcare facilities and lesser healthcare professionals as compared to the urban areas.
- Due to high cost of healthcare facility and longer waiting time for the patients lack of proper doctor to patient interaction, patients and their concerned ones are reluctant for timely visits to the doctor making the disease much worse. Also there exists a high prevalence of Non-Communicable Diseases such as Diabetes and Hypertension accounts for over 60% of the deaths in India which leads to loss of productivity amongst workers and increasing healthcare costs impacting the economic growth potential of our country.

### **CHALLENGES IN EMPLOYMENT**

Skilling plays a crucial role in increasing employment opportunities for the individuals, skill development is the need of the hour.

- There exists a wide skill gap as only 10% of Indian Workforce is formally skilled as compared to 50% in developed nations such as UK and South Korea, lack of industry relevant skills limits the employment opportunities for individuals and low productivity in the firm.
- Creation of jobs in the formal sector, the mismatch between the skills possessed by individuals and job requirements leads to less hiring and joblessness.
- Approximately 90% of the workforce is employed in the informal sector under poor working conditions and at low wages which leads to limited economic growth and productivity for the businesses. Informal sector is severely hampering the growth opportunities.

### **SWOT ANALYSIS**

The Demographic Transition taking place in India due to declining fertility and mortality rates is a great opportunity for Demographic Dividend that can also be defined as the economic growth potential particularly because of the changing working-age population.

**Below is the SWOT Analysis for demographic dividend of India: -**

### **STRENGTHS**

1. According to Economic Survey 2020-21 India's working age population (15-65 years) constitutes 66% of the total population which is expected to peak at 68.9% by 2031. It offers a significant potential for productivity and economic growth, if appropriate policies are made in this direction.
2. Reforms in Education sector with continuous and rigorous efforts of the government will uplift the illiterate and marginalised sections of the society, a concerted effort in this direction will boost the innovation in society, according to the National Education Policy 2020, it aims to increase the gross enrolment ratio in higher education from the current 27.1% (AISHE 2019-20) to 50% by 2035.
3. Health and nutrition are also a factor that plays crucial importance in improving the workforce productivity and reducing the economic losses. The Pradhan Mantri Abhiyan and Aayushman Bharat schemes aims to tackle malnutrition and provide Health Insurance to 500 million people.

### **WEAKNESSES**

1. The Demographic Transition in India is uneven across states in India which leads to scattered and imbalanced workforce thereby significantly impacting the social resources as well in the regions of High- working population. As per the projections of Census and NITI Aayog states like Bihar and Uttar Pradesh still have high fertility rates of 3.2 and 2.9 respectively, as compared to the southern counterpart of India that is in Kerala that stands at 1.7.
2. Low female-labour force participation in India also restricts the benefits of Demographic Dividend, as per the World Bank in 2021 India's Female Labour Force Participation stands at mere 19.2% which is relatively below than the Global average of 48%, the number is declining even though the female literacy has improved to 70.3% according to NFHS-5 (2019-21). The situation persists due to the Societal Norms and lack of childcare facilities.
3. Due to the dominance of Informal Labour according to the Ministry of Labour and Employment over 80% of the workforce is engaged in the informal sector, this heavy dependence on Informal sector leads to wage instability and low contributions to the tax-revenue.

### **OPPORTUNITIES**

1. Digital Infrastructure can help India achieve a significant milestone in increasing Internet Penetration, India's young and tech savvy population can drive innovation, entrepreneurship and employment opportunities in IT-Sectors, E-commerce and Fintech.
2. India can enter into the Global Manufacturing Club countries with Make in India Initiative, due to the demographic advantage with low-labour costs India is favourably positioned as a manufacturing destination. Ministry of Commerce and Industry reported that FDI Inflows between 2020-21 were a record of \$81.72 billion.

3. With increased investments in skill development and vocational training youth can be engaged into certainly important and strategically significant areas which includes Artificial Intelligence Renewable Energy

### THREATS

1. Due to huge population and increasing demands for resources have led to severe Environmental Degradation and Resource Scarcity particularly in Water and agricultural land availability due to rapid industrialization, thus it will adversely impact the productivity of both rural and urban economies, India's per capita water availability has dropped from 1816 cubic metres in 2001 to 1368 cubic metres in 2021 as per Ministry of Jal Shakti
2. Regional disparities exist in many parts of India as states like Uttar Pradesh and Bihar still face significant socio-economic challenges with poverty rates at 29% and 33% respectively as compared to the states like Kerela which stands at 6.1% as per the reports of NITI Aayog 2021.
3. Persistent increase in the population without corresponding increase in the employment opportunities leads to high unemployment amongst the youth, this can lead to economic stagnation overtime.

### CORRELATION ANALYSIS

The following table lays down the correlation analysis of impact of Female literacy on Female Workforce Participation in India. Data on Female Labour Work-force Participation and Female Literacy Rate retrieved from NSSO and PLFS Reports.

(Table-1)

YEAR	FEMALE LITERACY RATE (%)	FEMALE WORKFORCE PARTICIPATION (%)
2013	59.3	25.3
2014	60.6	23.7
2015	61.5	22.5
2016	62.9	23.4
2017	64.6	24.2
2018	65.8	24.5
2019	66.8	25.1
2020	68.4	26.2
2021	69.9	25.9
2022	71.5	26.8
2023	72.8	27.3

	FEMALE LITERACY RATE (%)	FEMALE WORKFORCE PARTICIPATION (%)
FEMALE LITERACY RATE (%)	1	
FEMALE WORKFORCE PARTICIPATION (%)	0.808225817	1

## **CORRELATION RESULT**

The correlation coefficient is 0.808 which indicates a strong positive relationship between female literacy rate and female workforce participation rate, the coefficient is positive it means that as the female literacy rate increases, female workforce participation rates also increase. This indicates that higher literacy amongst women is associated with higher rates of female participation in the workforce. This strong positive correlation highlights education as a critical driver of economic empowerment. Literate women are more likely to have the skills and qualifications needed to enter the labour market, access better job opportunities and negotiate better wages. Female Literacy can be seen as a key component of Human Capital Development which is essential for realizing country's economic potential.

## **POLICY RECOMMENDATIONS FOR CAPITALIZING THE DEMOGRAPHIC DIVIDEND FOR INDIA**

The Government must prioritize to address social sector challenges and focus towards increased investments, reforms in different sectors and promotion of inclusivity.

- Raising investments in education to at least 6% of the GDP which is the actual average expenditure by government in other emerging economies. The Samagra Shiksha Abhiyan which integrates Sarva Shiksha Abhiyan and Rashtriya Madhyamik Shiksha Abhiyan had a budget allocation of 31,050 crores for financial year 2022-23. Funding should be increased in the budget to fund rural education infrastructure and teacher training programs.
- Expanding and promoting the skill development programs in India such as Pradhan Mantri Kaushal Vikas Yojana and also other vocational training programs for Youth employed in different sectors. The Ministry of Education reports have shown that only 12% of the workforce have received formal vocational training (2020). Programs like Skill India under the Pradhan Mantri Kaushal Vikas Yojana have trained over 10 million youth but focus should also be prioritised towards the sectors like AI, Robotics and Green Energy.
- Employees from the Informal Sector must be formalised and trained as per the industry standards and gender inclusion objective also must be catered to, over 80% of the employees are engaged in the Informal Sector of India which contributes up to 50% of the GDP. The Social Security Code 2020 aims to provide pensions and health insurance to workers in the Informal sector thus the coverage should be increased to a greater number of workers with targeted approach.
- Government also must focus upon bridging the Digital Divide because as per TRAI in 2021 Rural Internet Penetration was 37% whereas Urban Internet Penetration stood at 67%. The Bharat Net project is projected to connect 2,50,000-gram panchayats by 2023, therefore Physical and Digital Infrastructure both are important for economic growth.
- Female Labour Workforce Participation in India was 19.2% in 2021 one of the lowest in the world (World Bank). The need of the hour is to introduce comprehensive workplace gender policies like equal pay, paternity leave and affordable child care services. As per NASSCOM 2021 women account for only 43% of the STEM Graduates in India but they are in only 14%

jobs in STEM Fields. Programs like Beti Bachao Beti Padhao have improved Girl Child Education and enrolments rates but skill development also must be prioritised in the budget.

Thus, India's Demographic Dividend presents ample opportunities and significant number of challenges, through targeted approach and focus upon key areas such as education, healthcare, employment, gender equality and infrastructure India can harness its demographic dividend to drive sustainable economic growth.

## CONCLUSION

India's demographic dividend characterized by young and working age population, however this study faces significant challenges in terms of social sector including education, healthcare and gender inequality, as per UN Population Division, 2021, it provides a vast labour force that could drive economic expansion. It specifies that workforce participation is hindered by low-female labour participation as it stands at only 20.3% as of 2020, World Bank Report. Moreover, there is a strong correlation between female literacy and workforce participation, thus the education and literacy challenges demands an investment in educational infrastructure and policies that stabilizes the qualification and utilisation of potential workforce, healthcare expenditure in India also accounts for only 1.28% of the GDP, this sector has direct impact on the longevity and productivity of the working-age population thus significant and considerable expansion in healthcare access especially in rural areas is important, Gender Inequality is also one of the significant barriers to the potential of demographic dividend in India as we rank 123<sup>rd</sup> in the Gender Inequality Index as per UNDP,2020. In conclusion India's composition of demographic dividend presents an opportunity for economic growth with increased focus upon the investment in social sectors, the dividend may be unutilized and benefits remain unrealized.

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# Unemployment - A Major Challenge in Emerging India

Dr. Syeeda Khatoon<sup>1</sup> & Sarita<sup>2</sup>

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## ABSTRACT

*Unemployment has been a major problem for India from a very long time. Problem of unemployment being a global phenomenon, international bodies like ILO have predicted an increase in unemployment in India in upcoming years. Unemployment, also known as non-employment, emerges when mankind is without work and energetically pursues employment. It's a terrible problem in India, which has significant social and economic consequences. National and local governments often attempt to facilitate employment to secure those who meet the acceptability criteria they set. Usually, work is availed exclusively at a certain minimum wage that is sufficient to make a living and provides them with further opportunities to find a permanent job. These efforts are made to develop the growth of the country and reduce the overall unemployment rate. Increasing unemployment rate in India slows down economic growth, and GDP is considered an indicator of economic growth. It has been found that there is a strong negative correlation between economic growth and the unemployment rate. The paper discusses the problems being faced by the economy due to high rate of unemployment and lays down strategies to improve the present employment situation in the country. The paper explains how an increase in population, poverty, illiteracy, inflation and lack of full employment can lead to a slowdown in the growth of the economy. This research paper also examines the various measures that the Indian government has taken to address unemployment, such as skill development programs and promoting entrepreneurship and foreign investment. Despite these efforts, the challenge of creating adequate employment opportunities for India's growing population remains crucial. This paper highlights the need for sustained efforts to address unemployment in India and suggest possible solutions to improve the situation.*

**Keywords-** *Unemployment, Development, Employment, Growth*

## Introduction

Due to many years, but being in the shackles of subjugation, India is not able to develop at the expected pace. As a result, government are facing many major tests and obstacles to establish themselves self-reliant and strong on the world stage. The Indian economy is incomplete shambles

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even after so many years of independence. Even though our government boasts of improving the standard of living of the people and providing them with suitable employment, the reality is that most of our population is forced to sleep hungry and remain without education due to unemployment. They do not have any facilities of any kind. In such a situation, whether our governments making policies to eradicate poverty and unemployment are meaningful or not, it can be estimated automatically. Increasing the unemployment figure, it has taken such a formidable and terrible from that it is a big challenge for us to face it. Due to economic liberalization and globalization, multinational companies, which helped a lot in improving the standard of living of the people. But this growth remained limited to urban areas only. No attention was paid to the development of the real India which lives in villages. Due to which the employment situation in the village is very deplorable. India is a country with a huge population. The faster the population is developing, the faster the economic level and employment opportunities are decreasing. It is not possible for a developing nation like India to provide employment to such a large population. The number of persons seeking employment far exceeds the number of means and opportunities available. Our government give an assurance that once the industry is set up, one persons from the family whose land has been acquired will be given a job in that industry. On the contrary, the farmer feeds the family with the compensation amount till the industry is set up and when he does not get any kind of job, he is forced to commit suicide to get rid of a life of poverty and misery.

### Review of Literature

**Chand, Khem, Rajesh & Manish (2017)**, the study attempts to find out the impact of economic growth on the unemployment rate in India. For the study, GDP has been considered as an indicator of economic growth. The data relating to GDP and unemployment rate are collected from the secondary sources such as world bank database. Correlation and regression analysis have been used to study the nature and degree of the impact of economic growth on the unemployment rate. It has been found that there is strong negative correlation between economic growth and the unemployment rate. In addition, it was found that GDP is 48% due to changes in unemployment rate. The findings are consistent with Okun's law and the findings of studies conducted in the past.

**David, Avinash Raj, (2019)**, this paper examines the reason behind the high rate of unemployment in the current market. The common cause of unemployment in India has always been slow economic growth, rapid growth in population, low savings and investment. But due to this pandemic, the mobility of labour has played an important role. This paper also talks about the labour participation rate (LPR), structural unemployment, regression model. Research can also conclude that most people want a job in their hometown but the salary and opportunity offered is not as attractive.

**Iqbal, Junaid, (2022)**, this study conclude that unemployment is a serious problem in contemporary times for India and many countries around the world. The paper presented demonstrates the problem of unemployment in India. The entire study is based on secondary data, taken from the year 2010-2020. The variables taken for the study are GDP (MKTP) and inflation (INF) as the independent variables while unemployment (UNEMP) was taken as the dependent variable. The statistical tool used to study the effect of the latter is regression analysis. Descriptive statistics were

also used to understand the various properties of variables. The null hypothesis was devised to understand the problem. The first zero hypothesis was accepted as the data results show that inflation does not affect unemployment while the second zero hypothesis was rejected as the data shows that GDP (MKTP) affects unemployment. The data also shows that there is a positive correlation between GDP (MKTP), inflation and unemployment.

### Meaning of Unemployment

Unemployment is a condition when a person actively seeks a job and is unable to find work. Unemployment indicates the health of the economy. The unemployment rate is the most frequent measure of unemployment. Unemployment rate is the number of unemployed people divided by the working population or people working under the labour force.

$$\text{Unemployment rate} = (\text{Unemployment workers} / \text{Total labour force}) * 100$$

The National Sample Survey Organisation (NSSO) defines employment and unemployment on the following activity statuses of an individual: NSSO is an organisation under MoSPI of the Ministry of Statistics and Programme implementation that measures India's unemployment on three approaches:

**Daily Status Approach:** Under this approach the unemployment status of a person is measured for each day in the reference week. A person who does not have any gainful work even for an hour in a day is said to be unemployed for that day.

**Weekly Status Approach:** This approach highlights the record of individuals who did not have gainful work or remained unemployed for even an hour on any day of the week preceding the survey date.

**Usual Status Approach:** It gives an estimates of individuals who were unemployed or had no gainful work for most of the time during the 365 days.

### Types of Unemployment in India

There are mainly six types of unemployment in India. The types of unemployment are discussed below:

1. **Structural Unemployment:** This unemployment arises when there is a mismatch between the skills of workers and the availability of employment in the market. Many people in India do not get a job commensurate with their skills or they do not get a job due to lack of required skills and due to poor education level, it becomes important to provide them with relevant training.
2. **Frictional Unemployment:** This is a situation when people are unemployed for a short period of time while looking for a new job or switching between jobs. Frictional unemployment also called search unemployment. Frictional unemployment is considered as voluntary unemployment because the cause of unemployment is not the lack of jobs, but in fact, the workers themselves leave their jobs in search of better opportunities.
3. **Disguised Unemployment:** it is a type of unemployment where employed people are more

- than what is actually needed. Disguised unemployment is usually found in unorganized sectors or agricultural sectors.
4. **Cyclical Unemployment:** Unemployment due to the business cycle, where the number of unemployed increases during a recession and declines with the growth of the economy. The figures for cyclical unemployment in India are negligible.
  5. **Technological Unemployment:** The situation when people lose their jobs due to advancements in technologies. In 2016, World Bank data predicted that the proportion of jobs threatened by automation in India is 69% year-on-year.
  6. **Seasonal Unemployment:** This type of unemployment is found in the agricultural sector. People engaged in agriculture get employment at the time of ploughing, sowing, harvesting etc. but as soon as the agriculture work ends, people engaged in agriculture become unemployed.

### Causes of Unemployment

**Dependence on Agriculture:** Despite the declining contribution of the primary sector to GDP, the majority of the people in India are still employed in it. This has increased the economic gap between urban and rural areas and disguised unemployment. Since agriculture is a seasonal industry, most people are vulnerable to seasonal unemployment.

**Rapid Population Growth:** There has been a significant increase in India's population in the last 50 years. The inability of the country's economy to keep pace with the rapid population growth is resulting in a large number of people becoming unemployed.

**Slow Industrial Growth:** Similar to the economy, industrialization has increased significantly but at a relatively moderate rate. At the national level, there is a strong focus on industry, which has boosted the Indian economy. Overall, industrial growth is creating comparatively less new job opportunities as compared to population growth.

**Lack of Physical Capital:** Physical capital is required to generate all economic activities. A farmer needs tractors, ploughs and other implements. An entrepreneur needs land, equipment, minerals, etc. and the service industry needs state-of-the-art technology, structure, equipment, etc. it's all physical capital. India's capital reserves are not able to meet the requirements of the growing population.

**Slowly Growing Economy:** Economic Growth in India is much slower than it could have been as the country's economy is still in a relatively early stage of development. In other words, as the population grows, the economy is unable to cope with the demand for jobs and an increasing number of individuals are struggling to find employment. As a result, there are not enough jobs available across the country.

**Neglect of Cottage Industries:** One of the main sources of income of peasant farmers in rural India is cottage industries including textiles and handicrafts. But larger, more automated industries that outperform these small and cottage industries in terms of production have a negative impact on them. As a result, small and cottage industries are becoming increasingly difficult to sustain, causing many people in rural and urban areas to lose their jobs.

## Unemployment Rate in India

There are many series problems like economic crisis, price rise, exploitation, corruption, poverty and unemployment in the country, but a present unemployment remains a serious problem. Very reliable estimates of the problem of unemployment are not available, yet there are some estimates of the size of unemployment. January 2024 saw a sharp decrease in the unemployment rate. According to the latest data from the Centre for Monitoring Indian Economy (CMIE), the unemployment rate in India stood at 6.8 percent in January. The unemployment rate in India saw a decrease of 1.9 percent in a month as it was 8.7 percent in December last year. Recent weather patterns across the country have led to significant changes in economic conditions. As the rains covered a large part of India, affecting nearly half of the agriculture land, expectations of higher agriculture production have risen. The positive growth has the potential to contribute to overall economic growth and improve labour demand in the agriculture sector. These changing trends in labour demand and employment rates require thoughtful policy measures to address existing economic challenges and ensure sustainable growth in rural and urban areas. It highlights the importance of diversifying economic activities to create more employment opportunities and increase the financial resilience of the country. Data in a small chart of the unemployment rate over the past 15 years is:

**Table No. 1**

Year	Unemployment Rate (percent)
2024	6.57 (January 2024)
2023	8.003
2022	7.33
2021	5.98
2020	8.00
2018	5.33
2017	5.36
2016	5.42
2015	5.44
2014	5.44
2013	5.42
2012	5.41
2011	5.43
2010	5.55
2009	5.54

Source: CMIE

## Government Initiative to Control Unemployment

Many policies have been introduced by the government to reduce the terrible problem like unemployment. Some of which are described as follows:

- In 1979, the government started TRYSEM training of rural youth for self-employment. The objective of the scheme was to help unemployed youth in rural areas in the age group of 18 to 35 years acquire skills for self-employment. Under this scheme, priority was given to women and youth of SC/ST category.
- The government of India created the integrated Rural Development Programme (IRDP) in 1978 and implemented it in 1980. The goal of the program is to give disadvantaged people a chance to enhance their skills to improve living conditions along with work prospects.
- NREP and RLEGP were merged under Jawahar Rozgar Yojana (JRY) in April 1989. The objective of JRY was to create meaningful employment opportunities for the unemployed and underemployed in rural areas through creation of economic infrastructure and community and social assets.
- Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was launched in 2005 which provides people the right to work. An employment scheme of MGNREGA aims to provide social security to all households whose adult members opt for unskilled labour-intensive work by guaranteeing a minimum of 100 days of paid work per year.
- The National Skills Development Mission launched by the Ministry of Skill Development and Entrepreneurship on July 15, 2015 aims to create convergence across sectors and states in terms of skills training activities.
- Pradhan Mantri Kaushal Vikas Yojana was launched in 2015. The objective of PMKVY was to enable the youth of the country to take up industry-relevant skill training to achieve a secure better livelihood.
- Launched on January 16, 2016, the startup India initiative has launched several programs aimed at supporting entrepreneurs, building a strong startup ecosystem and transforming India into a country of job creators rather than job seekers. These events are managed by a dedicated startup India team, which reports to the Department of industrial Policy and Promotion (DPIIT).
- The stand-Up India scheme aims to facilitate bank loans between Rs 10 lakh and Rs 1 crore to at least one Scheduled Caste (SC) or Scheduled Tribe (ST) borrower and at least one women borrower per bank branch for setting up a greenfield.

### **Suggestion**

- Control of population growth in the nation
- Encouraging public-Private-Partnership
- Strengthening education and industry cooperation
- Tapping the potential of digitization and technology
- Increasing rural employment opportunities
- Strengthening of manufacturing and industrial sector
- Promotion of skill development and vocational training

- Encouraging entrepreneurship and start ups
- Being creative, positive and competitive
- Ensuring political stability

## Conclusion

Unemployment is a major concern in any country and hence it is important to focus on it to save the nation from economic downfall. As unemployment affects each and every individual in the nation, proper economic conditions and maintenance are required by the government. At the time of recession, the government should be ready to take the right steps. Unemployment is a big crisis and can bury the economic condition of the whole country and therefore it is imperative to follow the right procedure and work towards creating an unemployment free nation. To effectively reduce unemployment, it is important to empower this demographic dividend through skill development and employment generation initiatives. By prioritizing quality education, vocational training and entrepreneurship programmes, India can equip its youth with the skills and knowledge needed to meet the demands of the job market. Encouraging public-private-partnership and industry collaborations can facilitate the creation of more employment opportunities that align with the skills and aspirations of the young workforce. Additionally, fostering innovation, supporting start-ups and increasing access to finance can nurture an entrepreneurial ecosystem, allowing young individuals to create their own employment opportunities. By empowering India's demographic dividend, the nation can harness the energy and talent of its youth to drive economic growth, reduce unemployment and promote a prosperous future for all.

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# Demographic Transition and Social Sector Challenges in India

Shweta Srivastava<sup>1</sup>

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## ABSTRACT

*In the contemporary landscape, the Banking Sector has emerged as a key player in providing high-quality services to a diverse customer base, ranging from individual consumers to corporate entities. The pivotal factor for the sustained growth of any banking institution is the fulfillment of customer needs and the paramount importance placed on customer satisfaction. As a financial industry, banks are intricately woven into the fabric of meeting customer requirements. The configuration of customer preferences is intricately linked to the array of services and facilities extended by banks. Preferences, likes, and dislikes of banking services are subjective, varying from one customer to another. In the current milieu, customers have evolved into discerning individuals, cognizant of their rights, prompting banks to adapt and innovate in response to these changing demands. This research seeks to delve into the configurations of customer preferences, focusing on the best services offered by banks and the dynamic interplay between customer satisfaction and the evolving landscape of banking services.*

**Keywords:** Banking sector, Public sector banks, Private sector Bank, Service, Customer.

## INTRODUCTION

The Banking Industries helps to develop the economic condition. RBI regulates the banking sector in India and makes rule and regulation for Banking Industries. It helps to improve in growth of any business by providing the source of finance. Banking sector provides many facilities to the Customer such as opening account, providing loan, E-banking, credit cards, ATM etc.

The Banks is divided into 4 parts which is as follows-

1. Commercial Bank
2. Small Finance Bank
3. Payment Bank
4. Co-operative Bank

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1. Entrepreneur as the Owner of Hotel Pradeep Star Inn and Hotel Pradeep Palace.

Commercial Bank is also divided into 4 parts which is-

1. Public sector Bank
2. Private Sector Bank
3. Foreign Bank
4. Regional Rural Bank

The purpose of Commercial Bank is to earn more and more profit, the first task is deposited cash and providing loan and other services to the customer, whatever is needed.

Public sector Bank is a bank in which most of the shares are held by the Government. All the rules and regulation is govern by the Government, so a customer wants to invest in a public sector bank because he feels like he is secure and believes that his money will be saved because it is regulate by Government and there is no chance of fraud.

Most of the shares in the Private Sector Banks belong to any private institution or individuals, they are not owned by the Government even though all the rules and regulation of RBI is also apply to Private Sector banks.

### Literature Review

**M. E. Dodderaju (2013)**, found in his research “**A study on customer satisfaction towards public and private sector banking services with special reference to anantapur district of Andhra Pradesh**”, that there is no variation in customer to invest in banks on their occupation and satisfaction, but there are many variations on their own income. And he also found that private sector banks is successful in establishing more customer relations than public sector banks.

**Navin kumar Mishra and Vijay kumar pandey (may,2013)** did his research “**customer satisfaction- a comparison of public and private sector banks in India**” They took 350 respondents and conducted research based on primary data which was questionnaire, and found that most of the customers, considering their security and trust, do not think it is appropriate to invest in a public sector bank rather than going to a private bank.

**Bilamage (2011)** found in his research “**comparative study of customer perception towards services rendered by public sector and private sector banks**”, assessed and compared customer satisfaction between SBI and ICICI bank. This research found that ICICI bank’s employees are more friendly nature and more helpful compared to SBI bank. And it was also seen that both banks are deprived of some important facilities.

### Scope

- It will help to make a strong bonding between customers and Banks.
- It will be helpful to improve banking services to fulfil customer satisfaction in Lucknow City.
- It will be helpful to increase customer awareness.

### Objective

- To know whether the customers are conscious from the Banking Services in Lucknow City.
- To Study by which Banking Services, customers are mostly influenced while selecting the Banks.
- To know about the perception of customers about physical product and services like ATM etc

### Research Methodology

**Sample Area** – The Sample Area is Lucknow City

**Data to be Used** – Quantitative

**Sample design** – It is a type of conclusion based research Descriptive in nature.

**Sample Size** – In this Research, the sample is 150 respondents (customers of Banks). It Include in equal proportion of both private sector and public sector banks.

**Data Collection Sources** – Primary Data has been collected by costumers of banks public sector and private sector both with the help of Qustionnaire. And secondary sources as well like Internet, books, newspaper, magazines, Journals etc . All the data were collected through the Interaction with customers of banks by visiting over there.

**Data Analysis** – Simplex Percentage Analysis, It involves representing raw data as a percentage, so as to better interpret the data.

### Limitation

This research will not give any general statement because this research process is conducted in Lucknow city only.

### DATA ANALYSIS AND INTERPRETATION

AGE	PRIVATE SECTOR BANK	PUBLIC SECTOR BANK
Less than 20	9.84	5
21-35	54.5	34.84
36-50	30.5	50.16
Above 50	5.16	10
GENDER	PRIVATE SECTOR BANK	PUBLIC SECTOR BANK
MALE	59.30	75.70
FEMALE	40.70	24.30
OCCUPATION	PRIVATE SECTOR BANK	PUBLIC SECTOR BANK
STUDENT	5	10
BUSINESSMAN	38.5	26.84

(Contd...)

PROFESSIONAL	21	14.33
SERVICE	28.16	42.33
HOUSEWIFE	7.34	6.5
MARITAL STATUS	PRIVATE SECTOR BANK	PUBLIC SECTOR BANK
MARRIED	43.16	59.84
UNMARRIED	56.84	40.16
MON. INCOME	PRIVATE SECTOR BANK	PUBLIC SECTOR BANK
NIL	5	12.6
LESS THAN RS.50,000	14.33	9.15
RS. 50,000-RS. 1,50,000	27.33	15.84
RS. 1,50,000-RS. 3,00,000	22.34	34.84
RS. 3,00,000-RS. 5,00,000	23.4	10.17
ABOVE RS. 5,00,000	7.6	17.4
Which types of Account do you have in that particular Bank	PRIVATE SECTOR BANK	PUBLIC SECTOR BANK
SAVING ACCOUNT	85.83	92.6
CURRENT ACCOUNT	12.5	5
FIXED ACCOUNT	0.84	2.4
OTHERS	0.83	0

### SERVQUAL FECTORS (In percentage)-

VS= Very Satisfied, S= Satisfied, N = Neutral, D= Dissatisfied, VD = Very Dissatisfied, HA = Highly Agree, A = Agree, NA = Not Agree

TABLE 1. SATURATION OF CUSTOMER

FACTORS	PRIVATE SECTOR BANK					PUBLIC SECTOR BANK				
	VS	S	N	D	VD	VS	S	N	D	VD
1. Customer Support /Guidance (Advisory/Clarification of Doubt)	20.67	66.83	5	5.84	1.66	9.83	45	28.66	5.16	11.33
2. The Politeness & Hospitality	24.84	70	5.16	0	0	15.84	21.67	6.66	44.16	11.66
3. Handling of Customer's Disputes	11.66	75.84	10.83	1.66	0	17.52	24.16	10	44.16	4.16
4. Speed, promptness, Accuracy in Transactions	25.83	57.5	10.83	5	0.83	7.5	25.83	9.16	47.5	10
5. Safety of Investment	39.84	60.16	0	0	0	44.66	51.16	0	1.66	2.8
6. Variety of Service Offered	37.5	51.66	7.5	3.34	0	10	26.66	45	15.83	2.5

(Contd...)

7. Mobile Banking, E- Banking and Latest Technology	31.66	60.83	7.6	0	0	30	42.5	25.83	1.67	0
8. Confidentiality of Account and Transaction	34.84	65.16	0	0	0	24.16	68.33	5	0.84	1.67
9. The Infrastructure Facilities like Parking, ATM, etc	62.66	34.83	0	0.84	1.67	10.84	15.83	9.17	53.31	10.85
10. Communication and Providing prompt Information	53.5	44	0	2.5	0	9.18	19.17	9.16	43.33	19.16
11. Timing of the Bank	17.5	44	21	0	17.5	10	79.16	9.17	1.67	0

**SATURATION OF CUSTOMERS :** This is depends upon the some statement which are:

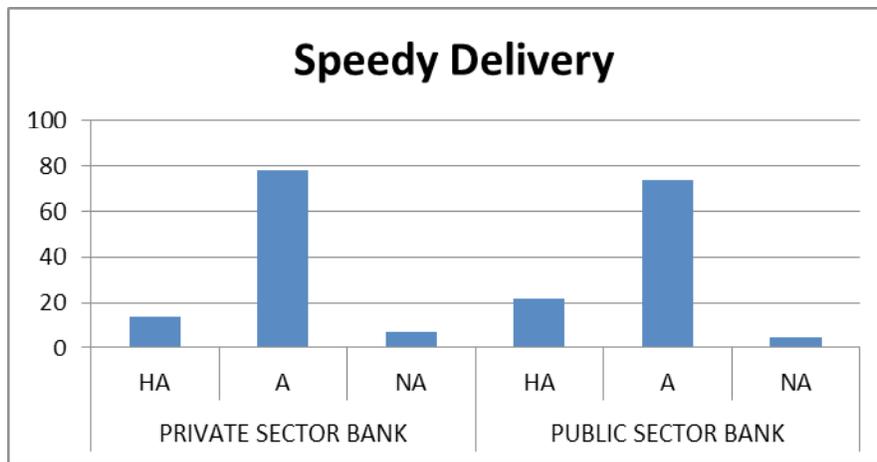
- CUSTOMER SUPPORT AND GUIDANCE** - Through this statement 66.67% customer feels private sector banks employees are more supportive and clarify the customer doubt whereas only 32.83% customer feels of public sector banks.
- THE POLITENESS AND HOSPITALITY** - The 70% customer of private sector banks feels employees are more politely behave and provide appropriate hospitality service whereas only 21.67% customer of public sector feels so.
- HANDLING OF CUSTOMER GRIEVANCES** – Employees are the handling grievances 75.83% of customers of private sector bank are feels satisfy whereas 24.16% of customer of public sector banks feel so.
- SPEED, PROMPTNESS, ACCRACY IN TRANSACTION** – According to this statement 57.5% of customers in private sector banks whereas 25.83% of customer in public sector bank feels that speediness, promptness and accuracy it their transactions.
- SAFETY OF INVESTMENT** – 59.16% of customers in private sector banks are feels that their investment more safe and only 51.66% of customer in public sector feels so.
- MOBILE BANKING, E- BANKING, AND LATEST TECHNOLOGY** – On the basis of this statement 60.83% customer of private sector banks are more satisfy with the modern equipments whereas in public sector banks only 42.5% of customer feels so.
- VARIETY OF SERVICE OFFERED** – Private sector bank’s 51.66% customer are more satisfy with the variety of service offered whereas 26.66% of customer of public sector banks.
- CONFIDENTIALITY OF ACCOUNT AND TRANSACTION** – 65.84% of customer of the public sector banks are more confident about the transaction and accounts as compare to only 42.5% of customer of private sector banks are confident.
- THE INFRASTRUCTURE FACILITIES** – on the basis of this statement private sector banks 61.66% of the customer are more satisfy whereas 15.84% of customer of public sector banks are satisfy.
- COMMUNICATION AND PROVIDING PROMPT INFORMATION** – In private sector banks 52.5% of customer feels that employees can properly communicate and provide the relatable information whereas 19.16% of public sector customer feels so.
- TIMING OF THE BANK** - 79.16% public sector banks customers are feels satisfy with the operation time of the transaction whereas 45% of customer in private sector banks feels so.

TABLE 2: PROCESS AWARENESS –

FACTORS	PRIVATE SECTOR BANK			PUBLIC SECTOR BANK		
	HA	A	NA	HA	A	NA
Speedy Delivery	14.16	78.33	7.5	21.66	73.33	5
Reduced Paperwork	4.16	95.84	0	14.16	85.83	0

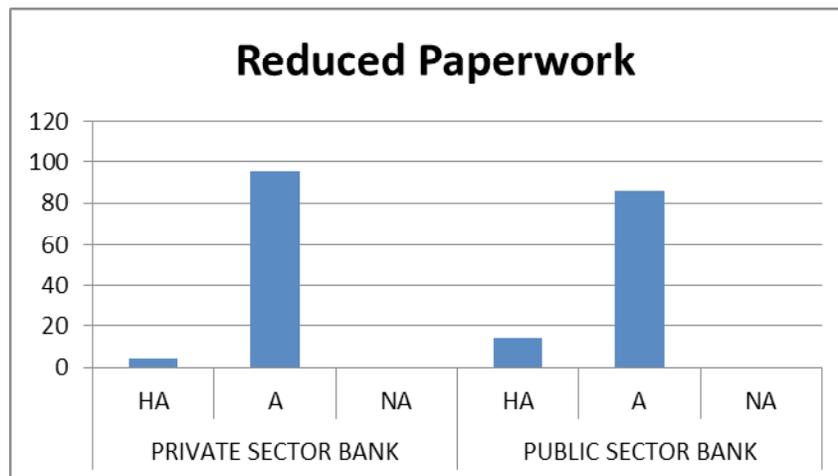
**PROCESS AWARENESS IN SELECTION OF BANK: -**

- **SPEEDY DELIVERY –**



78.33% customer of private sector feels that employees of that are more in seed delivery in all the criteria related with banks whereas 73.33% customer of public sector are feels so.

- **REDUCED PAPERWORK –**



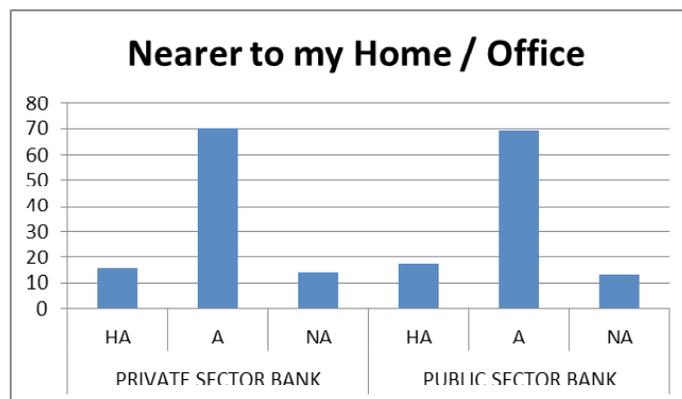
95.84% of private sector banks customer feels that the banks rarely do paperwork as comparison to public sector banks 84.83% of customer feels so.

TABLE 3 - ABOUT CONVIENCE

FACTORS	PRIVATE SECTOR BANK			PUBLIC SECTOR BANK		
	HA	A	NA	HA	A	NA
Nearer to my Home / Office	15.87	70	14.13	17.5	69.13	13.37
Number of ATM's available	77.5	17.5	5	94.16	2.5	3.34
Goodwill and Reputation of the Bank	70	17.5	12.5	3.33	79.17	17.5

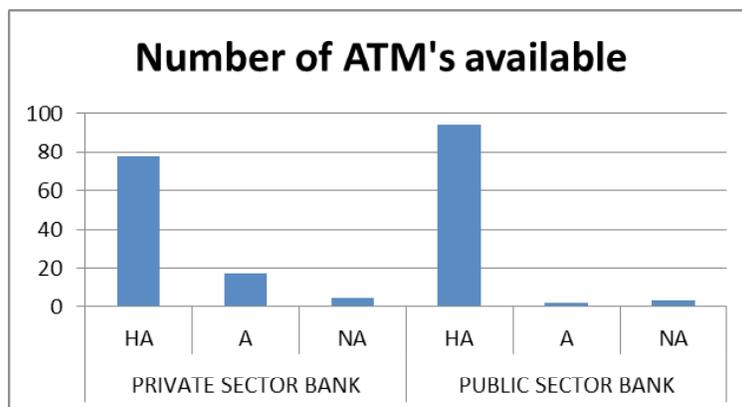
**ABOUT CONVENIENCE IN SELECTION OF BANK: -**

- **NEARER TO MY HOME/OFFICE –**



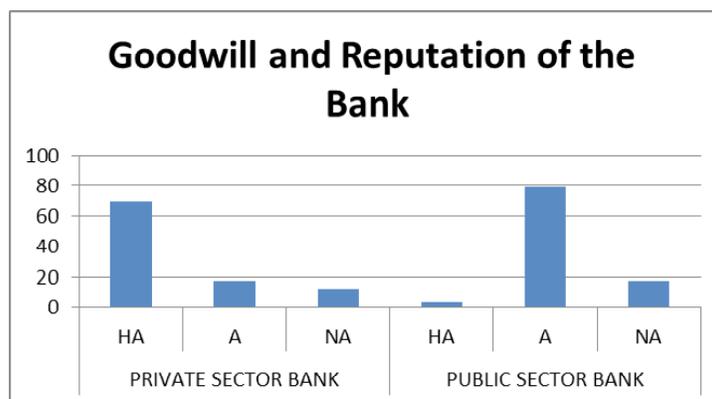
70% of customers select the private sector bank because of that is near to their home or office whereas 69.17% of customer in public sector banks selected.

- **NUMBER OF ATM'S AVAILABLE –**



94.16% of customer select the public sector bank because of there is number of ATM'S available in different areas whereas 77.5% of customer in private sector banks selected

- **GOODWILL AND REPUTATION OF THE BANK –**



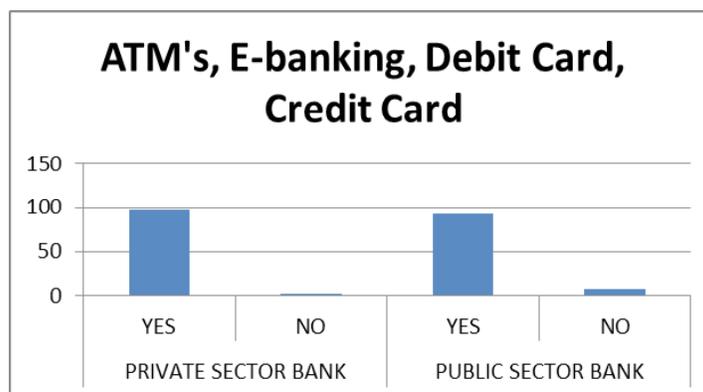
79.17% of customers select the public sector bank because of their goodwill and reputation basis whereas 70% of customer in private sector banks selected.

**TABLE 4 - AVAILED ABOUT THE PHYSICAL PRODUCT & SERVICES PROVIDED BY THE BANK**

FACTORS	PRIVATE SECTOR BANK		PUBLIC SECTOR BANK	
	YES	NO	YES	NO
Monthly Interest Income	30	70	82.5	17.5
Housing Deposit scheme	10.84	89.16	79.16	20.84
Loan scheme	54.16	45.84	95	5

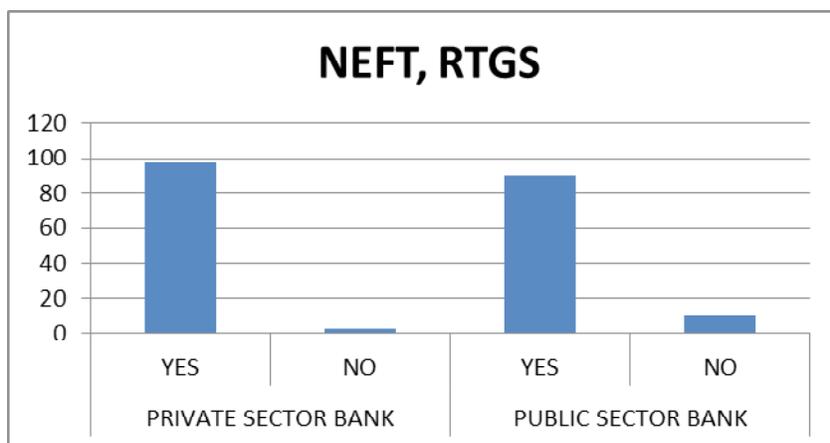
#### **KNOWLEDGE ABOUT THE PHYSICAL PRODUCT OR SERVICE :-**

- **MONTHLY INTEREST SCHEME –**



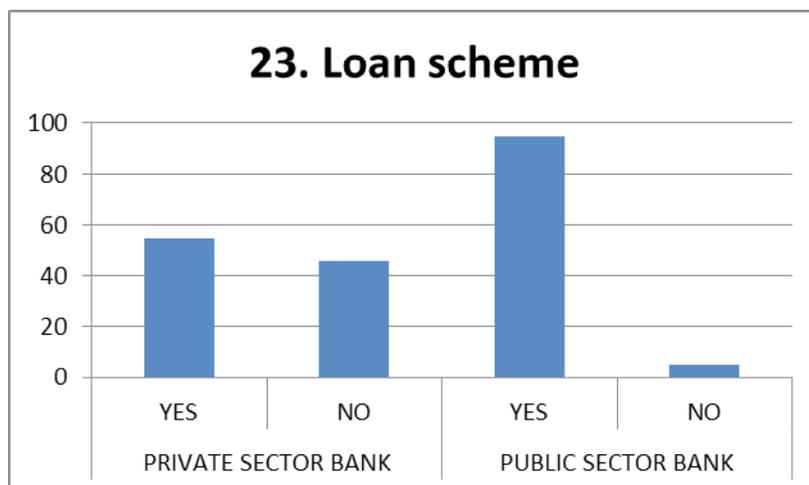
70% of customer in the private sector banks are knowledge about the monthly interest scheme whereas 82.5% of customer in public sector banks.

- **HOUSING SCHEME –**



89.16% of customer in the private sector banks are knowledge about the housing scheme whereas 79.16% of customer in public sector banks.

- **LOAN SCHEME –**



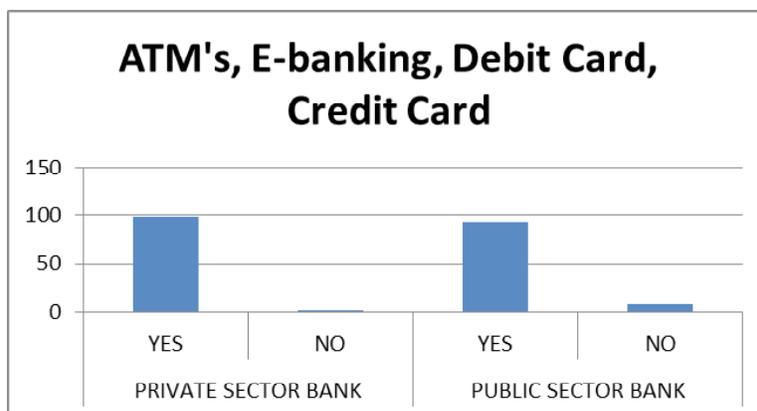
54.16% of customer in the private sector banks are knowledge about the loan scheme whereas 95% of customer in public sector banks.

TABLE 5 - Aailed about IT services

FACTORS	PRIVATE SECTOR BANK		PUBLIC SECTOR BANK	
	YES	NO	YES	NO
ATM's, E-banking, Debit Card, Credit Card	98.34	1.66	92.5	7.5
NEFT, RTGS	97.5	2.5	90	10

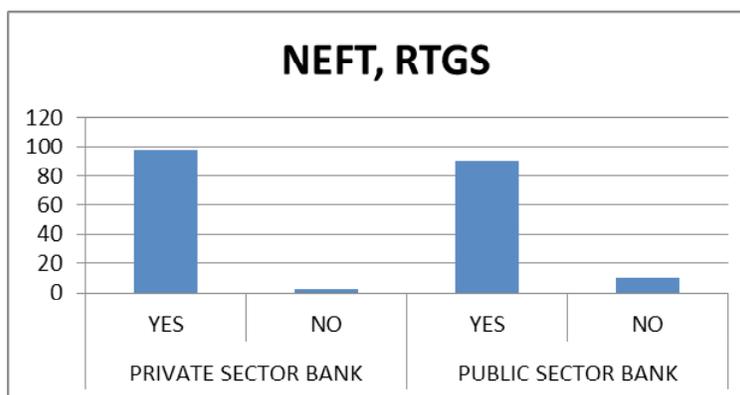
**KNOWLEDGE ABOUT THE IT ENABLES PRODUCT OR SERVICES :-**

- **ATM'S, E- BANKING, DEBT CARD, CREDIT CARD ETC. –**



98.34% of customers in private sector banks aware from and also continuous use the ATM, E-Banking, debit and credit card service whereas 92.5 % of customer in public sector banks aware.

- **NEFT, RTGS –**



98.5% of customer in private sector banks aware from and also use the NEFT AND RTGS service whereas 89% of customer in public sector banks is aware.

## **FINDING**

In this comparative study we found most of the statement area scored by the private sector banks compared to public sector bank except availed about the physical product or service and goodwill or reputation of the bank which is scored by the public sector Bank. So on the basis of comparison customer of private sector banks are more satisfied as comparison to public sector banks in most of the area.

## **SUGGESTION**

There are some suggestions for private sector banks and more for public sector banks.

The firstly suggestion for private sector banks which is :

- The operations timing of the bank should be increased.
- It should be necessary to maintain the goodwill and reputation of the bank.

### **Suggestion for public sector banks**

- Employees should be well behaved for their customer and handle the customer grievances and complain.
- It should also to be necessary increase in delivery of transactions and very less paper work to be used.
- It should be necessary to provide proper and exact guideline to the customer related to the product and services.

## **CONCLUSION**

In the competitive business environment there is necessary to understand and meet out the customer expectation. In this Research study the all aspects of customer regarding banking industry related to the services provided by it and the services is depend upon some dimensions. Through this research study find out the satisfaction level of the customers, study that how much know about the product and services and also find the reasons that typically visit to customer in private sector and public sector banks. Both the banking sector try to meet the expectation but customer of Gorakhpur city are more satisfy with the service of private sector bank rather than public sector bank. Public sector bank are necessary to be more modifying in the service which is provided to the customer and also necessary to be fluency in transaction, try to handle the grievances of customer, to communicate with the customer in polite way and also necessary to enhance the IT services related to the banks. Private sector banks are also needs to enhance the physical services or products and improve in some areas to build the trust of the customer. This study is helpful to the managers for improving the some areas for development of the both banking sector and it will be helpful in the growth of our Indian economy.

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# Harnessing India's Demographic Dividend: Addressing Brain Drain for Sustainable Economic Growth

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## ABSTRACT

*India is currently experiencing a unique demographic transition characterized by declining fertility and death rates and a significant increase in the labour force. This demographic shift presents an opportunity for India to accelerate its GDP growth. However, this opportunity is accompanied by the challenge of "brain drain," where highly skilled workers seek better opportunities abroad.*

*This study, based on secondary data from official sources including the Indian External Affairs Ministry, explores the impact of both demographic transition and brain drain on the Indian economy. According to Morgan Stanley, 23,000 millionaires have left India, and nearly 900,000 Indians have renounced their citizenship since 2015. Additionally, 2.5 million Indians migrate abroad each year.*

*Understanding the brain drain is essential for formulating strategies to hold onto highly qualified personnel and promote more robust partnerships between the public sector and higher education. In the long run, these initiatives are crucial for leveraging innovation and supporting India's economy. Although the Indian diaspora is useful in that it transfers knowledge and sends remittances, the loss of talent threatens local innovation and the economy's viability.*

*This research underscores the need for proactive recruitment and retention strategies to maximize the benefits of India's demographic dividend amidst increasing global competition. It also highlights investment's crucial role in the labour market and educational opportunities, particularly in technology and academia. These actions are not just beneficial, but they are also necessary for India's long-term economic progress. Failure to address the brain drain could exacerbate existing inequalities and hinder India's economic growth. To counteract this, India must invest in its labour market, enhance educational opportunities, and strengthen its connections with the Indian diaspora.*

**Keywords:** Demographic Transition, Migration, Economic Development, Brain Drain, Labor Market.

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## Introduction

According to the “**International Migration 2020 Highlights**” study, the biggest rise in international migration occurred in India, where an estimated 10 million individuals migrated between 2000 and 2020. The **British High Commission reports** that 1,17,965 Indians were granted a UK study visa in a single year, ending in June 2022. Several studies estimate that by 2024, 1.8 million Indians might have spent most \$85 billion on international education. This figure demonstrates how India’s talent is flowing out along with its money. It is anticipated that India would see economic benefits from having a higher proportion of working-age citizens than dependents—a trend referred to as the “**demographic dividend.**” This trend has the potential to boost economic growth if it is handled well. According to the **Cambridge Dictionary**, the phenomenon known as “brain drain” occurs when a significant number of highly skilled and educated people leave their home country to live and work in one where earnings and working conditions are higher. Top talent leaving India has a negative effect on important industries like technology, healthcare, and education. It also reduces the pool of talented workers needed for innovation and impedes long-term economic progress. Professionals are still drawn to industrialized nations by higher living standards, employment chances, and research opportunities despite India’s status as an emerging country. This growing brain drain is a reflection of discontent with the standard of living in the country and might eventually hurt India’s GDP. In order to counter this tendency and retain talent while promoting economic growth, India must upgrade its infrastructure and offer better work opportunities, competitive pay, healthcare, and education.

With more than 17 million Indians leaving the country for other countries, the issue still stands: Will brain drain destroy India’s demographic potential, or will it keep enough intellect to drive its economic future?

## Review of Literature

The problem of brain drain or the exodus of intellect might offset any potential economic benefits from a demographic dividend. Skilled professionals who discover better economic, professional, or educational prospects elsewhere often leave their home nations, a phenomenon known as “brain drain.” India has suffered from severe brain drain, with a sizable amount of its highly qualified workers leaving the country for the U.S., U.K., and Canada, particularly in industries like IT, engineering, and medical (Kapur & McHale, 2005). India is one of the top nations experiencing brain drain, according to research by Do Cuire and Rapoport (2012), especially in fields like academics, engineering, and IT. According to Bhagwati and Hamada (1974), brain drain directly contributes to the loss of human capital, which can obstruct innovation and economic advancement.

Moreover, the emigration of trained professionals may lead to decreased investment in local enterprises and higher unemployment rates for those left behind (Clemens, 2011). One important resource that may be used to close the gap between domestic and international prospects is the Indian diaspora. Involving the diaspora in knowledge transfer, investment, and mentorship may help mitigate the negative consequences of brain drain and boost local entrepreneurial activity, claims a paper published in 2014 by the Global Institute of McKinsey. To increase domestic possibilities, the Indian government has launched several programs, including “Startup India” and the “Skill Development Mission.”

There are several reasons why highly trained professionals relocate; they might be transitory (Baldwin-Edwards 2006; Beaver Stock 2005) or part of a plan for a long-term settlement (Hazen and Alberts 2006).

With programs like “Overseas Citizenship of India” (OCI) and “Pravasi Bhartiya Divas,” which seek to improve the circumstances for returnees to contribute to domestic economic growth, India has made attempts to entice qualified people to return home (Ray, 2015).

According to the International Labor Organization (ILO, 2020), India must generate millions of new jobs every year to accommodate its expanding labour force. The demographic dividend may become a demographic burden if infrastructure, jobs, and skill development are not significantly improved (Thakur, 2015).

### Objectives

1. To analyse the impact of Brain, drain on India’s potential to harness its demographic dividend and assess how the emigration of skilled professionals affects long-term economic growth.
2. To evaluate policy interventions and strategies that can mitigate brain drain and promote the retention and return of skilled talent, ensuring sustainable economic development in India.

### Research Design

The research design for this study is based on secondary data analysis, where existing data will be collected, evaluated, and analysed.

### Discussions and Analysis

India’s economy is growing at a very rapid rate because there are more people in the country of working age, and if they are given adequate living conditions and other amenities, they can be used frequently. This is because people are less likely to migrate abroad if they are skilled and qualified, which would hinder India’s economic progress. In order to reduce the brain drain problem, appropriate policy implications are required.

### Why Brain drain?

- **Insufficient Possibilities for Higher Education :** The fierce rivalry for admission to India’s top colleges may be one of the causes of Indian students relocating overseas. Over 18.5 lakh applications were received for the NEET test in 2022. There were just 27,698 BDS seats, 50,720 AYUSH seats, 525 BVSc and AH seats, and 91,927 MBBS seats available. Comparable patterns may be seen in other national elite exams like the UPSC or the entrance exams for IITs, where thousands of candidates vie for a spot.
- **Possibilities for Employment and Greater Salary :** India’s work market is extremely competitive. Thousands of fresh jobseekers join the market each year, competing with one another to land positions at the top businesses. Due to the intense competition for jobs, incomes are drastically declining as an increasing number of individuals are prepared to work for less

money. The pay for the same position in Europe, the US, or other foreign countries is significantly different from that of India.

- **Policy on Taxes :** The increase of HNIs leaving India for other nations might perhaps be attributed to the country's high tax rates and intricate regulatory structure.

In India, the highest tax rate, inclusive of surcharge and cess, that applies to a person earning more than ₹ 1 crore is 35.88%. In contrast, the peak rates in Singapore and Hong Kong, two neighbouring nations, are far lower at 22% and 17%, respectively.

- **Visa Initiative:** The effectiveness of the work visa programs offered to overseas students and graduates is a critical element in the rise in Indian students studying abroad. Almost 115,000 Indian students were approved to study in Canada between January and September 2021; for the preceding five years, the acceptance percentage for Indian PGWP candidates was above 95%. Indians have mostly benefited from post-study visas, such as the H-1B in the US.
- **Living Standards :** They go to developed nations in search of better living conditions, more pay, and access to cutting-edge technology that would fuel their future economic expansion. India is classified as having a medium level of human development. India received a score of 0.645 in the 2022 report, placing it 131st out of 189 nations.
- **The emergence of next Generation:** The younger generation (GEN-Z) is questioning the antiquated status quo. Therefore, those that study abroad decide to stay there. However, they are also cognizant of the following: growing crime rates, political extremism, authoritarian bullying, gender discrimination, sectarian violence, and climate change. Therefore, it should come as no surprise that China, Russia, and India, together with Hong Kong, Iran, and Qatar, are the countries with the largest migrant outflows.

### Impact of Brain Drain on India's Economy:

- **Loss of Skilled Workforce and Human Capital:** It results in a shortage of highly skilled labour, which hinders the expansion of important sectors like technology, healthcare, and education. **Team Lease Services**, a renowned human resources development consulting firm, asserts that there is a worrying 150 million skilled labour deficit in the country, which is an increase from 138 million three years prior.
- **Economic Inequality and Regional Disparities:** Brain drain may be somewhat to blame for the widening economic gap in India. Although a few highly skilled individuals succeed abroad, a large number of people may fall behind owing to stagnate incomes, limited access to opportunities, and expensive schooling that also contributes to wealth concentration.
- **Loss of Entrepreneurial Talent and Innovation :** It is often harder for countries experiencing brain drain to build strong innovation ecosystems. Research and development (R&D) in industries such as technology, space exploration, and pharmaceuticals may stop due to inexperience, reducing the competitiveness of Indian enterprises globally. The **India Innovation Index 2021** indicates that national R&D spending has been relatively low in India. The gross expenditure on R&D (GERD) as a percentage of GDP, which was around 0.7%, served as evidence for this. India

is still rated 40th out of 132 economies in the **World Intellectual Property Organization's 2023 Global Innovation Index**.

- **Challenge to Meeting Employment Demands:** India has a significant underemployment and unemployment rate, especially in rural areas where many people labour in low-skill, low-paying jobs. The annual growth in the labour force is surpassing the deficiency in job creation, a situation exacerbated by the exodus of highly skilled individuals from the nation. There are many highly qualified IT and engineering graduates in the country, but there aren't many high-paying employment opportunities because of a lack of infrastructure and domestic investment. Further more, because over 65% of the population is under 35, reliance on the unorganized sector impedes the transition to formal, high-skill employment that the economy needs and sustains growth.
- **International Competitiveness and Knowledge Transfer :** India's competitiveness in innovation-driven industries like biotechnology and IT is threatened by the emigration of highly qualified personnel in these fields to industrialized nations, which might stunt the country's progress in high-tech sectors and contemporary infrastructure. On the other hand, a vibrant Indian diaspora may promote knowledge transfer that helps the startup scene in India, encouraging information exchange and links between the country and international markets. To capitalize on this potential and sustain its competitiveness in the global market, India has to enact laws that promote cooperation between foreign experts and indigenous companies.
- **Loss of Revenue :** The loss of money is another consequence of places that suffer from brain drain. Income taxes are the primary source of funding for government infrastructure and social services. A large-scale migration reduces tax revenue, which impedes economic expansion.

### **Policy interventions and strategies:**

India should concentrate on a few crucial tactics in order to stop brain drain and keep talented workers:

- **Education and Research :** Putting money into research and higher education establishments would draw experts and improve human capital generally, but this calls for extensive reform and the removal of administrative obstacles.
- **Job Creation:** To lessen the motivation for migration, programs like "Skill India" and "Made in India" seek to create opportunities in high-skilled industries. Their success hinges on how well they are implemented and how well training is matched to industry demands.
- **Competitive compensation and Career Growth:** You can retain talent and increase productivity by providing higher compensation and possibilities for career progression. Financial limitations, however, may make it more difficult for the government to match private sector pay.
- **Foreign Institutes in India:** Encouraging international universities to establish campuses in India might help Indian students get access to top-notch education without requiring them to travel abroad. This might lessen the brain drain and increase international students' interest in studying in India.

**Example:** An Australian university and Gujarat International Finance Tec-City (GIFT City) are planning to open campuses shortly.

- **Entrepreneurship:** Fostering a startup-friendly environment encourages people to develop locally, increasing competitiveness and employment generation. This necessitates lowering administrative obstacles and enhancing financing accessibility.
- **Improving Public Services:** Improving infrastructure, healthcare, and education improves life expectancy and deters talented workers from leaving the country. For equal growth across regions, structural improvements and long-term investment are necessary.
- Creating a safe environment for women in offices, colleges, buildings, public places etc. Strict anti-harassment regulations, increased monitoring, well-lit public spaces, gender-sensitization initiatives, and easily available reporting channels are all necessary to provide a secure atmosphere for women in workplaces, educational institutions, and public spaces. Security and inclusion may be improved by programs like the \*POSH Act\* in India and safety assessments in urban planning.

### Statistics and data:

Domestically, India faces challenges which can be the reasons for increasing abroad migration.

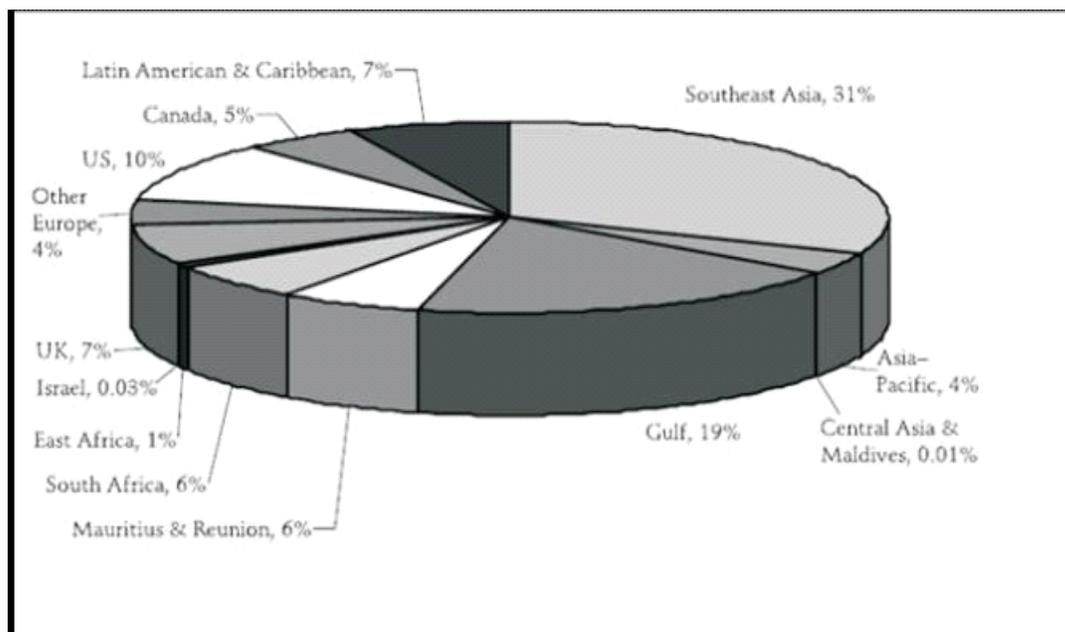
- The **International Labor Organization's Global Pay Report (2022–2023)** highlighted a -0.2% decrease in real earnings in 2021, attributed to COVID-19 and inflation.
- In the **Women, Peace, and Security Index 2023**, India ranked 128th out of 177 countries, showing ongoing issues regarding women's safety and participation.
- Environmentally, India ranked 176th out of 180 in the **2024 Environmental Performance Index** due to reliance on coal and poor regulations.
- Additionally, the **Global Gender Gap Report 2023** placed India 127th out of 146, reflecting persistent gender inequality in various domains, which leads to increasing migration.

**Table-1: Stocks of immigrants and emigrants, India, 2020**

<b>Number of Indian emigrants abroad of which:</b>	<b>17,869,500</b>
Percentage of total population	1.27%
Percentage of women	34.3%
United Arab Emirates	3,471,300
United States	2,723,800
Saudi Arabia	2,502,300
Pakistan	1,597,100
Oman	1,375,700

**Source:** United Nations Global Migration Database

Table-2 : Global overview on Indian migration-Percentage Distribution of NRIs and PIOs by Region



Source: ICWA, Report of the High-Level Committee on the Indian Diaspora, New Delhi: Indian Council of World Affairs, 2001.

The amount of people leaving India for other nations including the United Arab Emirates, the United States, Saudi Arabia, Pakistan, and Oman is indicated by **Table 1** statistics, demonstrating their higher level of life. We might draw the conclusion that a smaller proportion of women than men relocate overseas, demonstrating the dominance of men in Indian culture. In addition, major factors may be higher education, marriages, work, style of life, and employment. Therefore, in order to lessen the issue of brain drain, India should implement the same kinds of laws and regulations that other nations do to ensure that people feel free from discrimination and can afford a higher level of living. **Table 2**, on the other hand, indicates the proportion of Indians who left India to move abroad in pursuit of better employment prospects or various other factors.

The information in **table 3** offers a thorough picture of both forced and voluntary migration patterns. The numbers show the scope of global migration, the characteristics of migrants, and the financial effects on the sending and receiving nations. They draw attention to important areas that should be taken into account when formulating policy, notably those that deal with helping migrants, refugees, and their families, facilitating remittances, and overcoming obstacles in the migration process.

Table-3:

Category	Total value	Source
<b>Immigration &amp; emigration</b>		
Total number of international migrants at mid-year 2020	4.9 million	UN DESA, 2020
International migrant stock as a percentage of the total population at mid-year 2020	0.4 %	UN DESA, 2020
Total number of emigrants at mid-year 2020	17.9 million	UN DESA, 2020
Net migration (immigrants minus emigrants) in the 5 years prior to 2019	2.7 million	UN DESA, 2019
Difference in the share of migrants in the total population between 2000 and 2020	0.3	UN DESA, 2020
Share of female migrants in the international migrant stock at mid-year 2020	53.4 %	UN DESA, 2020
Share of international migrants 19 years and younger residing in the country/region at mid-year 2020	7.7 %	UN DESA, 2020
Share of international migrants 65 years and older residing in the country/region at mid-year 2020	21.6 %	UN DESA, 2020
<b>Forced Migration</b>		
Total number of refugees in host country, end of 2021	195,400	UNHCR, 2021
Total number of refugees by country of origin, end of 2021	120,400	UNHCR, 2021
<b>Development</b>		
Personal remittances received (as % of GDP) in 2021	3.1 %	World Bank, 2021
Average cost of sending remittances from the country (in % of 200 USD) in 2021	3 %	World Bank, 2021

Source: IOM–GMDAC database.

## Conclusion

The figures above suggest that improving India's performance is necessary to mitigate the effects of brain drain. This research includes a discussion of the problems associated with brain drain and its effects on the Indian economy, as well as an analysis of statistics pertaining to the number of migrants abroad and potential solutions. Overall, this study explains the migration pattern in India due to various factors and the data shows the increasing number of migrations to the other countries as the other countries have better facilities and better standard of living which also includes forced migration.

To keep talent, proactive measures like raising living conditions, creating jobs, boosting higher education, and providing competitive pay are crucial. Policies that encourage cooperation between foreign specialists and domestic businesses might also lessen the negative consequences of brain drain. It is imperative to tackle these concerns in order to maintain India's sustainable economic growth over the long run and prevent the demographic dividend from turning into a demographic burden. Inaction might make the disparities already there worse and obstruct India's economic development.

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# The Role of Demographic Transition and Gender Equality in Shaping India's Economic Future: Insights for Viksit Bharat 2047

Vandana Singh<sup>1</sup> & Dr Vibha Joshi<sup>2</sup>

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## ABSTRACT

*India is currently in the third stage of demographic transition, characterised by low mortality rates and declining fertility rates, coupled with a large and growing youth population. This demographic shift presents an opportunity to harness the potential of India's youth through skill development, which can lead to efficient resource utilization and increased economic activity, positioning India on the path to becoming a developed nation. Promoting economic justice and rights for women, and closing gender gaps in the workforce, are essential to achieving the 2030 Sustainable Development Goals and the Viksit Bharat 2047 vision.*

*The study underscores the transformative power of women's economic empowerment. Not only does it enhance economic diversification, but it also contributes to income equality and shared prosperity. By closing gender gaps, India could potentially achieve an estimated global economic boost of USD 5 trillion, a testament to the inspiring potential of women's economic empowerment in India's economy.*

*The study is based on secondary data from sources such as the Press Information Bureau, the International Monetary Fund, and various government websites. By 2036, the population is expected to be more feminized. Despite this, India ranks 129th out of 146 countries in the World Economic Forum's Gender Gap Report 2024. However, enhancing gender equality in the workplace is crucial for driving economic growth and improving social conditions. Effective policies should focus on increasing female participation in the labour force, reducing unpaid labour, and promoting equitable pay. These measures, if put into action, will facilitate skill development, human capital formation, and overall economic growth by reducing poverty and inequality while improving living standards.*

**Keywords:** *Demographic Transition, Gender Equality, Economic Growth, Skill Development, Sustainable Development*

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## Introduction

Demographic transition is used to describe and predict the future population of an any area, it refers to the complex phenomena of reduced fertility levels; and erosion of correlation between resources and fertility in populations undergoing significant societal changes. India is in the third stage of demographic transition with low mortality rate and declining fertility rate in upcoming years with a high number of youth population. Ministry of statistics and program implementation, Government of India released the 25<sup>th</sup> issue of its publication titled “Women and Men in India 2023”; The report show a holistic view of situation of men and women in India in the field of education, health, participation in economy and participation in decision making etc. The report suggested that in the upcoming years by 2036 population of India is expected to reach 152.2 crores with a slightly improved female percentage of 48.8% as compared to 48.5% in 2011. Proportion of population underage of 15 years is expected to decline from 2011 to 2036 due to declining fertility rates, that means declining in the issue of dependent population in country while there is an increase in the population above 60 yrs of age. India’s population in 2036 is expected to be more feminine in nature as compared to the 2011 population. It is expected to improve in sex ratio from 943 in 2011 to 952 by 2036, This highlights a positive trend in gender equality. In different age groups ratio of gender gap will continuously decline in this situation promoting gender equality in social as well as economic sector will leads to higher economic growth in the country. While limiting the participation of females in economic activities have a negative impact on economic growth. The female labor forces participation rate was recorded at 24.4% after independence in 1955. In 1972 female labor force participation rate has increased to 33% after which it steadily declines and failed to lowest level in 2017 at 23%. The gentle gap in Indian labor polls attributed largely to conservative social norms and due to boot demand side and supply side factors remains the most persistent paradox of recent decades. The exclusion of women from paid work has resulted in perpetual gender inequality in economy. There has however been an improvement in the female Labor force participation rate in the last 6 years and new trends are emerging. Data from Periodic labor force survey 2022-23 indicates that FLFPR is at 37% and increase of 4.2 percentage from last survey of 2021-22. Having a large youth population there is opportunity with India to provide skill to its youth population that will promote efficient utilization of resources and increase economic activities in the country which will helpful to become India as a developed nation. Also promoting women’s economic justice and rights in the economy and closing gender gaps in the world of work are the key to achieving the 2030 agenda for sustainable development and achieving the sustainable development goals. Women’s economic empowerment increases economic diversification and income equality for shared prosperity.

## Review of Literature

***Demographic dividend, gender equality and economic growth: The case of Cabo Verde prepared by Heloisa Marone August 2016-*** This study analyzes Cabo Wade’s demographic transition from the perspective of gender equality. It also discusses some policies option that may contribute to attaining the potential economic and social dividend from the transition. As Cabo Verde’s demographic transition slowed the size and potential of demographic dividends post- 2015 will

drop sharply due to mechanical reasons that is to see the slowdown of the increase in proportion of working age population. Henceforth it will largely be determined by the growth in productivity and the growth in effective participation rate of the working age population in the labor market. In this context efforts towards closing gender gaps in combination with efforts towards making economic growth more inclusive will be increasingly important in enhancing otherwise diminished growth dynamics reducing poverty and improving lives of all women and men.

***Demographic transition and change in women's life by Sonalde Desai, article in The Hindu, July 2023-*** This article discusses about world population day (11 July) as a time to look at how India's demographic journey has changed the life of its citizens, particularly its women. India's population grew from 340 million at independence to 1.4 billion. This growth was fueled by gift of life that residing starvation improved public health and medical miracles brought to India.

***Demographic transition and opportunity for India, article February 2023-*** This article discusses with the challenges associated with India's demographic dividend that is low female labor force participation. India's labor force is constrained by absence of women from workforce. As per survey 2020-21, female labor workforce participation stands at 25.1%. High dropout rate while overall 95% of Indias children attend primary schools, the national family health survey confirmed that inadequate infrastructure in government school, malnutrition and scarcity of trained teachers have resulted in poor learning outcomes and high dropout ratios. Lack of employment opportunities as a large and growing working age population India job market is not able to generate enough job to meet the demand of this expanding workforce this result in high rates of underemployment and unemployment. To overcome all this challenges India needs to address gender inequality in education and employment including improving access to education and employment opportunities for women. India needs to encourage entrepreneurship and innovation particularly among youth to create job opportunity and contribute to economic growth.

### **Objective:**

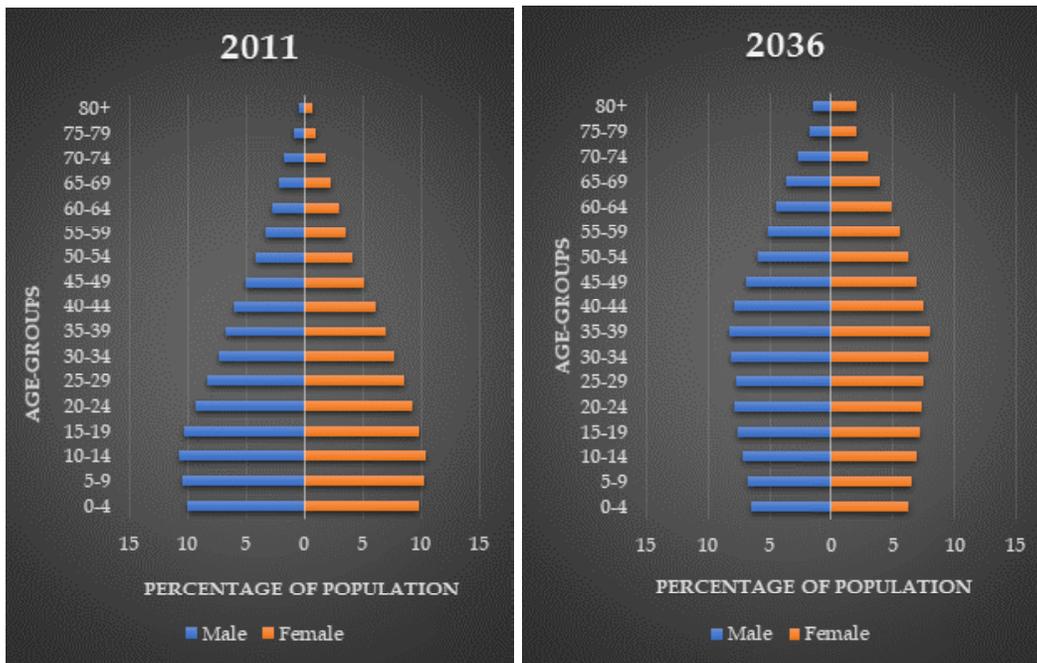
To analyze how demographic transition and promoting gender equality at workplace will helpful in economic growth of India.

To understand the role of women in Viksit Bharat at 2047.

### **Role of demographic transition in economic growth**

According to the UN population division, the population growth of India has been a major focus, with projection of reaching 1.7 billion by 2065 underscoring the ongoing transition of demographic dividend in India. National family health survey 5<sup>th</sup> report data govt projected the total fertility rate for 2021 to 2025 will be 1.94 and 2031 to 2035 it will be 1.73. It suggested that India population may stabilize earlier than 2065. And economic survey of 2018-19 says that dividend would peak around 2041 when the working age population in the country would be 59% of the India's population. With such a huge youth population India can rise as economic superpower with high potential of workforce in upcoming decades. Increase in labor force that enhance the productivity of the economy and rise in women's workforce that naturally accompanies declined fertility and which can be new source of growth.

In this stage upskilling and inclusion of women will be crucial in reaching the nation’s economic potential. According to international labor organization estimates only 24% of women participate in the workforce, getting more women entered in workforce will be pivotal for future growth because in the upcoming years India’s population will be more feminine in nature. To make nation economically strong it is important to promote the manufacturing sector in the country by providing high skilled to this youth population as per industrial needs.



Source: Ministry of Statistics & Programme Implementation **Release of Publication “Women and Men in India 2023”** Posted On: 12 AUG 2024 5:31PM by PIB Delhi

In diagram we can see population of India in different age group in 2011. This triangular shape pyramid represents that most of the population in youth age with high fertility rate and higher number of children population in the country having a large dependent population in this decade with unbalanced sex ratio. While the other diagram showing percentage of population in different age group during 2036 have a decline in fertility rate and rising population in different age group with a large number of populations in 14-50 age group can see as an opportunity for India. This bell shaped structure show that sex ratio in upcoming years will be in favour of females.

### Role of Women in Economic Growth

Gender equality is a crucial in leveraging the benefits of demographic transition. Historically women in India have faced significant barriers to education and employment. According to World Economic Forum Gender Gap report 2024 India ranked 129 out of 146 countries in gender equality index 2024. Improvements in gender equality can enhance the economy growth by increasing female

participation in labour force and improving productivity. Increasing female participation in Labor force help boost economic output and GDP growth. Women contribute significantly in agriculture manufacturing and service sector. Female entrepreneurs drive innovation and job creation their business contribute to economic diversification and can leads to increased economic resilience. As well as women involvement in healthcare and family planning improve overall societal health, productivity and reduces the economic strains.

Despite this labour force participation rate for women in India remains relatively low as compared to global average. The female labour force participation rate in India is around 20 to 25% in contrast global average for female labour force participation ranges between 45 to 55%. This means in India out of four women in working age there is only one woman who is either employed or actively seeking participation in economic activities.

### Analysing a worker population ratio in India:

Survey period	Rural			Urban			Rural+Urban		
	male	female	person	male	female	person	male	female	person
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2022-23	80.2	41.5	60.8	74.5	25.4	50.4	78.5	37.0	57.9
2021-22	78.2	36.6	57.5	74.7	23.8	49.7	77.2	32.8	55.2
2020-21	78.1	36.5	57.4	74.6	23.2	49.1	77.0	32.5	54.9
2019-20	77.9	33.0	55.5	74.6	23.3	49.3	76.8	30.0	53.5
2018-19	76.4	26.4	51.5	73.7	20.4	47.5	75.5	24.5	50.2
2017 18	76.4	24.6	50.7	74.5	20.4	47.6	75.8	23.3	49.8

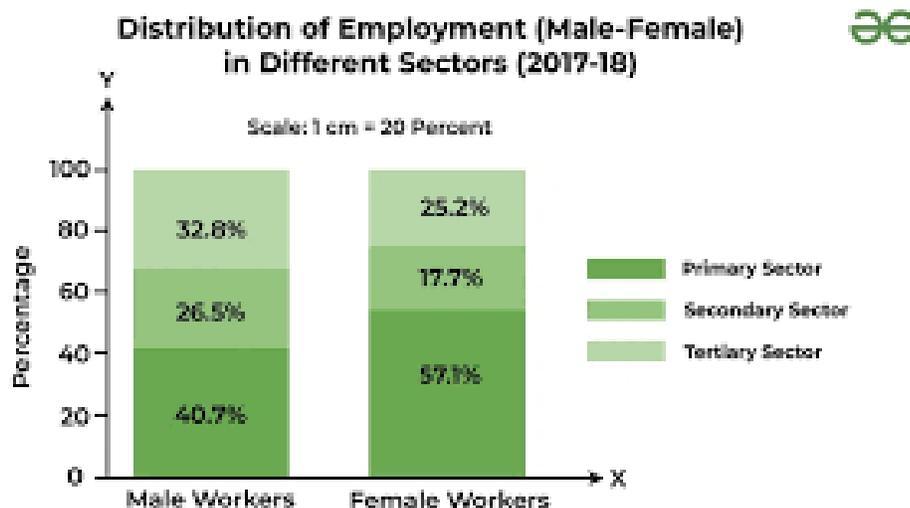
**Source:** Press information Bureau, Ministry of statistics and program implementation: Periodic Labor force survey annual report 2022-2023

Above table shows that labour force participation rate has increased from 50.7% in 2017 to 18 to 60.8% in 2022 to 23 in rural areas While in urban areas liberal force participation rate has increased from 47.6% to 50.4% and overall increase from 49.8% to 57.9% in 2022 23 as per press information bureau report released by Ministry of statistics and program implementation. But there is a little change in female labour force participation rate it has increased from 23 .3% in 2017-18 to 37 percent in 2022-23 only. Instead of male labour force participation rate increased from 75.8% in 2017 to 78.5% in 2022-23.

This shows a major gap between male and female labour force participation rate. Female has lacking behind in the participation in economic activities in comparison to males this saw a major

gender gap in employment in India. Due to this gender gap India is unable to utilize its human resources at its full potential and in near future if gender gaps will not fulfil in India, Country will unable to take advantage of its demographic transition having used female use population in the country. Without participation in the economic activities and having a less productivity these use population will become burden for country. And India will lose a chance to become economically developed nation.

**Analysing Distribution of employment in different sectors of economy:**



Source: <https://www.geeksforgeeks.org/distribution-of-employment/>

The above bar diagram showed that distribution of employment on bases of gender in different sectors of economy in 2017-18. In primary sector about 40.7% male population are engaged while there is 57.1% female population engaged in primary sector. While in other two sector 26.5% and 32.8% males are in secondary sector and tertiary sector and in case of female 70.7% and 25.2% females are in secondary sector and tertiary sector.

This saw a major gender gap in different sector of economy because more than 50% of the female worker are engaged in low paying jobs in a primary sector because of that their standard of living are low and they are more prone to poverty and inequality in society.

**Expected growth in GDP:** An increase in women’s participation in workforce can have a significant positive impact on India’s GDP. India is on cups of a demographic dividend we are working age population is higher relative to dependence if women’s who make up nearly half of the population participate more fully the country can better capitalize on this advantage. Enhancing gender equality in workforce can have positive social consequences and estimates from various sources tell that India could increase its GDP by up to 27% by 2025 if it achieved gender parity in labour force participation. This can translate to trillions of dollars in additional economic output.

## **Challenges to Address**

To take advantage of this demographic transition by promoting gender equality, some major challenges need to be addressed. The first is to address these structural barriers, as India must address challenges such as societal norms, lack of childcare support, wage gap, and workplace discrimination that prevent women from fully participating in the workforce.

## **Policies Intervention**

The Need to support women's education, entrepreneurship and access to finance as well as work life balance, initiative like maternity leave and flexible work hours will be crucial. Some of the running schemes are-

Maternity benefit act 2017 with the aim to improve working conditions for women by extending maternity leave from 12 weeks to 26 weeks which will help to balance women their work and family responsibility by continuing their workout participation. Second is Mahila Shakti Keane with objective to empower ruler women through community participation and skill development programs. Third is Pradhan Mantri Mudra Yojna with the aim to provide financial support to women entrepreneurs by offering collateral free loans, This will encourage women to start and group businesses. National Crunch scheme with aim to provide affordable childcare for working women's specially in unorganized sector. Beti Bachao Beti Padhao scheme to improve status of girl child through education and creating a pathway for future workforce participation.

## **Women and Viksit Bharat at 2047**

The aim of Viksit Bharat is also connected deeply with empowerment and active participation of women across all the sector. Women's empowerment is essential for economic growth social development and achieving an inclusive society. In vision of developed India women's roles are multi-faceted spanning from economic participation to leadership in governance education and social reforms. Increased work force participation, entrepreneurship, educated workforce, Healthcare access, nutrition and sanitation, gender equality, reducing gender-based violence, political participation of women, corporate leadership role of women, women in science, technology, engineering and mathematics field not only contribute to GDP but also create a more just equitable and sustainable country.

## **Conclusion and Highlights of the Study**

This demographic transition can create favourable condition for economic development but the benefits depend on how well policies and infrastructure adopt to changing demographic realities. As population grow during the early stages the labour force will expand and have a more worker that will leads to increase in productivity. With declining birth rate in the later stages dependency ratio of population will improve this result in higher saving and investment rates as fewer resources are needed for dependent children. It will also lead to increase in urbanization that can promote the industrialization and economic development in the country urban areas will offer more job opportunities and became hub for economic activities. As society move toward demographic transition there will be shift from agriculture to industrial require manufacturing sector this leads to decline in

unemployment rate. Higher education and skill level can also be promoted because with fewer children in family resources can be concentrated on improving the education and skill that will leads to a more educated workforce and promote innovation in the country.

The major highlights of the studies is that India's offer demographic transition with a high number of female population in country and this opportunity can utilize only by promoting gender equality at workplace. Historically condition of women in India have always vulnerable and their economic participation was also low at present India still rank lower in gender equality index and participation of women in different sector of economy is also very poor in comparison to male. If their participation will increase the GDP of country have a positive impact due to increasing workforce, increasing productivity, innovation in different fields and better standard of living in the country with reducing poverty and income inequalities. Overall study concludes that limiting female participation in labour forces will leads to a significant loss of opportunities for India in its aim of Viksit Bharat at 2047. If India wants to achieve its aim it needs to utilize its youth population promoting gender equality in every aspect like economic, social and political.

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# Understanding the Dynamics of Migration from Uttar Pradesh, India

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## ABSTRACT

*The current study examines the different dimensions and determinants of out migration from Uttar Pradesh for the year 2020-21, drawing upon secondary data sourced from the Multiple Indicator Survey (MIS) of NSS. The study employs a logistic regression model to analyse the factors influencing out-migration. The research found that while female migration predominantly occurs in the rural areas within the state (intra-state), male migration tends towards urban areas within and mostly outside Uttar Pradesh (inter-state). Notably, employment emerges as the primary reason for male out migration, whereas marriage serves as the principal motivator for female migration. Maharashtra, Delhi, Gujarat, and Punjab emerge as the primary destinations for migrants from Uttar Pradesh seeking employment opportunities. While males predominantly engaged in manufacturing, wholesale & retail trade, and construction activities, while agriculture remains the dominant sector for females. Furthermore, a majority of individuals witness an increase in earnings during the post-migration. The study identifies age, gender, marital status, level of education, social affinity, religion, family size, landholding size, and debt status as the major determinants of migration*

**Keywords-** Out-migration, employment, earning, determinants, logistic, MIS, Uttar Pradesh

## 1. Introduction

Migration significantly impacts the social and economic lives of migrants and their families (Beguy, Bocquir & Zulu, 2010). Most migrants come from rural areas where they were previously engaged in farm activities. The migration of males from these areas often leads to the ‘feminization’ of agriculture, as women take on greater responsibilities in farming (Singh N P et al., 2011). Before migrating, the majority of them are already in a state of poverty and vulnerability (Singh N P et al., 2011; Srivastava R, 2020; Rajan S I et al., 2020). Their migration stems from the absence of job prospects, limited employment opportunities, and prevailing poverty (Kundu A & Sarangi N, 2007; Singh N P, et al. 2011; Srivastava R, 2020; Rajan S I et al. 2020). Additionally, migration is often a

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‘risk diversification strategy,’ providing an additional income source for families (Deshingker 2010; Deshingker & Grim, 2005; Lambert, 1994). Upon arrival at their destinations, migrant workers often find employment in informal sectors, semi-skilled jobs, or small self-employed roles (Srivastava R 2020; Rajan S I et al. 2020; Aggrawal V et al. 2020). Through employment, they earn income, which they subsequently send back to their families in the form of remittances. Remittances sent by migrants are primarily used to meet subsistence needs, with any surplus being invested by the household (Parida J K & Madheswaran S, 2011; Tumble C, 2011; Irdam D, 2012). In the same vein, International migration has been linked to poverty reduction, knowledge transfers, development instruments, and attracting skilled expatriates (Black R & Sward J, 2009). Migration also has several positive impacts, such as increased family happiness, improved children’s education and health (Singh N P et al. 2011; Irdam D, 2012; Rajan S I & Bhagat R B, 2021).

Studies on internal migration within India have highlighted the role of economic disparities between regions as a primary driver, with individuals and families often moving from less developed areas to urban centres or more prosperous regions in search of livelihood opportunities (Desai & Banerji, 2008; Deshingkar & Akter, 2009). The extent of this disparity fluctuates across different states in India. Uttar Pradesh, with its large population, is the second poorest state in India after Bihar in terms of per capita income and has significant regional imbalances. These socio-economic factors contribute to U.P. being one of the largest migrant-sending states in India (NSSO 64<sup>th</sup>; Migration Census 2011). Among the states witnessing substantial migratory flows, Uttar Pradesh stands out as a prominent source region, contributing significantly to both intra- and inter-state migration streams. Internal migration within Uttar Pradesh is characterized by significant movements from rural to urban areas, driven by factors such as agrarian distress, limited employment opportunities in rural sectors, and the growth of urban centers (Gaiha et al., 2012; Deshingkar & Akter, 2009). Additionally, seasonal or circular migration, particularly in the agricultural sector, is prevalent, with individuals moving temporarily to other states for work during specific seasons and returning to their place of origin thereafter (Singh & Sood, 2017). Economic factors emerge as pivotal drivers of migration from Uttar Pradesh. Push factors such as poverty, unemployment, and inadequate infrastructure in rural areas impel individuals and families to seek better prospects elsewhere (Gaiha et al., 2012). Pull factors, including higher wages, industrialization, and urban amenities, attract migrants to destination areas within and outside the state (Deshingkar & Akter, 2009). Social networks and kinship ties also play a crucial role in facilitating migration by providing migrants with information, resources, and support in the destination areas (Czaika & Haas, 2013). As a result of Migration from Uttar Pradesh engenders far-reaching consequences for both sending and receiving areas. In the sending areas, migration can lead to demographic shifts, changes in labor dynamics, and alterations in social structures. It may also exacerbate agrarian distress and contribute to the feminization of agriculture as men migrate for work (Desai & Banerji, 2008). In receiving areas, migrants contribute to the labor force, propel economic growth, and enrich cultural diversity. However, migration also poses challenges such as strain on urban infrastructure, housing, and social services (Keshri et al., 2016).

Existing studies often focus on specific aspects of migration, such as labor migration i.e. rural-urban migration, thereby overlooking the broader dynamics and interconnectedness of migration patterns within the state. Moreover, there is a lack of comprehensive analyses that integrate various

dimensions of migration from Uttar Pradesh. This research aims to fill these gaps by analysing both in-migration and out-migration levels, with a particular emphasis on out-migration from Uttar Pradesh. It is evident that the majority of migration occurs in search of work. Has migration affected the earning status, either positively or negatively? This has been examined in the current study, which was not addressed in previous research. Additionally, several determining factors that influence migration, such as land size and debt levels, have been included. What factors drive these migration patterns? Additionally, how does out-migration vary across different states from Uttar Pradesh? What types of economic activities do migrants engage in, what is their income status, and what factors influence their decision to migrate?

## 2. Data and Methodology

The study is based on the unit level data obtained from Multiple Indicator Survey (MIS, 2020-21) of the NSS 78<sup>th</sup> round. The MIS contains more detailed information than the PLFS, including data on indebtedness, changes in migrant earning status, and other relevant factors. In the current research “*household member whose last usual place of residence was different from the present place of enumeration was considered as a migrant. The last usual place of residence was referred to be the village/town/country where the household member stayed continuously for 6 months or more before coming to the present village/ town at the place of enumeration*” (MIS report 2023).

The study used a binary logistic regression model to explore the impact of determinant variables on migration from Uttar Pradesh. A binary logistic regression model is a statistical technique used to predict the likelihood of a binary outcome, where the dependent variable has only two possible outcomes (e.g., yes/no, success/failure, presence/absence). It’s particularly useful when the dependent variable is categorical and the independent variables can be continuous, categorical, or both. The logistic regression model estimates the probability of the dependent variable being in one of the two categories based on one or more independent variables. Unlike linear regression, which predicts a continuous outcome, logistic regression predicts the probability of a categorical outcome using a logistic function.

In our current study, we are examining determinants of migration from Uttar Pradesh, with the dependent variable representing whether individuals have migrated from Uttar Pradesh or not. A value of 1 indicates individuals who have migrated from Uttar Pradesh, while a value of 0 indicates those who have not migrated from Uttar Pradesh. The model is explained as –

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \dots + \beta_k X_{ik} + \varepsilon \quad \dots(1)$$

$\beta_0$  represents the intercept or constant term, while  $\beta$  represents the coefficient of the independent variables (age, age squared, gender, social group, marital status, level of education, religion, sector). These variables collectively make up  $X_1$ . The error term, denoted by  $\varepsilon$ , accounts for any unexplained variability in the model. This model is based on the cumulative logistic probability function.

$$P_i = \frac{1}{1 + e^{-Z_i}} \quad \dots(2)$$

$$Z_i = \alpha + \sum_{i=1}^n \beta_i X_i \quad \dots(3)$$

In this investigation, where “e” denotes the base of the natural logarithm and F(Z) signifies the cumulative logistic function, Z encompasses a collection of explanatory variables denoted by X. Pi represents the non-migrant status from Uttar Pradesh (Yi = 0). Employing a similar methodology, we estimate the probability of Yi= 0, indicating the non-migrants, is given by

$$1 - P_i = \frac{1}{1 + e^{Z_i}} \quad \dots(4)$$

Equation (2) is divided by Equation (4), and then simplified to provide the following equation.

$$e^{Z_i} = \frac{P_i}{1 - P_i} = \frac{1 + e^{Z_i}}{1 + e^{-Z_i}} \quad \dots(5)$$

The odds ratio in favour of migrant from Uttar Pradesh, represented by Pi/(1-Pi), signifies the status of migration compared to non-migrants. This ratio quantifies the probability of someone being migrated relative to being non-migrated.

By applying the natural logarithm to Equation 5, we derive the final form of the logit model as follows.

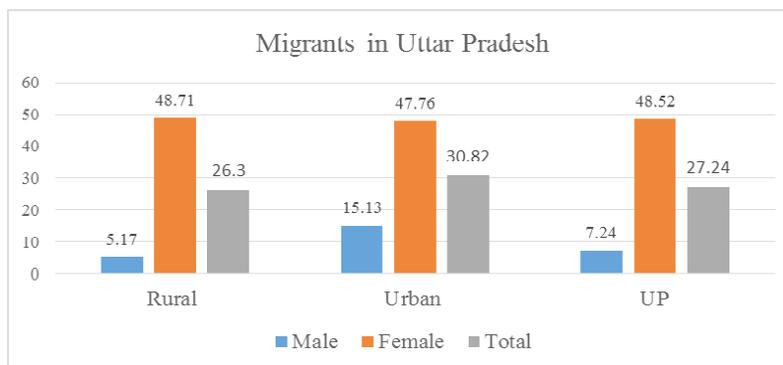
$$L_i = \ln\left(\frac{P_i}{1 - P_i}\right) = Z_i = \alpha + \sum_{i=1}^n \beta_i X_i \quad \dots(6)$$

### 3. Result and Discussion

#### 3.1 Sector and gender distribution of migrants in Uttar Pradesh

Gender distribution among migrants in rural and urban areas is a critical aspect of migration studies, influencing economic dynamics and societal structures. Urban areas attract both men and women for diverse employment opportunities, with women often engaged in informal sectors like domestic work (Chant, 2010). Conversely, rural migration patterns reflect traditional gender roles, with men migrating for urban job prospects while women manage agricultural and household responsibilities (Kothari, 2016). These dynamics shape economic contributions and social dynamics in both settings, highlighting the need for gender-sensitive policies to address vulnerabilities and promote equitable development (UN Women, 2012).

Figure 1- Sector and gender distribution of migrants in Uttar Pradesh



Source: NSS 78<sup>th</sup> round, multiple indicator survey in India 2020-21 unit level data

The figure 1 reveals a significant insights into migrants share in Uttar Pradesh (UP), highlighting the distinctions between rural and urban sectors and the gender distribution among migrants. The overall migration rate in UP is 27.24%, with males accounting for 7.24% and females for a substantial 48.52% with notable differences between rural and urban areas.

In rural areas, the total migration rate is 26.3%. A closer examination of gender distribution reveals a stark contrast: only 5.17% of the migrants are male, whereas a substantial 48.71% are female. This pronounced disparity is largely attributable to social customs, particularly the tradition of women moving to their husbands' homes after marriage. Urban areas exhibit a higher overall migration rate of 30.82%, indicating that almost a third of the urban population has migrated. The gender distribution in urban migration also shows distinct characteristics: 15.13% of urban migrants are male, while 47.76% are female. The higher percentage of male migration in urban areas compared to rural areas underscores the role of economic factors.

In the previous section, we explored the extent of migration share in Uttar Pradesh. Consequently, it's evident that a significant portion of migrants have migrated within the state, while a significant proportion of people have migrated to other states. Thus, the upcoming section will delve into the distribution between those who migrated within Uttar Pradesh and those who migrate to other states, shedding light on their respective shares.

### 3.2 In migration in Uttar Pradesh

The table 1 shows an in-depth view of migration patterns in Uttar Pradesh (UP) by gender and location, categorized into same state (rural and urban), other state (rural and urban), and other countries. Analysing this data reveals significant gender-based differences in migration patterns and motivations. A substantial 77.7% of migrants move within rural areas of UP, primarily driven by female migration due to marriage. Meanwhile, 12.79% came from urban areas within the state. Migration from other states shows 3.46% coming from rural areas and 5.78% from urban areas, highlighting the appeal of out-of-state urban centres for better economic opportunities and living standards. Additionally, 0.28% of migrants come from other countries, indicating a small yet notable trend of pursuing global economic opportunities.

**Table 1- Location of last usual place of residence of migrants in Uttar Pradesh**

Gender	Same sate		Other state		Other country	Total
	Rural	Urban	Rural	Urban		
Male	37.89	22.63	6.16	31.87	1.46	100
Female	84.01	11.22	3.03	1.64	0.09	100
<b>Total</b>	77.7	12.79	3.46	5.78	0.28	100

**Source:** NSS 78th round, multiple indicator survey in India 2020-21 unit level data

For male migrants in Uttar Pradesh, a significant 37.89% of male migrants move from rural areas of UP, indicating that many men find opportunities or reasons to relocate without leaving the rural environment. Another substantial portion, 22.63%, of male migrants move from urban areas within UP. This migration reflects the urban push within the state, where cities and towns offer

better employment prospects, educational facilities, and improved living conditions compared to rural areas. Migration from other states shows notable figures as well. 6.16% of male migrants relocate from rural areas in other states, suggesting cross-state rural migration driven by factors such as agricultural work, regional economic conditions, or kinship ties. More prominently, 31.87% of male migrants move from urban areas in other states. International migration, although the smallest category, involves 1.46% of male migrants coming from abroad.

Female migration patterns in UP are markedly different, dominated by social factors, particularly marriage. An overwhelming 84.01% of female migrants move within rural areas of UP. Additionally, 11.22% of female migrants relocate from urban areas within UP. For migration from other states, 3.03% of female migrants migrate from rural areas, again largely due to marriage. The small percentage reflects fewer cross-state rural marriages or relocations. Even smaller is the percentage of women moving from urban areas in other states, at only 1.64%. International migration among women is minimal, with only 0.09% coming from abroad.

### 3.3 Out migration from Uttar Pradesh

The table 2 detailing out-migration from Uttar Pradesh (UP) by gender and destination reveals distinct patterns in the movement of males and females within the state, to other states, and across rural and urban areas. The combined data offers a comprehensive view of out-migration from Uttar Pradesh. A significant 74.84% of migrants move within rural areas of the state. Meanwhile, 12.31% relocate to urban areas within UP. Interstate migration shows that 9.82% of migrants move to rural areas in other states, while 3.03% relocate to urban areas in other states.

**Table 2- Location of last usual place of residence of migrants from Uttar Pradesh**

Gender	Same state		Other state		Total
	Rural	Urban	Rural	Urban	
Male	34.67	20.7	33.58	11.05	100
Female	81.61	10.9	5.81	1.68	100
<b>Total</b>	74.84	12.31	9.82	3.03	100

Source: NSS 78<sup>th</sup> round, multiple indicator survey in India 2020-21 unit level data

The data on male migrants from Uttar Pradesh shows a balanced distribution across destinations. Specifically, 34.67% move within rural areas of UP, while 20.7% relocate to urban areas within the state. Additionally, 33.58% migrate to rural areas in other states, and 11.05% move to urban areas in other states. This distribution reflects a blend of localized and interstate migration, driven by diverse economic opportunities and personal motivations.

Additionally, female migration patterns in Uttar Pradesh are markedly different, primarily influenced by social factors such as marriage. A significant 81.61% of female migrants move within rural areas of UP, while 10.9% relocate to urban areas within the state. Additionally, 5.81% move to rural areas in other states, and only 1.68% relocate to urban areas in other states. This distribution underscores the dominant role of marriage in driving female migration and the limited economic migration among women.

### 3.4 Reason for migration from Uttar Pradesh

The current section provides a comprehensive breakdown of the reasons for migration from Uttar Pradesh (UP), categorized by gender and rural-urban destinations. It offers valuable insights into the diverse motivations driving migration and sheds light on the socio-economic factors influencing migration patterns in the region. Clear gender disparities are evident in migration patterns. Males are more likely to migrate for employment-related reasons, indicating a greater focus on economic opportunities and career advancement. In contrast, females predominantly migrate due to marriage, reflecting traditional gender roles and societal expectations.

The table 3 demonstrate that migration for employment-related purposes constitutes a significant portion of overall migration from Uttar Pradesh. This includes categories such as Search of employment and Better employment. Search of employment reflects individuals actively seeking job opportunities, with 19.45% of males and a minimal 0.21% of females migrating for this reason. On the other hand, “Better employment” accounts for 23.53% of male migrants and only 0.11% of female migrants. These disparities indicate a pronounced gender gap in access to employment opportunities, with males more inclined to migrate for career advancement and economic betterment.

**Table 3: Reason for migration from Uttar Pradesh (out-migrants)**

Reason for Migration	Total			Rural		Urban	
	Total	Male	Female	Male	Female	Male	Female
Search of employment	2.99	19.45	0.21	11.84	0.09	23.27	0.61
Better employment	3.49	23.53	0.11	18.87	0.02	25.87	0.4
Business	0.25	1.65	0.01	1.44	0.01	1.76	0.02
Take up employment	0.97	6.29	0.08	4.28	0.01	7.3	0.31
Transfer of service/ contract	0.58	3.7	0.05	4.2	0.01	3.44	0.18
Proximity to place of work	0.21	1.21	0.04	1.38	0.02	1.13	0.09
Studies	1.21	5.78	0.44	6.84	0.23	5.25	1.13
Marriage	79.61	8.23	91.64	20.75	96.6	1.94	75.28
Social/political problems	0.26	0.55	0.21	1.36	0.22	0.14	0.18
Development project	0.02	0.11	0	0.3	0.01	0.02	0
Acquisition of own house	0.43	2.01	0.17	0.76	0.04	2.63	0.57
Insufficient land holding	0.45	1.79	0.23	1.45	0.05	1.95	0.8
Health care	0.12	0.62	0.04	1.62	0.02	0.12	0.12
Post retirement	0.19	1.32	0	1.98	0	0.99	0.02
Natural disaster	0.04	0.2	0.01	0.54	0.01	0.03	0
With Earning member	7.63	19.08	5.7	15.3	1.72	20.98	18.84
Others	1.55	4.49	1.05	7.09	0.93	3.18	1.44
Total	100	100	100	100	100	100	100

**Source:** NSS 78<sup>th</sup> round, multiple indicator survey in India 2020-21 unit level data

Marriage emerges as the predominant reason for migration, especially among females. A staggering 91.64% of female migrants move due to marital obligations, reflecting deeply ingrained cultural norms and familial expectations. Conversely, only 8.23% of male migrants migrate for marriage.

Migration for educational pursuits, categorized under “Studies,” accounts for a notable percentage, especially among males (5.78%). Conversely, only 0.44% of females are migrate for the study purpose from the Uttar Pradesh. This reflects the aspiration for better learning opportunities and skill development, emphasizing the role of education in socio-economic mobility and personal growth. Migration with earning members of the family emerges as another significant driver of migration, with males (19.08%) far outnumbering females (5.7%) from Uttar Pradesh.

When considering migration by sector, it’s apparent that in both rural and urban areas, male migration predominantly stems from employment-related motives. Conversely, female migration, whether in rural or urban settings, primarily occurs for marriage purposes. However, the proportion of migrating individuals with earning members is notably higher in urban areas, particularly among females (18.84%).

### **3.5 State/UT wise migration from UP for employment purpose**

The preceding section highlighted that the primary reason for migration from Uttar Pradesh is employment-related concerns, particularly among males, while females tend to migrate predominantly for marriage purposes. Simultaneously, the analysis revealed that within the total male migration originating from Uttar Pradesh, 44.6% stems from other states. Thus, it becomes imperative to ascertain the destinations where individuals are migrating for employment opportunities.

The table 4 presents a comprehensive overview of state-wise migration from Uttar Pradesh (UP) for employment purposes, categorized by gender. Result of the table denotes the percentage of migrants from UP who relocate to a particular state for employment, with further distinctions made between male and female migrants. This data provides valuable insights into the migration patterns and preferences of individuals from UP seeking employment opportunities across different states in India.

The data reveals a wide geographic spread of destination states where migrants from Uttar Pradesh seek employment. Notably, Maharashtra (31.73%) emerges as the top destination, attracting a significant percentage of migrants, both male and female. This can be attributed to the robust industrial and economic landscape of Maharashtra, particularly in cities like Mumbai and Pune, which offer diverse job opportunities across sectors. Delhi (18.88%) follows closely, with a substantial influx of migrants from UP, highlighting the magnetism of the national capital as a hub for employment seekers. Other states like Gujarat (11.43%), Punjab (8.85%) and Haryana (5.4%) also draw a considerable number of migrants from UP due to their thriving economies and industrial sectors.

Table 4- State/UT wise migration from UP for employment purpose

State	Total	Male	Female
Jammu Kashmir	0.39	0.35	1.32
Himachal	1.69	1.72	0.93
Punjab	8.85	8.78	10.55
Chandigarh	0.94	0.93	1.14
Uttarakhand	4.16	4.32	0.04
Haryana	5.4	5.17	11.28
Delhi	18.88	18.77	21.7
Rajasthan	1.91	1.95	0.92
Bihar	1.1	1.15	0
Nagaland	0.04	0.04	0
Meghalaya	0	0	0.11
Assam	0.01	0.01	0
West Bengal	2.29	2.35	0.87
Jharkhand	1.25	1.26	0.84
Odisha	0.52	0.54	0
Chhattisgarh	1.48	1.33	5.18
Madhya Pradesh	1.27	1.3	0.66
Gujarat	11.43	11.63	6.24
Daman & Diu	0.73	0.75	0.25
Dadra Nagar	1.14	1.17	0.22
Maharashtra	31.73	31.97	25.63
Andhra Pradesh	0.48	0.5	0
Karnataka	1.54	1.12	12.13
Goa	0.56	0.58	0
Lakshadweep	0	0	0
Kerala	0.82	0.85	0
Tamil Nadu	0.58	0.6	0
Andaman Nicobar	0.03	0.03	0
Telangana	0.81	0.84	0
Total	100	100	100

Source: NSS 78<sup>th</sup> round, multiple indicator survey in India 2020-21 unit level data

Gender disparities are evident in migration patterns, with males constituting a higher percentage of migrants compared to females in most destination states. However, there are exceptions such as Haryana (11.28%) and Karnataka (12.13%), where the percentage of female migrants surpasses that of males. This suggests gender-specific employment opportunities or social factors influencing migration decisions. Overall, males dominate migration numbers, reflecting a broader trend of male-dominated labor migration from UP.

While traditional economic centres like Delhi and Maharashtra continue to attract a significant share of migrants, there are emerging employment hubs that are gaining traction among migrants from UP. States like Karnataka, with its booming IT sector and urban centres like Bengaluru, are increasingly becoming preferred destinations for job seekers. Additionally, Gujarat's industrial

proress and Haryana's industrial clusters also draw migrants seeking employment opportunities. The choice of destination state may also be influenced by sectoral preferences, with migrants gravitating towards states with thriving sectors such as manufacturing, services, and information technology.

Migrants from Uttar Pradesh have significantly contributed to the economies of Maharashtra, Delhi, and Gujarat, particularly in sectors such as manufacturing, wholesale and retail trade, construction, and transportation. Their presence has bolstered these industries, providing essential labor and expertise that drives growth and sustains operations. In Maharashtra, for instance, Uttar Pradesh migrants are integral to the manufacturing sector's workforce, supporting diverse production activities. In Delhi, they play crucial roles in the manufacturing, transportations, contributing to the region's vibrant commerce and market dynamics. Similarly, in Gujarat, migrants from Uttar Pradesh are pivotal in the manufacturing and wholesale and retail trade sectors construction, helping to fuel infrastructure development and logistical operations across the state. Their migration reflects a vital economic interdependence between regions, where their skills and labor are instrumental in shaping local economies and meeting industrial demands.

## Conclusion

The study delved into the diverse facets of migration from Uttar Pradesh, revealing significant levels of both in-migration and out-migration within the state. Notably, migration predominantly originates from rural and urban areas within Uttar Pradesh, particularly among females, whereas males tend to migrate to urban areas in other states of India. An interesting finding is that the majority of male migrants relocate due to employment-related issues, whereas females primarily migrate for marriage within Uttar Pradesh. The top destinations for migrants from Uttar Pradesh seeking employment are Maharashtra, Delhi, and Gujarat. Post-migration, a significant proportion of males find engagement in Manufacturing, Wholesale & Retail Trade, and Construction, while females are predominantly involved in Agriculture, Forestry & Fishing. Furthermore, it's noteworthy that a considerable number of migrants from Uttar Pradesh were not earning members before migration, suggesting that migration often serves as a conduit to improved economic status. Additionally, individuals who were earning members before migration generally experience an increase in their earning status post-migration.

Analysis of the major determinants of migration indicates that certain variables exhibit significant positive associations with migration, while others show negative associations. Migration tends to increase with age up to a certain point, beyond which it decreases. Gender also emerges as a major determinant, with the probability of migration significantly higher for females compared to males. Moreover, migration probability is lower among individuals with lower levels of education but increases with higher levels of education. Additionally, the probability of migration is positively correlated with increasing land size. The study underscores the intricate dynamics of migration from Uttar Pradesh, shaped by a myriad of socio-economic factors. Understanding these dynamics is paramount for policymakers and stakeholders to formulate effective strategies aimed at addressing the diverse needs of migrants and harnessing the potential benefits of migration for both individuals and communities.

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# Transforming Societies: The Interplay between Demographic Transition, Education and Population in Achieving Sustainable Development

Vishakha<sup>1</sup>

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## ABSTRACT

*Demographic transition has been experienced by every country. In India, the demographic transition has been accompanied by significant challenges insuring access to quality education and addressing different disparities. The study is an attempt to look at the changing age structure and its interface with the demographic and economic situation in Uttar Pradesh. Uttar Pradesh's socio economics structure is characterized by a large population a largely agrarian economy and income disparity. The objective of the study is to analyses the determinants of education, fertility, socio- economic factors affecting the sustainable development goals with a focus on state Uttar Pradesh The state's particularly the youth population presents both opportunities and challenges for human capital development. Based on demographic data from the census of India, the national family health survey, SDG Index 2023-24. The study observed that fertility rate has declined over the years, but it's still above the national average. The literacy rate in UP lower than the national average and made significant progress in Sustainable development goals. The dependency of population on agriculture, Income disparity and developing infrastructure. The study will contribute in validation of demographic transition theory, an empirical evidence for education-fertility nexus also express the complexity of relationships between the variables, needs for continuous monitoring and evaluation The interplay between demographic transition, literacy and fertility is critical for achieving sustainable development. Government, policy makers and youth population must prioritize education, healthcare and economic empowerment to harness the demographic dividend and ensure a sustainable future*

**Key Words:** - Socio economic, education, fertility, Sustainable development

## 1. Introduction

Demographic transition has been historical process as nearly every country undergoes from origin of high fertility and high mortality to low fertility and low mortality. fertility decline is most

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Important factor in demographic as well as age structure transition. Uttar Pradesh is India's most popular state and the largest subdivision in the world, having a large number of academic. And research institutes, including IITs, IIM, LU, NIT and IIIT. Uttar Pradesh is India's 3<sup>rd</sup> largest economy, contributing 8% to the country's GDP and the largest producer of food grains. It has a large pool of skilled, Semi-skilled and unskilled labour. Uttar Pradesh has a gender disparity score of 0.41 and lies in the category of moderate gender disparity in literacy. With literacy rate of 67.68% among which 77.28% are males and only 57.18% are females. Uttar Pradesh is an agrarian economy where a large portion of the population relies on agriculture for their livelihood, 47% of the population directly dependent on agriculture where they contribute 37% of the country's GDP. And 14% of the population are in the category of low literacy. Uttar Pradesh has made significant progress towards achieving the Sustainable Development Goals.

This is Sustainable Development Goals are a collection of 17 global goals designed to be a "blueprint to achieve a better and more sustainable future for all". The SDG set in 2015 by the United Nations General Assembly and intended to be achieved by the year 2030, are part of UN population 17/1, the 2030 Agenda. The goals are broad based and interdependent. Balanced, inclusive and sustainable development together with the socio economic process of all individual is the vision of Government of Uttar Pradesh. Needless to say, that changing age structure presents Both formidable challenges and windows of Opportunities for economic development. The failure to account for and adapt to changes in age structure can lead to Economic and social catastrophes in years to come.

Developing countries with growing Populations of young people must find ways to provide education and job opportunities to young masses to harness their potential contribution to sustainable development.

## **2. Data base and methodology**

The study is based on information available in the Census of India, Data on vital statistics and life expectations from the National Family Health Survey (NFHS), Sustainable Development Goal Index 2023-24, Official website of government of Uttar Pradesh, And Economic Survey, 2023-24.

By analyzing all the data about the determinants of education, Fertility, Social economic factors, health We can find out the level of growth, achievements, problems and required changes to achieve the Sustainable Development Goals.

## **3. Results and discussion**

Age structure is the proportion of a Population in different age classes. The age Structures of different populations are usually compared in terms of three broad age groups, which identify persons in the working-age (15-59 years), children under the working age (0-14 years) and aged people (60 +Years). Changing age structure is shown by population pyramids. The coefficient of correlation is used to find out the degree and extent of correlation between various Indicators of age structure and per capita Net District Domestic Product (NDDP) in Uttar Pradesh at the district level.

Table 1: List of Indicators and their Measurements

Indicators	Definition/measurement
Crude Birthrate (CBR)	Number of live births per 1000 mid-year population in a given geographical area during a given year.
Total fertility rate.	Number of children who would be born per woman if she were to pass through the child bearing years bearing children according to a current schedule of age-specific fertility rates
Crude death rate. (CDR)	Number of deaths per 1000 mid-year population in a given geographical area during a given year.
Infant mortality rate. (IMR)	Number of deaths of infants under one year per 1000 live births in a given year
Maternal mortality rate. (MMR)	Annual number of female deaths per one lakh live births from any cause related to or aggravated by the pregnancy or its management.
Life expectancy at birth.	Average number of years that a newly born baby is expected to survive at current mortality rates
Dependence ratio.	Population in 0 to 14 and 60+ to the population aged 15 to 59, expressed in percentage.
Index of ageing.	Population aged 60+ per 100 children (0-14 age group).

### Population size, fertility and mortality

Uttar Pradesh is the most populous state in India, with a projected population of 238.9 million as of July 1, 2024 <sup>1</sup>. This number is equivalent to the population of Pakistan, the 5<sup>th</sup> most populous country in the world. The state accounts for 17% of the Indian population, which is 2.57% less than the peak level of 19.57% in 1901 <sup>1</sup>.

### Population Growth Rate:

The population growth rate for 2024 is projected at 1.01%, ranking 9<sup>th</sup> among Indian states <sup>1</sup>. Uttar Pradesh is expected to add 2.39 million more people in 2024.

### Sex Ratio:

The sex ratio of the total population in Uttar Pradesh is 108.635 males per 100 females, with 124.33 million males and 114.54 million females.

### Fertility Rate:

Although I couldn't find the exact fertility rate for Uttar Pradesh in 2024, a report from The Lancet projects India's total fertility rate (TFR) to decrease to 1.29 by 2051 <sup>2</sup>. Additionally, the adolescent fertility rate for women aged 15-19 in Uttar Pradesh was 14 per 1,000 live births, according to the National Family Health Survey 2020-21.

**Mortality Rate:**

According to the National Family Health Survey 2020-21, the infant mortality rate (IMR) in Uttar Pradesh was 42.0 per 1,000 live births, while the under-five mortality rate (U5MR) was 49.7 per 1,000 live births. The neonatal mortality rate (NNMR) was 27.7 per 1,000 live births.

**Table 2: Population growth in Uttar Pradesh (2011-2024)**

Year	Population			Growth		Share (%)
	Total	Male	Female	Net Change	rate (%)	India
2011	200,897,000	105,036,000	95,862,000	-	-	16.52
2012	204,152,000	106,701,000	97,451,000	3,255,000	1.620	16.57
2013	207,407,000	108,367,000	99,040,000	3,255,000	1.594	16.62
2014	210,662,000	110,033,000	100,629,000	3,255,000	1.569	16.66
2015	213,917,000	111,698,000	102,218,000	3,255,000	1.545	16.71
2016	217,075,000	113,311,000	103,763,000	3,158,000	1.476	16.75
2017	220,039,000	114,818,000	105,221,000	2,964,000	1.365	16.79
2018	223,003,000	116,325,000	106,678,000	2,964,000	1.347	16.84
2019	225,967,000	117,832,000	108,135,000	2,964,000	1.329	16.88
2020	228,931,000	119,339,000	109,592,000	2,964,000	1.312	16.92
2021	231,704,000	120,743,000	110,961,000	2,773,000	1.211	16.95
2022	234,094,000	121,939,000	112,155,000	2,390,000	1.031	16.97
2023	236,484,000	123,136,000	113,348,000	2,390,000	1.021	16.98
2024	238,875,000	124,332,000	114,542,000	2,391,000	1.011	17.00

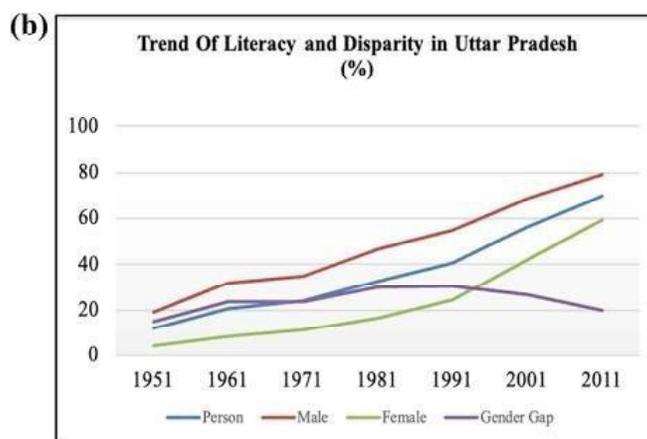
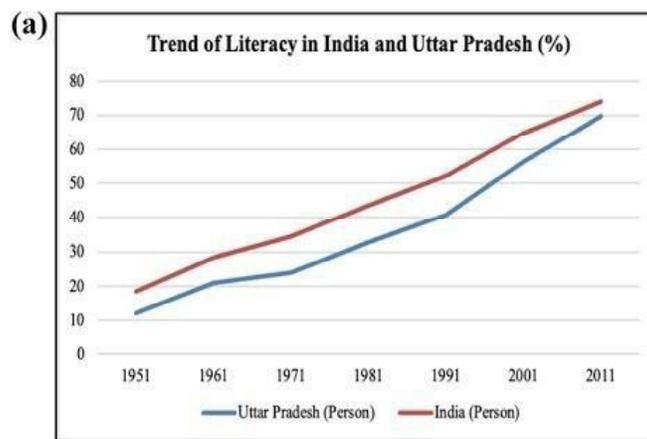
**Uttar Pradesh population by Age Group (2011)**

Age group	Male	Female	Total		M per 100 F
			Persons	Share (%)	
00-04	10,660,474	9,716,194	20,376,668	10.20	109.719
05-09	13,250,331	11,811,386	25,061,717	12.54	112.183
10-14	13,679,154	12,190,727	25,869,881	12.95	112.210
15-19	12,307,573	10,732,807	23,040,380	11.53	114.672
20-24	9,405,485	8,173,163	17,578,648	8.80	115.078
25-29	7,466,367	7,113,462	14,579,829	7.30	104.961
30-34	6,431,401	6,523,281	12,954,682	6.48	98.592
35-39	6,401,231	6,154,991	12,556,222	6.28	104.001
40-44	5,395,162	4,836,240	10,231,402	5.12	111.557
45-49	4,382,148	4,067,629	8,449,777	4.23	107.732
50-54	3,571,917	3,015,106	6,587,023	3.30	118.467
55-59	2,626,201	2,837,945	5,464,146	2.73	92.539
60-64	2,968,771	2,736,420	5,705,191	2.86	108.491
65-69	1,958,472	1,881,497	3,839,969	1.92	104.091
70-74	1,535,092	1,297,276	2,832,368	1.42	118.332
75-79	638,877	611,015	1,249,892	0.63	104.560
80-84	479,353	443,203	922,556	0.46	108.157
85-89	179,266	163,305	342,571	0.17	109.774
90-94	122,631	119,301	241,932	0.12	102.791
95-99	53,342	52,485	105,827	0.05	101.633
100+	101,329	98,269	199,598	0.10	103.114
Age not stated	865,933	756,129	1,622,062	0.81	114.522
<b>Total</b>	<b>104,480,510</b>	<b>95,331,831</b>	<b>199,812,341</b>		<b>109.597</b>

### Literacy Growth rates in India and Uttar Pradesh:

Uttar Pradesh has seen significant literacy growth from 1991 to 2024. According to the Ministry of Statistics and Program Implementation, the literacy rate in Uttar Pradesh was 67.88% in 2011, with males at 77.28% and females at 57.18%. By 2024, the overall literacy rate has increased to 67.68%.

Table 4: Showing literacy trends in India and Uttar Pradesh.



### Literacy Rate Breakdown:

- Males: 79.20% in 2011
- Females: 59.30% in 2011
- Rural-Urban Gap: Exists in adult literacy rates for both females and males.

**Top 5 Districts with Highest Literacy Rates:**

- Gautam Buddha Nagar: 80.12%
- Kanpur Nagar: 79.65%
- Auraiya: 78.95%
- Etawah: 78.41%
- Ghaziabad: 78.07%

**Districts with Lowest Literacy Rates:**

- Shravasti: 46.74%
- Bahraich: 49.36%
- Balrampur: 49.51%
- Budaun: 51.29%

While there's still a gap in literacy rates between males and females, Uttar Pradesh has made notable progress in literacy growth.

**Sustainable development goals (SDGs) in Uttar Pradesh**

Uttar Pradesh has been working towards achieving the Sustainable Development Goals (SDGs) since their adoption by the United Nations in 2015. The state's vision aligns with the global goals, focusing on balanced, inclusive, and sustainable development for socio-economic progress.

**Progress Highlights:**

**Decent Work and Economic Growth:** Uttar Pradesh has made progress in promoting sustained, inclusive, and sustainable economic growth, with a focus on full and productive employment and decent work for all.

**Reduced Inequalities:**

The state has shown improvement in reducing inequalities, with initiatives aimed at promoting social, economic, and political inclusion.

**Sustainable Cities and Communities:** Uttar Pradesh is working towards creating sustainable cities and communities, with efforts focused on affordable housing, transportation, and urban planning.

**Climate Action:**

The state is taking steps to address climate change, including initiatives on renewable energy, energy efficiency, and disaster resilience.

## Challenges and Areas for Improvement:

### Child Mortality Rate

Despite progress, Uttar Pradesh still faces challenges in reducing child mortality rates, particularly in rural areas.

### Healthcare Access:

Disparities in healthcare access and quality remain, particularly for marginalized communities.

### Ongoing Initiatives:

The state government has launched various program SDG to address these challenges, including initiatives on healthcare, education, and infrastructure development.

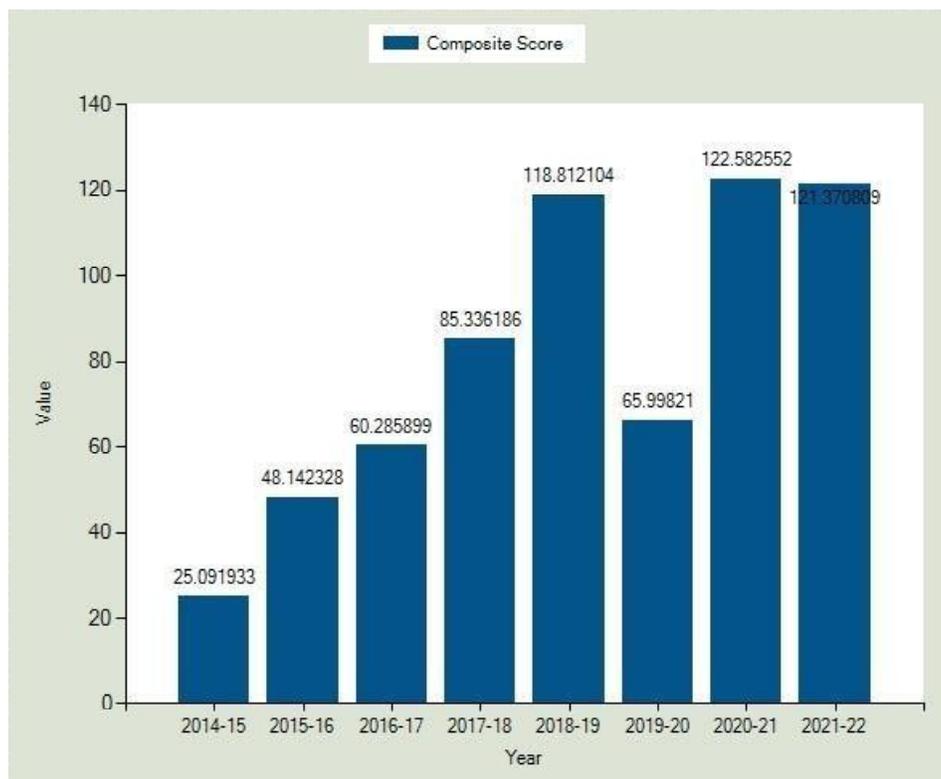
Overall, Uttar Pradesh is making strides towards achieving the SDGs, but continued efforts are needed to address persistent challenges and ensure equitable progress.

## SUSTAINABLE DEVELOPMENT GOALS



Uttar Pradesh, has improved its overall position to finish at the 11<sup>th</sup> spot in NITI Aayog 's Sustainable Development Goals (SDG) India Index 2023-24.

### Graph showing composite score of SDGs in Uttar Pradesh



Uttar Pradesh has made significant progress in achieving the Sustainable Development Goals (SDGs) in 2023-24. The state has moved up to the “Front Runner” category with a score increase of 25, the highest among all states. This is a remarkable achievement, considering the state’s large population and diverse challenges.

Some notable achievements in Uttar Pradesh include:

**Poverty Reduction:** The state has made significant progress in reducing multidimensional poverty, with a decline from 24.8% to 14.96% between 2015-16 and 2019-21.

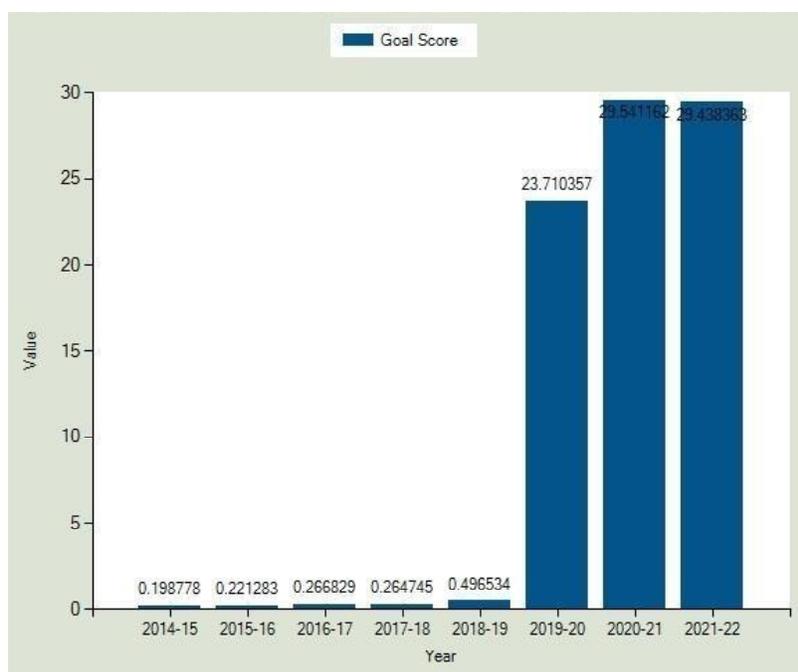
**Access to Electricity:** Uttar Pradesh has achieved 100% household electrification under the Saubhagya scheme.

**Clean Water and Sanitation:** The state has shown significant improvement in access to clean water and sanitation, with 99.29% of rural households having improved their source of drinking water.

**Affordable and Clean Energy:** Uttar Pradesh has made notable progress in increasing the use of clean energy, with 96.35% of households having access to clean cooking fuel.

Overall, Uttar Pradesh's progress in achieving the SDGs is a testament to the state's commitment to sustainable development and improving the lives of its citizens.

Graph showing growth of SDG 6 : clean water and sanitation



Uttar Pradesh has scored 92 in the sustainable development goal 6, clean water and sanitation.

### Key Achievements:

**Increased Access to Toilets:** Over three-quarters of households (78%) have access to a toilet facility, with a much higher accessibility in urban areas (95%) than in rural areas (73%).

**Reduced Groundwater Withdrawal:** The state has reduced groundwater withdrawal from 70.66% of the total available groundwater.

**Improved Water Infrastructure:** Uttar Pradesh aims to develop quality, reliable, sustainable, and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being.

### Challenges Ahead:

**Disparities in Rural-Urban Access:** Despite progress, there's still a significant gap in access to toilet facilities between urban and rural areas.

**Sustainable Water Management:** The state needs to focus on sustainable water management practices to ensure long-term availability.

### Growth of sustainable development goal 10- Reducing inequalities

Uttar Pradesh has been making progress towards achieving Sustainable Development Goal 10 (SDG 10) and scored 66, which focuses on reducing inequalities.

In terms of specific indicators, the state has made progress in:

**Labour Force Participation Rate:** Uttar Pradesh has fared relatively well in the labour force participation rate, particularly for women, with an increase of 17.9% from the previous year.

**Reduced Inequalities:** The state has shown improvement in reducing inequalities, with a score of 11 out of 100 in the SDG India Index.

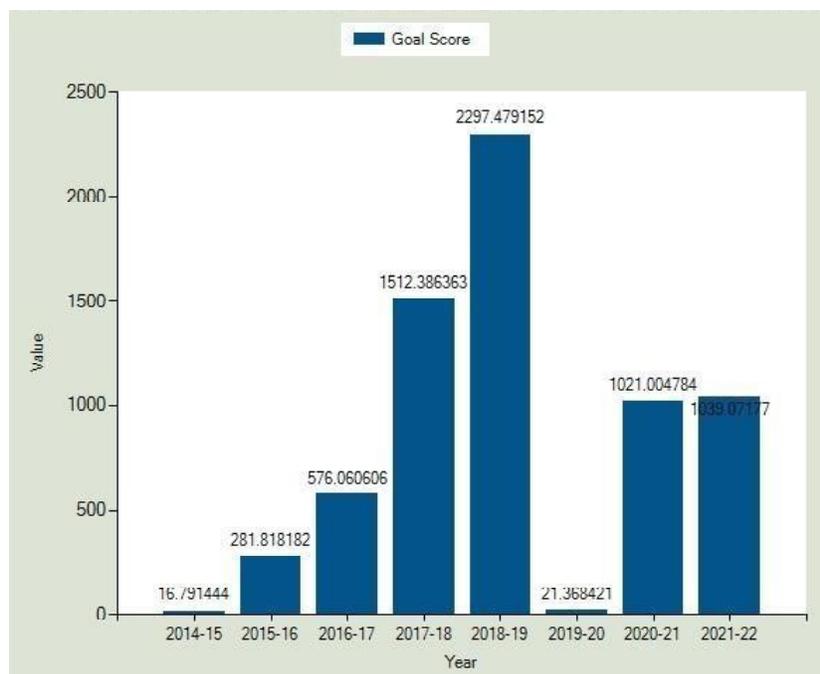
**Economic Growth:** Uttar Pradesh has achieved a growth rate of 5.88% in GDP per capita at constant prices.

**However, challenges remain, including:**

**Disparities in Access to Education and Healthcare:** Disparities in access to education and healthcare services persist, particularly for marginalized communities.

**Income Inequality:** The state needs to address income inequality to ensure sustainable growth and development.

Graph showing growth of SDG :11 sustainable cities and communities



Uttar Pradesh has achieved 82 score in Sustainable Development Goal 11 (SDG 11), which focuses on making cities and human settlements inclusive, safe, resilient, and sustainable.

The state has developed the SDG Vision 2030, which outlines strategies and milestones to achieve this goal.

### Key Achievements:

**Increased Access to Urban Planning:** Uttar Pradesh has made efforts to promote sustainable urban planning, with initiatives focused on affordable housing, transportation, and urban infrastructure.

**Resilience and Disaster Management:** The state has strengthened its disaster management capabilities, reducing the impact of natural disasters on communities.

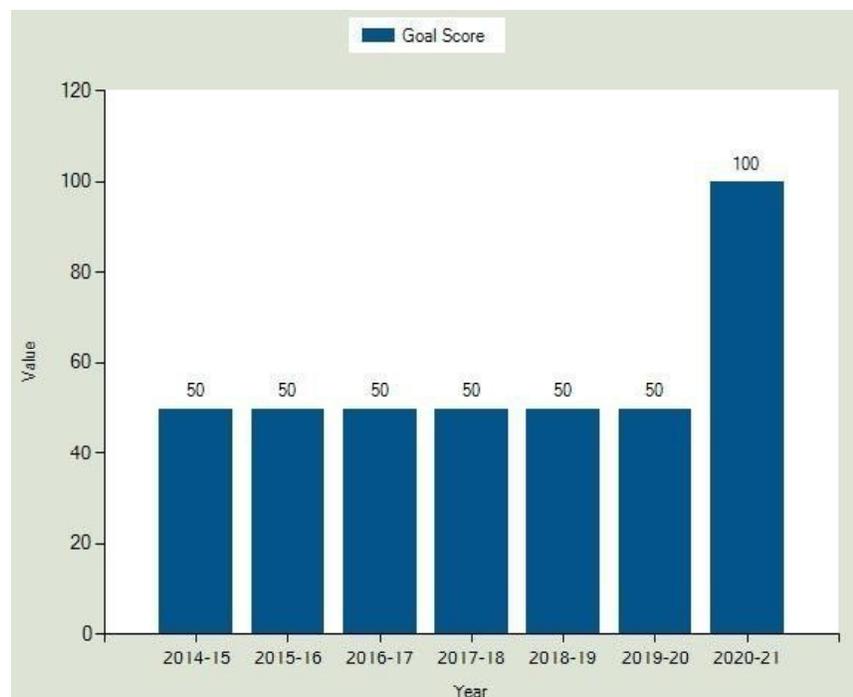
**Improved Waste Management:** Uttar Pradesh has implemented waste management initiatives, aiming to reduce waste and promote sustainable practices.

### Challenges Ahead:

**Urban-Rural Disparities:** Despite progress, disparities in access to basic services and infrastructure remain between urban and rural areas.

**Sustainable Transportation:** The state needs to focus on developing sustainable transportation systems to reduce congestion and pollution.

Graph showing growth of SDG:12 responsible consumption and production.



Uttar Pradesh has scored 85 in Sustainable Development Goal 12 (SDG 12), which focuses on responsible consumption and production.

### **Key initiatives**

**Sustainable Agriculture:** Efforts to promote sustainable agriculture practices, reduce waste, and increase efficiency in food production.

**Renewable Energy:** Initiatives to increase the use of renewable energy sources, such as solar and wind power.

**Waste Management:** Implementation of waste management systems to reduce, reuse, and recycle waste.

While progress has been made, there is still work to be done to achieve the targets set for SDG12. The state government has recognized the importance of sustainable consumption and production patterns and is working towards implementing policies and programs to support this goal.

### **GROWTH OF SDG 16: peace, justice and strong institutions**

Uttar Pradesh has scored 77 Sustainable Development Goal 16 (SDG 16), which focuses on promoting peaceful and inclusive societies for sustainable development. The state government has developed the SDG Vision 2030, which outlines strategies and milestones to achieve this goal.

### **Some key initiatives:**

**Promoting Peaceful Societies:** Efforts to reduce crime rates and improve law and order in the state.

**Access to Justice:** Initiatives to increase access to justice for all citizens, particularly vulnerable groups.

**Effective Institutions:** Strengthening of institutions to promote good governance and transparency.

According to the SDG India Index, Uttar Pradesh has made progress in reducing under-five mortality rates and improving access to justice. The state has also reduced multidimensional poverty, with a headcount ratio decrease from 2015-16 to 2019-21.

### **However, challenges remain, including:**

**Disparities in Access to Justice:** Disparities in access to justice for vulnerable groups, such as women and marginalized communities.

**Institutional Strengthening:** Need for continued institutional strengthening to promote good governance and transparency.

Overall, Uttar Pradesh is moving forward in achieving SDG 16.

Participation and influence of youth on sustainable development goals.

The participation and influence of youth on Sustainable Development Goals (SDGs) are crucial for achieving the 2030 Agenda. Young people are key stakeholders in promoting sustainable development, and their involvement is essential for ensuring the success of SDG initiatives.

### **Youth-Led Initiatives and Contributions**

**Innovative Solutions:** Young innovators are developing cutting-edge solutions to address SDG challenges, such as climate change, healthcare, and education.

**Advocacy and Awareness:** Youth-led organizations are raising awareness about SDGs, mobilizing communities, and advocating for policy changes.

**Volunteerism and Community Engagement:** Young people are engaging in volunteer work, community service, and social entrepreneurship to drive SDG progress.

### **Government and Institutional Support**

**National Strategies:** Governments, like India's NITI Aayog, are developing national strategies to achieve SDGs, involving youth in the planning and implementation process.

**Youth-Focused Program:** Initiatives, such as the Uttar Pradesh government's Vision 2030, aim to empower youth to contribute to SDG achievement.

**International Cooperation:** Global platforms, like the G20, recognize the importance of youth participation in SDG progress, promoting meaningful engagement and leadership.

### **Challenges and Opportunities**

**Capacity Building:** Youth require training, resources, and capacity-building opportunities to effectively contribute to SDG initiatives.

**Inclusive Decision-Making:** Ensuring youth representation in decision-making processes is crucial for leveraging their perspectives and ideas.

By harnessing the energy, creativity, and idealism of young people, we can accelerate SDG progress and create a more sustainable future for all.

## **4. CONCLUSION**

The declining trends of fertility and mortality have brought about significant changes to the population and age structure of Uttar Pradesh. The share of children's population has declined and that of population in the working ages and old age groups has increased. The components of education have shown significant improvement in the literacy rate of the state. The growing population is working as a helping hand in overall development of the state. The above data shows that, the youth have been contributing a lot in the development of the state. Uttar Pradesh has ranked itself 11 at the point of sustainable development goals which represents itself as a result of development.

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# Impact of MGNREGA in Empowering Women: A Case Study of Sitapur and Prayagraj District of Uttar Pradesh

Vishnu Kumar<sup>1</sup>

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## ABSTRACT

*MGNREGA is a significant centrally sponsored scheme which is a demand-driven wage employment program that provides 100 days of wage employment to rural households. The paper discusses status of women in Sitapur and Prayagraj districts of Uttar Pradesh. The study employs both the primary and secondary data for the data collection and to test the significance of the model logistic regression has been used which further clarifies that whether MGNREGA helps in empowering women in the districts of Sitapur and Prayagraj or not. The paper concludes with some policy implications suggesting that there is still a need to develop innovative strategies to raise women's status in society through MGNREGA and the government should immediately address the unethical practices in the program to boost its effectiveness.*

**Keywords:** *Employment, Women Empowerment, Poverty, MGNREGA, Labour force, Uttar Pradesh*

## I. Introduction

Rural poverty and unemployment in India are persistent issues of India economy which have resulted in a deceleration of economic development. The advancement of any community or society is dependent upon their active participation in development programs. Therefore, to address these issues, the Government of India has launched many rural development programs aimed at enhancing the living standards of rural populations namely National Rural Employment Programme (1977), 'Rural Manpower Programme (1995), Employment Assurance Scheme (1993) and National Rural Employment Guarantee Act (2005).

Hence, this study aims to evaluate the impact of MGNREGA on the empowerment of rural women in Uttar Pradesh. The districts selected for the study are Sitapur in central region and Prayagraj in Eastern region of Uttar Pradesh. The first section of the paper addresses the introduction, the second section reviews the literature and the third section presents the data, methods and hypotheses. The fourth section discusses the socio-economic attributes of the beneficiaries, accompanied by

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data analysis and discussion. The fifth and final section concludes the paper with some policy recommendations.

## II. Review of Literature

Empowerment, according to Kar (2013), is a process meant to alter the character and course of systemic forces that hampers the marginalize women and other underprivileged groups in the society. MGNREGA has made a substantial contribution to rural development and the reduction of poverty. With the introduction of MGNREGA scheme, people from rural India now rarely have to face caste or gender prejudice and could support their families. According to Savaiah and Jayaraj (2004), since independence, women continued to be the least advantaged groups in society despite the government's continuous attempts to promote socio-economic development of women through the implementation of various five-year plans. However, MGNREGA has become a powerful instrument of the government for women empowerment in rural India through its effect on livelihood security and democratic governance and social protections (Kaushal and Singh, 2016). MGNREGA is a scheme which has been making opportunities for the people to enhance their economic condition. According to Bordoloi (2011), the MGNREGA is a fresh lifeline for rural residents who depend on daily wages for their livelihood. Although Kadrolkar (2012) has observed that to some extent, the Act provides jobs but there are many issues with its implementation like lack of awareness among people and malpractices in the schemes but the scheme still lacks in creating awareness among people.

## III. Data and Methods

The study is based on mixed-method approach to data collection, including both primary and secondary data for analysis. A comparative analysis has been done to assess the impact of MGNREGA on women's empowerment Central and Eastern region of Uttar Pradesh. For this, One district each from Eastern region and Central region has been selected on the basis of highest number of female beneficiaries in MGNREGA in 2023-24. From Eastern region Prayagraj and from Central region Sitapur has been selected for the survey. Using the multi stage sampling, two blocks from each district and from each block two gram panchayats has been selected the data collection. From each gram panchayat two villages are selected on the basis of highest number of female beneficiaries in MGNREGA in 2023-24 and 20 female beneficiaries from each village were interviewed using a predefined questionnaire. The overall sample size comprised 160 female beneficiaries (80 from each district) of the MGNREGA scheme. The data on the number of female beneficiaries has been taken from the MIS reports of MGNREGA, Ministry of Rural Development. Additionally, to enhance the results with statistical analysis, a logistic model has been employed to ascertain the elements contributing to women's empowerment through MGNREGA in the designated regions of Uttar Pradesh.

### Hypothesis:

$H_{01}$ : there is no significant impact of MGNREGA in empowering women.

$H_{A1}$ : there is a significant impact of MGNREGA in empowering women.

#### IV. Analysis and Discussion:

After almost two decades of implementation, MGNREGA in India continues to positively impact the livelihoods of marginalized people in rural areas, particularly rural women. As per the MIS report of the Ministry of Rural Development, in 2023-24, around 131.68 million active workers are registered under MGNREGA, with active female MGNREGA workers constituting 68.814 million whereas in Uttar Pradesh, during the 2023-24 year, there are 12.85 million active MGNREGA workers, of which 5.132 million are women beneficiaries. Women, once confined to domestic roles as housewives, are now venturing beyond their homes not only for family responsibilities and household work but also to pursue economic opportunities to earn livelihood. Thus, the Implementation of the MGNREGA is a significant milestone regarding the participation of women in the growth process of the state.

#### MGNREGA: Evidences from Field Survey

Being one of the most successful scheme of Government of India in generating employment is popular among the rural people. As evident from Table 1 that 87.50 percent of the beneficiaries knows well about the MGNREGA scheme in Sitapur whereas in Prayagraj the 91.25 percent beneficiaries have knowledge about the MGNREGA scheme. Women in rural areas have engaged themselves in various activities in order to support their house but they often encounter refusals from working outside and they have to leave the job and have to return to their domestic roles. The reason could be the unsafe rural environment, the patriarchal mindset of the people or some other reasons. While asking them the reason to join the MGNREGA, in Sitapur, 38.75 percent beneficiaries have joined MGNREGA as a source of generation of their Income, 15 percent beneficiaries have joined to generate income as well as to create village assets and 31.25 percent beneficiaries have joined MGNREGA to generate income and utilise their vacant time and the rest 15 percent beneficiaries have joined MGNREGA just to avail the *Pradhan Mantri Awas Yojana- Gramin* (PMAY-G) scheme. On the other hand, in Prayagraj, 22.50 percent beneficiaries have joined MGNREGA as a source of generation of their income, 27.50 percent beneficiaries have joined to generate income as well as to create village assets and 36.25 percent beneficiaries have joined MGNREGA to generate income and utilise their vacant time and the rest 13.75 percent beneficiaries have joined MGNREGA just to avail the PMAY-G scheme.

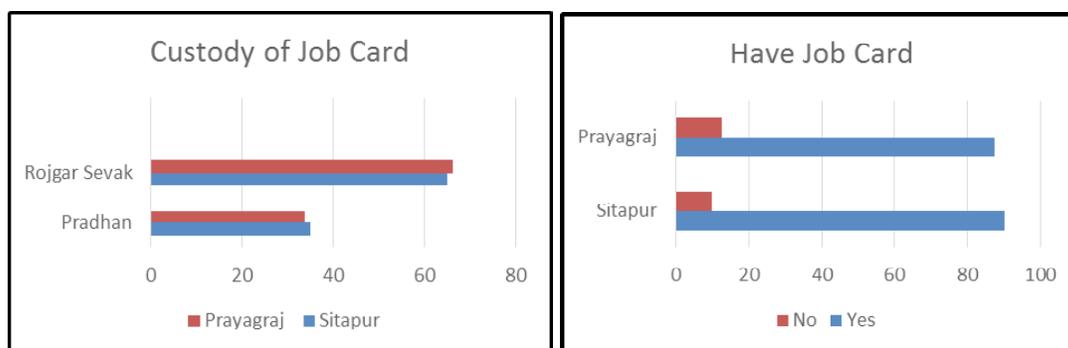
**Table 1: Awareness and employment MGNREGA**

Sample Characteristics	Particulars	N	Frequency		% Frequency	
			Sitapur	Prayagraj	Sitapur	Prayagraj
Knowledge about scheme	Yes	80	70	73	87.50	91.25
	No		10	7	12.50	8.75
Reason to join MGNREGA	Income generation	80	31	18	38.75	22.50
	To avail PMAY-G		12	11	15.00	13.75
	Income generation and creation of village asset		12	22	15.00	27.50
	Income generation and to utilise vacant time		25	29	31.25	36.25

Source: Field survey

MGNREGA being a demand-based employment generation scheme that focuses on primarily on providing the employment to the person who genuinely wants it by providing employment under various development work in or nearby village. In order to get the employment in MGNREGA, the person has to seek its proposal to the *Gram Pradhan* and after the verification, *Gram Pradhan* and the other officials issue a job card in the name of the applicant within 15 days of the application. It is a necessary document as it can be used as beneficiary’s identity proof but still many of the beneficiaries in both the districts do not have their job cards. In Sitapur, 90 percent beneficiaries had their job cards and rest 10 percent beneficiaries did not have possession of their job cards and 35 percent and 65 percent of that beneficiaries who did not possess their job cards had their job cards with *Pradhan* or *Rojgar Sevak* respectively. Whereas, in Prayagraj, 87.5 percent beneficiaries had job cards and 12.5 percent beneficiaries did not have their job cards and 33.75 percent and 66.25 percent of that beneficiaries who did not possess their job cards had their job cards with *Pradhan* or *Rojgar Sevak* respectively (refer Figure 1).

Figure 1: Beneficiaries having job card and the custodians of job card



The beneficiaries who are engaged in the MGNREGA have to perform various tasks assigned to them in accordance with their skills and calibre. Table 2 exhibits that 27.5 percent beneficiaries in Sitapur and 33.75 percent beneficiaries in Prayagraj had been assigned the task of levelling of Kaccha road of the village and nearby areas and 16.25 percent beneficiaries in Sitapur and 18.75 percent beneficiaries in Prayagraj were engaged in Repairing of official buildings and village assets whereas 56.25 percent beneficiaries in Sitapur and 47.50 percent beneficiaries in Prayagraj had done both kind of work under MGNREGA. Regarding the MGNREGA attendance record, it is kept up to date by the Muster roll system, which only records the daily attendance of employees who are physically present at the workplace. Thus, 85 percent beneficiaries in Sitapur and 86.25 percent beneficiaries in Prayagraj reported that attendance is recorded daily with the muster roll at the worksite whereas the rest of the beneficiaries in Sitapur (15 percent) and Prayagraj (13.75 percent) denied the statement and on the other hand 67.50 percent beneficiaries in Sitapur and 56.25 percent beneficiaries in Prayagraj also reported that no extra names were included in the muster roll except the present workers on the worksite whereas 12.50 percent beneficiaries in Sitapur and 18.75 percent beneficiaries in Prayagraj marked that extra names were included unethically in the muster roll and on the other hand 20 percent beneficiaries (Sitapur) and 25 percent beneficiaries (Prayagraj) reported that occasionally or sometimes some names are included in the muster roll.

Table 2: Attendance and Wage Payment in MGNREGA

Sample Characteristics	Particulars	N	Frequency		% Frequency	
			Sitapur	Prayagraj	Sitapur	Prayagraj
Type of work	Levelling of Kaccha road	80	22	27	27.5	33.75
	Repairing of official buildings and village assets		13	15	16.25	18.75
	Both		45	38	56.25	47.50
Attendance recorded	Yes	80	68	69	85.00	86.25
	No		12	11	15.00	13.75
Extra names in muster roll	Yes	80	54	45	12.50	18.75
	No		10	15	67.50	56.25
	Sometimes		16	20	20.00	25.00
Receive wages on time	Yes	80	21	30	26.25	37.50
	No		59	50	73.75	62.50
Reason for delay	Delay in sanction of funds	80	4	8	5.00	10.00
	Usually comes late		10	13	12.50	16.25
	Don't Know		66	59	82.50	73.75

**Source:** Field survey

MGNREGA provides Rs. 237 per day (Ministry of Rural Development) to all its beneficiaries in accordance with the number of days worked in a month but one of the major drawbacks of this scheme is that the beneficiary receives the payments after 15-20 days of work via Direct Benefit Transfer (DBT) in their respective bank accounts rather than daily payment method as used in casual labour wage system. Other than this, 73.75 percent beneficiaries (Sitapur) and 62.50 percent beneficiaries (Prayagraj) reported that the wages were not been paid to them on time and when they were asked the reason for the delay in the payment system, 82.50 percent beneficiaries and 73.75 percent beneficiaries did not even know the reason for the delay in the payment in Sitapur and Prayagraj districts respectively. On the other hand, 12.50 percent beneficiaries in Sitapur and 16.25 percent beneficiaries told that it usually comes late whereas 5 percent beneficiaries (Sitapur) and 10 percent beneficiaries (Prayagraj) responded that the reason for the delay in payment is the delay done in sanctioning the funds by the officials. Thus, these could be reason that may lead the beneficiary to lose the interest in the scheme and could migrate to the other city or district to earn their daily bread.

Even after the criticism, people have their mixed opinions on the MGNREGA scheme. Table 3 exhibits the level of satisfaction for the MGNREGA scheme among the beneficiaries. It was found from the field survey that 38.75 percent beneficiaries in Sitapur and 31.25 percent beneficiaries in Prayagraj were satisfied with the wage employment by the MGNREGA whereas 17.50 percent

beneficiaries 21.25 percent beneficiaries had a neutral vote for the MGNREGA scheme but the rest i.e. 43.75 percent beneficiaries of Sitapur and 47.50 percent beneficiaries of Prayagraj were not at all satisfied with the benefits of the MGNREGA scheme as they demanded that the number of days of employment should be increased. In Sitapur, 54.29 percent beneficiaries demanded wage employment for 100-200 days, 20 percent beneficiaries demanded wage employment for 200-300 days and 25.71 percent beneficiaries demanded wage employment for more than 300 days in a year. On the other hand, per year increase in number of days wage employment demand of beneficiaries in Prayagraj was 60.53 percent (100-200 days), 31.58 percent (200-300days) and 7.89 percent (more than 300 days) (refer Table 3).

**Table 3: Satisfaction from the scheme**

Sample Characteristics	Particulars	N	Frequency		% Frequency	
			Sitapur	Prayagraj	Sitapur	Prayagraj
Satisfied with 100 days employment	Satisfied	80				
	Neutral		14	17	17.50	21.25
	Not satisfied		35	38	43.75	47.50
If not satisfied, Then employment for	100-200 days	35 (Sitapur) and 38 in (Prayagraj)	19	23	54.29	60.53
	200-300 days		7	12	20.00	31.58
	More than 300 days		9	3	25.71	7.89

Source: Field survey

### Benefits of MGNREGA Scheme

It is quite evident from the field survey that MGNREGA has benefitted the rural people in the Sitapur and Prayagraj district of Uttar Pradesh. Other than generating the employment it is also helpful in reduction of migration as 70 percent beneficiaries of Sitapur and 61.25 percent beneficiaries of Prayagraj responded that MGNREGA has successfully reduced the out migration from their villages whereas rest of the beneficiaries in both the district did not agree with this statement (refer Table 4). Also, it is exhibited from Table 4 that MGNREGA has also created the various assets for the village along with enhancing the development in the rural areas. Thus, 62.50 percent beneficiaries of Sitapur and 68.75 percent beneficiaries of Prayagraj reported that the assets that are created under the MGNREGA scheme are durable and can be used for various years and on the other hand 57.50 percent beneficiaries of Sitapur and 63.75 percent beneficiaries of Prayagraj also reported that they felt that the development in the village has been due the MGNREGA scheme. The infrastructural development and creation of village assets like proper roads, ponds and canals have also led to increase the agricultural productivity as 57.50 percent beneficiaries of Sitapur and 56.25 percent beneficiaries of Prayagraj also responded that due to MGNREGA their agricultural productivity has increased.

Table 4: Benefits of MGNREGA scheme

Sample Characteristics	Particulars	N	Frequency		% Frequency	
			Sitapur	Prayagraj	Sitapur	Prayagraj
Reduction in Migration	Yes	80	56	49	70.00	61.25
	No		24	31	30.00	38.75
Asset created are durable	Yes	80	50	55	62.50	68.75
	No		30	25	37.50	31.25
Development in Village	Yes	80	46	51	57.50	63.75
	No		34	29	42.50	36.25
Increase in agricultural productivity	Yes	80	46	45	57.50	56.25
	No		34	35	42.50	43.75

Source: Field survey

### Statistical Analysis:

Further to supplement the observations from the field, the quantitative analysis with the help of logistic regression, binary data (collected from the field) has been used. The explanatory variable to explain women empowerment considered for the model are change in the decision making in household, change in the decision making in Child Marriage, change in the decision making in Asset Purchase, change in Health status, change in education and reduction in migration of the beneficiaries (before and after MGNREGA). Thus, the logistic model has been used to assess the effect of these explanatory variables on the empowerment of women engaged in MGNREGA. The model to express the equation of empowering women with MGNREGA in Sitapur is explained in the following way.

LOGIT (Empowering women with MGNREGA in Sitapur) = 1.726 + 3.148\* change in the decision making in Household - 1.784 change in the decision making in Child Marriage - 2.346 change in the decision making in Asset Purchase - 0.784 change in Health status + 2.585\* change in education + 4.054\* reduction in migration

Note:\*significant at 5% significant level

For Sitapur, the model is significant at  $\chi^2=95.8$  ( $p<0.05$ ) and the model explained 56.3% (Nagelkerke  $R^2$ ) of the variance in change in the decision making in household, change in education and reduction in migration and all these factors are statistically significant ( $p<0.05$ ) suggesting that our null hypothesis  $H_{01}$  is rejected and the result exhibits that there is a significant impact of MGNREGA in empowering women (refer Table 5).

For Prayagraj, the model is significant at  $\chi^2=96.5$  ( $p<0.05$ ) and the model explained 56.4% (Nagelkerke  $R^2$ ) of the variance in decision making in household, change in the decision making in Child Marriage, change in health status and reduction in migration and all these factors are statistically

significant ( $p < 0.05$ ) suggesting that our null hypothesis  $H_{01}$  is rejected and the result exhibits that there is a significant impact of MGNREGA in empowering women (refer Table 5).

LOGIT (Empowering women with MGNREGA in Prayagraj) = -3.241 - 2.897\* change in the decision making in Household + 2.258\* change in the decision making in Child Marriage - 0.082 change in the decision making in Asset Purchase +3.225 change in Health status – 20.321\* change in education +3.717 reduction in migration

Note: \*significant at 5% significant level

**Table 5: Statistical analysis for Sitapur and Prayagraj district.**

Variables	Sitapur					Prayagraj				
	B	S.E.	Wald	Sig.	Exp (B)	B	S.E.	Wald	Sig.	Exp (B)
Constant	1.726	3.009	.329	.049	5.616	-3.241	2.543	1.623	.042	.054
Decision in Household Expenditure	3.148	1.484	4.250	.039	21.310	-2.897	1.434	4.082	.043	.055
Decision in Child Marriage	-1.784	2.064	.835	.361	.152	2.258	1.277	3.128	.077	9.561
Decision in Asset Purchase	-2.346	1.507	2.635	.105	.087	-.082	1.115	.005	.941	.921
Change in Health Status	-.784	1.460	.297	.585	.451	3.225	1.344	5.759	.016	25.156
Change in Education	2.585	1.141	5.061	.024	13.012	-20.321	9757.823	.000	.998	.000
Change in Migration	4.054	1.699	5.774	.016	59.340	3.717	1.398	7.069	.008	41.128

Source: Author’s construction

**Conclusion:**

For an equitable economic growth, it is necessary that the female participation should also be taken care off as women are known as the building blocks of the economy. An economy enjoys the benefits of the economic development only when the females of the country are empowered and are taking part active in the labour force participation. Therefore, the empowerment of rural women is much crucial for the development of the developing economies like India. Thus, by providing the wage employment to the rural females, MGNREGA has diluted the patriarchal barriers of the society and provided a chance to the rural females to show their abilities. MGNREGA has drastically changed the life of the rural females as now they are included in the decision making in household. MGNREGA also helps the beneficiaries to improve their health and education and it also led to reduce the out migration from the rural areas. Despite these positive effects, the irregularities in the scheme such as delay in payment, proxy attendance in the muster roll, lack of child care facility, worksite facility and illegal presence of contractors has led to decrease the efficiency of MGNREGA. Thus, government should take care of these leakages in order to successfully implement the scheme so that the left-over rural population could also enjoy the benefits of the scheme.

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# Artificial Intelligence and Societal Challenges

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## ABSTRACT

*The rise of Artificial Intelligence (AI) has transformed industries, enhancing efficiencies in healthcare, finance, and beyond. However, this rapid development brings significant societal challenges. This paper explores the complex impacts of AI, focusing on employment, ethics, bias, and regulation.*

*One critical challenge is AI's impact on the labour market. While AI-driven automation improves productivity, it risks displacing workers, especially in sectors reliant on repetitive tasks. This shift emphasizes the need for reskilling initiatives and educational reforms to prepare the workforce for an AI-centric future. Ethical concerns around AI include privacy and accountability. Many AI systems operate as "black boxes," making decisions that are difficult to interpret, which raises transparency issues. AI's dependency on extensive datasets also heightens privacy risks, with potential for misuse of personal data. Bias in AI systems is another pressing issue, as these algorithms can inadvertently reinforce societal prejudices, particularly in hiring and law enforcement. Addressing bias requires diverse datasets and rigorous oversight to ensure fair outcomes.*

*Finally, the paper discusses the need for cohesive regulatory frameworks to govern AI's societal role. International standards and ethical guidelines are critical, especially in high-stakes applications, to ensure AI aligns with shared human values.*

*In conclusion, AI's challenges require proactive and collaborative approaches, involving technologists, policymakers, and society to create an ethical, fair, and inclusive AI landscape that benefits all.*

**Keywords:-** Artificial Intelligence, Employment, Social Challenges Technology, Transparency.

## 1. INTRODUCTION

In recent years, artificial intelligence (AI) has emerged as one of the most transformative technologies, impacting nearly every facet of modern life, from healthcare and education to transportation and finance. AI's capabilities, such as machine learning, natural language processing, and computer vision, have brought unprecedented efficiency, accuracy, and convenience. As AI technologies continue to advance, they hold immense potential to solve complex problems, drive economic growth, and improve quality of life.

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However, alongside these promising developments, AI also raises significant societal concerns. The integration of AI into critical aspects of human life introduces challenges related to job displacement, privacy, bias, and accountability. Automation threatens traditional employment models, particularly in sectors where repetitive or manual tasks are common, leading to concerns about economic inequality and workforce disruption. Privacy and data security are increasingly at risk as AI systems process vast amounts of personal information, often without sufficient regulatory oversight or transparency. Moreover, the reliance on data-driven models has introduced issues of algorithmic bias, where AI systems may reinforce and even amplify societal inequalities, raising ethical questions about fairness and justice.

Given AI's pervasive role and the complex ethical and social questions it introduces, it is essential to critically examine these challenges. This paper aims to explore the primary societal impacts of AI, focusing on its implications for employment, ethics, privacy, and public policy. By analyzing these challenges, we seek to understand the ways in which society can better harness AI's potential while mitigating the risks to ensure a responsible, equitable, and sustainable future.

The aim of this paper is to examine the primary societal challenges posed by artificial intelligence and to explore potential solutions and areas for further research. By analyzing issues such as job displacement, privacy concerns, algorithmic bias, and ethical accountability, this paper seeks to shed light on the complex ways AI impacts society. Additionally, it will discuss policy recommendations and frameworks that could help mitigate these challenges, with the goal of fostering a responsible and equitable integration of AI into various aspects of daily life. This research aims to contribute to a broader understanding of how society can harness AI's benefits while addressing its risks to ensure a sustainable, ethical future.

## **2. SOCIETAL CHALLENGES OF AI**

As artificial intelligence continues to evolve and permeate various sectors, it introduces significant societal challenges that must be addressed to ensure ethical, equitable, and safe implementation. These challenges impact employment, privacy, security, fairness, and global governance, and addressing them is essential for responsible AI adoption.

### **2.1. Job Displacement and Economic Impact**

One of the most immediate and visible impacts of AI is job automation. AI-driven systems are increasingly capable of performing tasks traditionally carried out by humans, particularly in industries that rely on repetitive or manual work, such as manufacturing, retail, and transportation. Studies predict that a large portion of jobs could be automated in the coming decades, which raises concerns about economic inequality and unemployment.

Although AI has the potential to create new jobs, particularly in tech and data science fields, the transition requires reskilling and education initiatives to prepare the workforce for these new roles. Policymakers and industries face the challenge of ensuring an equitable economic transition to minimize the social and financial impact on affected workers and communities.

The potential for job displacement due to automation, especially in manufacturing, transportation, and retail, is substantial and has already begun to affect the global workforce. While automation can

boost productivity and economic growth, it also creates a pressing need for reskilling and policy measures to support affected workers. By addressing these challenges proactively, society can work toward a future where the benefits of automation are realized without leaving displaced workers behind.

## **2.2. Privacy and Data Security**

AI systems often depend on massive amounts of personal data to function effectively, especially in sectors like healthcare, finance, and social media. However, the vast data requirements of AI pose risks to personal privacy, as data can be used for surveillance, targeted advertising, and even predictive policing without users' informed consent.

Furthermore, AI systems are not immune to cyber threats, and the potential for data breaches increases with the complexity of these systems. The ethical use of data and the need for stronger privacy protections are critical considerations, as inadequate regulation can lead to misuse, loss of privacy, and a lack of trust in AI technologies.

Privacy and security challenges in AI underscore the importance of safeguarding individuals' rights while advancing technological innovation. As AI continues to rely on large datasets and complex algorithms, ensuring data privacy, securing systems against breaches, and promoting algorithmic transparency become paramount. Addressing these challenges requires a combination of policy interventions, robust technical safeguards, and ongoing collaboration to create a secure, trustworthy AI environment that respects individual privacy and fosters public confidence in technology.

## **2.3. Bias and Fairness**

Bias and fairness are critical considerations in the development and deployment of AI systems. Without deliberate efforts to address these issues, AI can unintentionally reinforce societal inequities and perpetuate discrimination. Mitigating bias requires a multifaceted approach, including balanced datasets, fairness auditing, transparent decision-making, and diverse perspectives in development. Through collaboration between AI developers, policymakers, and industry stakeholders, it is possible to create AI systems that are fairer, more equitable, and better aligned with societal values, ultimately promoting trust in AI technologies.

## **2.4. AI in Healthcare**

AI's potential to improve healthcare is immense, offering advances in diagnostics, personalized treatment, operational efficiency, research, and remote care. However, realizing this potential requires careful attention to ethical and regulatory challenges. By addressing issues related to privacy, bias, transparency, and accountability, AI can be safely integrated into healthcare, ultimately leading to more accurate, accessible, and patient-centered care.

## **2.5. Autonomous Weapons and Warfare**

The ethical and practical risks of AI in military applications underscore the need for robust international regulations, transparency, and accountability mechanisms. While AI presents possibilities for reducing human exposure to warfare, the potential for misuse, accidents, and escalated

conflicts highlights the importance of caution, oversight, and ethical consideration in the development and deployment of autonomous weapons.

## **2.6. Legal and Regulatory Challenges**

The challenges of regulating AI highlight the need for adaptive, forward-looking regulatory frameworks that can evolve alongside AI technology. Addressing issues of accountability, bias, privacy, global consistency, and public safety requires a collaborative effort across sectors and jurisdictions. Developing regulations that keep pace with AI's rapid advancements is essential for realizing AI's benefits while minimizing its risks, ensuring that the technology is used responsibly and ethically.

## **3. POTENTIAL SOLUTIONS**

### ***3.1. Establish Clear Regulatory Frameworks***

Establishing clear regulatory frameworks for AI is essential to foster responsible innovation while safeguarding public welfare. A risk-based approach to regulation ensures that high-stakes applications in critical sectors undergo rigorous scrutiny, while lower-risk AI tools continue to innovate freely. Developing global standards and fostering international collaboration prevent inconsistencies across borders, ensuring that AI development adheres to shared ethical and operational standards. Finally, implementing AI accountability laws provides clarity on liability and responsibility, promoting the creation of fair, transparent, and reliable AI systems. Together, these measures create a balanced approach to AI governance, addressing societal challenges while promoting technological progress.

### ***3.2. Implement Strong Data Privacy Protections***

Strengthening data privacy and control measures is foundational to ethical AI usage. Enhanced data privacy regulations, building on frameworks like GDPR, can provide users with clear rights to manage their personal data, ensuring that data collected by AI is handled responsibly. Encouraging privacy-by-design practices means integrating privacy considerations from the outset of AI system development, with measures like data minimization, encryption, and anonymization, significantly reducing risks. Furthermore, policies granting users control over their data—such as opting out or restricting data usage for specific AI purposes—empower individuals to manage their privacy actively, especially in sensitive domains. Together, these measures not only protect personal data but also help build public confidence in AI technologies.

### ***3.3. Initiatives for AI Education***

As AI continues to transform industries, proactive initiatives focused on education and upskilling are essential to ensure that workers can adapt and thrive in an automated future. By fostering collaboration among governments, corporations, educational institutions, and community organizations, society can create robust training programs that empower individuals in vulnerable fields, helping them acquire the skills needed to succeed in the evolving workforce. These initiatives not only benefit workers but also enhance overall economic resilience and innovation in a rapidly

changing technological landscape. These initiatives reflect a growing recognition of the need for education and upskilling to address the challenges posed by automation and AI. By focusing on collaborative efforts among governments, corporations, educational institutions, and community organizations, society can better prepare workers in vulnerable fields to thrive in an increasingly automated world. Such proactive measures will not only benefit individual workers but also contribute to economic resilience and innovation across industries.

#### **4. LITERATURE REVIEW**

The rapid development and adoption of artificial intelligence (AI) have sparked a significant body of research examining its societal impact, ranging from its transformative potential to its ethical and regulatory challenges. This literature review synthesizes the key studies and theoretical frameworks on AI's societal challenges, such as job displacement, privacy concerns, bias and fairness, and regulatory considerations. The review also explores suggested solutions, including education initiatives, ethical frameworks, and policy recommendations, that aim to promote responsible AI development.

##### **4.1. AI and Job Displacement**

Numerous studies have addressed the potential for AI to disrupt employment in various sectors. Frey and Osborne (2013) provided a foundational analysis, estimating that approximately 47% of jobs in the United States are at risk of automation within the next few decades. Subsequent research has examined the disproportionate impact on routine-based occupations, particularly in manufacturing, retail, and transportation (Autor, 2015). While automation is expected to improve productivity and economic growth, its impact on workers in vulnerable fields raises concerns about growing income inequality and economic displacement (Brynjolfsson & McAfee, 2014). Studies emphasize the importance of upskilling and reskilling programs to mitigate these adverse effects, with recent research highlighting the need for AI-specific training initiatives tailored to the evolving job market (World Economic Forum, 2020).

##### **4.2. Privacy and Security Concerns**

The advent of AI-driven data analytics has led to increased concerns about privacy and data security. Zuboff's (2015) concept of "surveillance capitalism" has been widely discussed as it pertains to AI's capacity to collect and analyze vast amounts of personal data, often without user consent. Research by Acquisti et al. (2015) highlights the tension between data utility and privacy, with many studies calling for privacy-preserving techniques, such as federated learning (Yang et al., 2019) and differential privacy (Dwork & Roth, 2014). However, privacy challenges remain, especially with the potential for AI to be used in ways that are intrusive or invasive, underscoring the need for robust regulatory frameworks that prioritize data protection and user rights (Calo, 2017).

##### **4.3. Bias and Fairness in AI Systems**

A significant body of literature addresses the issue of bias in AI, recognizing that algorithms trained on biased datasets can perpetuate and amplify societal inequities. Studies by Barocas and

Selbst (2016) and Noble (2018) illustrate how algorithmic bias can affect marginalized communities, leading to unfair treatment in areas like hiring, lending, and law enforcement. Researchers have proposed various methods to counteract bias, including the use of more representative datasets, bias-detection algorithms, and fairness-aware machine learning models (Hardt et al., 2016). Despite these efforts, challenges persist in creating truly unbiased AI systems, and researchers call for interdisciplinary approaches that incorporate ethics and social science perspectives into AI development (Binns, 2018).

#### **4.4. Ethical and Autonomous Concerns in AI**

The ethical implications of AI, particularly in high-stakes areas like autonomous weapons and medical diagnostics, have received considerable attention in the literature. Wallach and Allen (2008) emphasize the moral responsibility of developers to consider the potential consequences of AI actions, especially in situations where decisions can result in harm. The deployment of AI in autonomous weapons systems raises significant ethical and practical questions, as scholars like Sharkey (2010) and Altmann et al. (2013) argue for clear international guidelines to prevent misuse and ensure human oversight. In healthcare, while AI holds promise for improving diagnostic accuracy, researchers like Obermeyer et al. (2019) have shown how AI-driven diagnostics can inadvertently reinforce healthcare disparities if not carefully designed and monitored.

### **5. CSAE STUDIES**

#### **Case Study 1: AI in Healthcare: IBM Watson for Oncology**

- **Overview:** IBM Watson for Oncology was developed to assist doctors in diagnosing and recommending treatments for cancer patients. Using large datasets of medical research and patient information, Watson aimed to offer precise treatment recommendations based on individual patient data.
- **Challenges:**
  - **Diagnostic Accuracy:** Watson was reported to have made recommendations that sometimes contradicted the opinions of human doctors, leading to concerns about diagnostic reliability and patient safety.
  - **Privacy and Data Security:** Handling sensitive health data posed significant privacy risks, as Watson required access to vast amounts of personal health information.
  - **Equity and Access:** There was criticism over Watson's implementation in settings that had sufficient resources, which could exacerbate disparities in healthcare access between well-funded hospitals and those in low-income regions.
- **Outcomes:** Despite initial promise, IBM Watson for Oncology struggled to deliver consistent, high-quality recommendations and faced ethical scrutiny. This case highlights the challenges of integrating AI into healthcare and the need for extensive testing and validation.

***Case Study 2: Bias in Criminal Justice: COMPAS Recidivism Algorithm***

- **Overview:** COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) is an AI-driven algorithm used in some parts of the United States to assess the likelihood of criminal defendants reoffending. It is commonly used to inform bail, sentencing, and parole decisions.
- **Challenges:**
  - **Bias and Fairness:** Studies, such as the one by ProPublica in 2016, found that COMPAS was biased against Black defendants, who were more likely to be incorrectly classified as high-risk compared to White defendants.
  - **Transparency and Accountability:** COMPAS operates as a “black box,” with limited transparency into how it makes decisions, making it challenging to evaluate or contest its outputs.
  - **Ethical and Legal Implications:** Using an algorithm with potential bias in criminal justice settings raises ethical concerns and risks infringing on defendants’ rights to fair and impartial treatment.
- **Outcomes:** The case of COMPAS underscores the need for fairness-aware algorithms in criminal justice and the importance of transparency and accountability in AI decision-making processes.

***Case Study 3: Job Displacement: Amazon’s Use of Automation in Warehouses***

- **Overview:** Amazon has heavily invested in AI-driven automation, including robots that handle goods and optimize warehouse operations. Automation has allowed Amazon to fulfill orders faster and reduce operational costs.
- **Challenges:**
  - **Employment and Economic Impact:** While automation improved efficiency, it reduced the need for certain human roles, contributing to job displacement. Workers in low-skill roles have been especially vulnerable to layoffs.
  - **Worker Surveillance and Privacy:** Automated tracking systems monitor worker productivity, raising concerns about surveillance and workplace privacy.
  - **Physical and Mental Health:** Studies indicate that warehouse automation may lead to more repetitive tasks for human workers, increasing physical strain and impacting mental health.
- **Outcomes:** This case illustrates the dual impact of automation, where efficiency gains come with social and economic costs, particularly in terms of employment and workplace ethics. Amazon’s experience underscores the importance of workforce reskilling and regulation on workplace AI.

#### ***Case Study 4: Facial Recognition and Privacy Concerns: Clearview AI***

- **Overview:** Clearview AI developed a facial recognition tool that scraped billions of photos from the internet and social media, creating a massive database for use by law enforcement agencies. The tool has been used to identify suspects and assist investigations.
- **Challenges:**
  - **Privacy and Consent:** Clearview's scraping of images without consent raised significant privacy concerns and led to legal challenges worldwide.
  - **Bias and Fairness:** Facial recognition algorithms have been shown to have higher error rates for people of color and women, which could lead to wrongful identifications and further perpetuate biases.
  - **Legal and Ethical Implications:** Clearview's technology has faced numerous lawsuits and bans in countries like Canada and the European Union due to privacy violations, highlighting the lack of regulation on facial recognition technology.
- **Outcomes:** Clearview AI's case highlights the importance of privacy, the ethical use of personal data, and the need for stronger regulatory frameworks to oversee the use of facial recognition technology.

#### ***Case Study 5: Autonomous Vehicles: Tesla's Self-Driving Cars***

- **Overview:** Tesla has been at the forefront of developing autonomous vehicles (AVs), offering features like Autopilot and Full Self-Driving (FSD) capabilities. The technology aims to reduce accidents and improve transportation efficiency.
- **Challenges:**
  - **Safety and Reliability:** There have been multiple reports of accidents involving Tesla's self-driving features, raising concerns about safety and the readiness of AVs for public roads.
  - **Legal and Regulatory Issues:** Existing traffic laws and regulations are not well-suited to autonomous vehicles, leading to legal ambiguity about liability in cases of accidents.
  - **Ethical Decision-Making:** Autonomous vehicles face ethical dilemmas in decision-making, such as how to handle unavoidable accidents. These situations raise questions about moral responsibility and accountability in AI-driven machines.
- **Outcomes:** Tesla's journey with self-driving technology underscores the challenges of ensuring safety, developing suitable regulations, and addressing ethical questions in AI deployment in public spaces.

## **6. ETHICAL CONSIDERATIONS**

The ethical considerations surrounding AI highlight the need for careful, responsible development that prioritizes human rights, fairness, transparency, and accountability. By addressing biases,

protecting privacy, and ensuring human-centered design, AI can be developed and used ethically, fostering public trust and maximizing societal benefits. To achieve this, ongoing collaboration among policymakers, technologists, and ethicists is essential to establish and enforce ethical standards that evolve alongside AI technology.

## **6.1. Transparency and Accountability**

Transparency and accountability are essential to responsible AI development, fostering trust, protecting individual rights, and supporting ethical decision-making. By making AI systems explainable, defining clear accountability structures, and establishing mechanisms for recourse, society can mitigate the risks associated with AI while maximizing its benefits. Addressing transparency and accountability will require collaboration across sectors, continuous oversight, and an adaptive approach to regulation as AI continues to evolve.

### **6.1.1. The “Black Box” Problem in AI**

The black box problem in AI highlights a significant tension between maximizing performance and ensuring accountability. Without transparency, AI decisions are challenging to interpret, creating issues in assigning responsibility, complying with regulations, and detecting biases. Efforts to address this problem—through explainable AI, accountability frameworks, and regulatory standards—are crucial for responsible AI development. By making AI systems more interpretable, society can harness AI’s potential benefits while safeguarding against misuse and ensuring that decisions remain fair, accountable, and transparent.

## **6.2. Human-AI Interaction and Trust**

Trust in AI is critical for successful human-AI interaction and relies on transparency, accountability, fairness, and ethical design. Building trust is not a one-time achievement but an ongoing process that requires consistent reliability, user engagement, and sensitivity to ethical considerations. Through transparent communication, user-centric design, and accountable practices, AI can become a trusted partner in various applications, empowering people to interact confidently and responsibly with technology.

Building public trust in AI and establishing robust ethical standards is a collaborative effort that requires transparency, accountability, and a commitment to fairness and privacy. By developing regulatory frameworks, fostering a culture of responsibility, and ensuring that AI systems operate with fairness and respect for individual rights, society can create an environment in which AI becomes a trusted and reliable partner in addressing complex challenges. Setting ethical standards and continually updating them as technology evolves will allow AI to contribute meaningfully and responsibly to the betterment of society.

## **7. CONCLUSION**

Harnessing AI’s transformative potential while preserving human dignity and rights is paramount. This requires collaborative, inclusive efforts among governments, industry, academia, and the public

to establish ethical, transparent, and accountable practices. With a balanced approach, society can leverage AI to improve quality of life, promote innovation, and support societal well-being, while upholding the principles of equality, fairness, and respect for human rights. By navigating these complexities thoughtfully, we can shape a future where AI serves as a positive force aligned with our shared values and aspirations.

## 8. FUTURE DIRECTIONS FOR RESEARCH IN ADDRESSING AI CHALLENGES

To address the societal challenges posed by AI, future research should prioritize ethical, equitable, and human-centered approaches that align with fundamental human values. Key research areas include developing comprehensive ethical AI frameworks to ensure principles like fairness, accountability, and transparency are integral to AI design and deployment. Bias mitigation techniques are essential for promoting fairness by reducing systemic biases within data and algorithms. Human-centered design further prioritizes user needs, building trust and ensuring that AI systems operate ethically and inclusively.

Additionally, regulatory and policy research is necessary to create adaptable frameworks that keep pace with AI advancements, while socioeconomic studies can provide insight into the broader impacts on jobs and inequality, guiding policies for workforce transition. Privacy-preserving technologies, such as federated learning, will address data security concerns, balancing utility and privacy rights.

In healthcare, AI holds transformative potential, and research should focus on developing tools that enhance diagnostics and patient care while addressing privacy and equity issues. Public engagement research will be critical to fostering an informed public, while longitudinal studies on trust can reveal how to enhance public acceptance of AI over time.

Finally, interdisciplinary collaboration is crucial, bringing together insights from various fields to create holistic solutions that address AI's diverse societal impacts. Together, these research directions will guide AI's development towards outcomes that prioritize societal well-being, ethical integrity, and technological innovation.

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# Impact of PM Surya Ghar Muft Bijli Yojana on Rural Electrification and Socioeconomic Development in Uttar Pradesh

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## ABSTRACT

*The PM Surya Ghar Muft Bijli Yojana, a significant initiative launched by the Government of India, aims to enhance rural electrification through the provision of free electricity connections to underserved households. The PM Surya Ghar Muft Bijli Yojana, launched in 2022, aims to provide free electricity connections to eligible households in Uttar Pradesh, addressing the critical issue of energy access in rural areas. This study examines the scheme's implementation and its socioeconomic impacts, highlighting changes in rural electrification rates, which increased from approximately 80% to over 90% within two years. The research employs a mixed-methods approach, combining quantitative data analysis with qualitative case studies from various villages. This paper explores the impact of the scheme on rural electrification rates and its subsequent influence on socioeconomic development in Uttar Pradesh. Through a mixed-methods approach, including quantitative data analysis and qualitative case studies, the research assesses how access to electricity has transformed lives in rural communities, improving education, health, and economic opportunities.*

*Findings indicate that the scheme has benefited over one million households, significantly reducing electricity bills by 30-50% and generating approximately 50,000 jobs in the solar sector. Furthermore, improvements in electricity access have positively affected education, health services, and local economies, empowering women and enhancing agricultural productivity.*

*Despite its successes, the implementation of the scheme faces challenges, including a lack of awareness among potential beneficiaries, inadequate infrastructure, and high initial costs of solar installations. The study recommends increasing awareness campaigns, improving infrastructure, and expanding the scope of the scheme to include off-grid systems to ensure equitable access to electricity for all households. Overall, the PM Surya Ghar Muft Bijli Yojana presents a transformative opportunity for rural electrification and socioeconomic development in Uttar Pradesh.*

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## 1. Introduction

### About the Scheme (PM Surya Ghar Muft Bijli Yojana)

The PM Surya Ghar Muft Bijli Yojana, launched in 2022, aims to provide free electricity connections to eligible households, thereby addressing the longstanding issue of energy access. This paper investigates the scheme's implementation in Uttar Pradesh, the most populous state in India, and evaluates its impact on electrification and community well-being.

A 1 kW rooftop solar system generally requires 10 sq. meters of shadow-free area. However, actual area requirements may vary depending on the efficiency of solar module, their placement, etc. On a clear sunny day, a 1 kWp RTS system can generate 4 to 5.5 units of electricity.

### The PM Surya Ghar Muft Bijli Yojana aims to provide:

- Free electricity connections to below-poverty-line households.
- Promotion of solar energy to ensure sustainable energy supply.
- Streamlined application processes through digital platforms.

### Who are eligible to apply for the Scheme?

- The applicant must be an Indian citizen.
- Must own a house with a roof that is suitable for installing solar panels.
- The household must have a valid electricity connection.
- The household must not have availed of any other subsidy for solar panels

### Subsidy for residential households

Solar Plant	Central Subsidy	State Subsidy	Total Subsidy
1 kW	30000	15000	45000
2kW	60000	30000	90000
3kW	78000	30000	108000
More than 3 kW to 10kW	78000	30000	108000

### Subsidy for Group Housing Society/ Resident Welfare Association (GHS/RWA):-

Rs. 18,000 per kW for common facilities, including EV charging, up to 500 kW capacity (@3 kW per house) with the upper limit being inclusive of individual rooftop plants installed by individual residents in the GHS/RWA.

### Suitable Rooftop Solar Plant Capacity for households

Average Monthly Electricity Consumption (units)	Suitable Rooftop Solar Plant Capacity
0-150	1 – 2 kW
150-300	2 – 3 kW
>300 Above	3 kW

## Application Process for Central Government Subsidy

### Steps to apply for rooftop solar:

Step 1	Register in the portal with the following point number one select your state select your district select Electricity Distribution Company enter your consumer account number enter mobile
Step 2	Login with mobile number apply for rooftop.
Step 3	Once you get the feasibility approval get the plant installed by any of the received registered vendor in your DISCOM
Step 4	Once installation is completed submit the plant detail and apply for net metre.
Step 5	Commissioning certificate will be generated from the portal after installation of net metre and inspection by DISCOM
Step 6	Once you get the commissioning report submit the bank account details and a cancelled cheque through the portal you will receive your subsidy in your bank account within 30 days.

### Document required to apply for the scheme to avail the Subsidy

To certify his/her eligibility, consumers must submit some essential documents, the list of which is as follows:

- Aadhar card
- PAN
- Bank Passbook
- Mobile number
- Electricity connection certificate
- Passport-sized photo, etc.

**How to Avail State Subsidy:** After Disbursal of Central Financial Assistance (CFA) through National Portal, UPNEDA releases The State Subsidy to all Eligible Consumers.

### Standard Operating Procedure (SOP)

S. No.	Activity	Responsibility	Maximum Time Period
1.	Submission of Application	Consumer	-
2.	Acknowledgment of Application	DISCOM/UPNEDA	1Day
3.	Site Verification and Technical Feasibility	DISCOM	7Days
4.	Installation of Rooftop Solar System	Vendor	90Days
5.	Testing of Solar Power Plant and Net Metering	DISCOM	7 Days from Depositing of meter
6.	Execution of net metering agreement	DISCOM	3 Days from Submission of Draft agreement
7.	Commissioning/Connection of Roof top System	DISCOM	3 Days after net Metering agreement
8.	Issuance of Joint Commissioning Report	DISCOM, Vendor and Beneficiary	1 Day after Commissioning
9.	Release of Central Financial assistance to consumers	MNRE	30 Days after issuance of JCR
10.	Release of State Financial assistance to consumers	UPNEDA	15 Days after issuance of JCR

## 2. Objectives of the Study

- To assess the changes in rural electrification rates in Uttar Pradesh post-implementation of the PM Surya Ghar Muft Bijli Yojana.
- To evaluate the socioeconomic impacts of electrification on education, health, and local economies.
- To identify challenges faced during the implementation of the scheme.

## 3. Methodology

The research employs a mixed-methods approach:

- **Quantitative Analysis:** Data on electrification rates, household connections, and socioeconomic indicators from government reports and surveys.
- **Qualitative Analysis:** interviews with beneficiaries and Vendors.

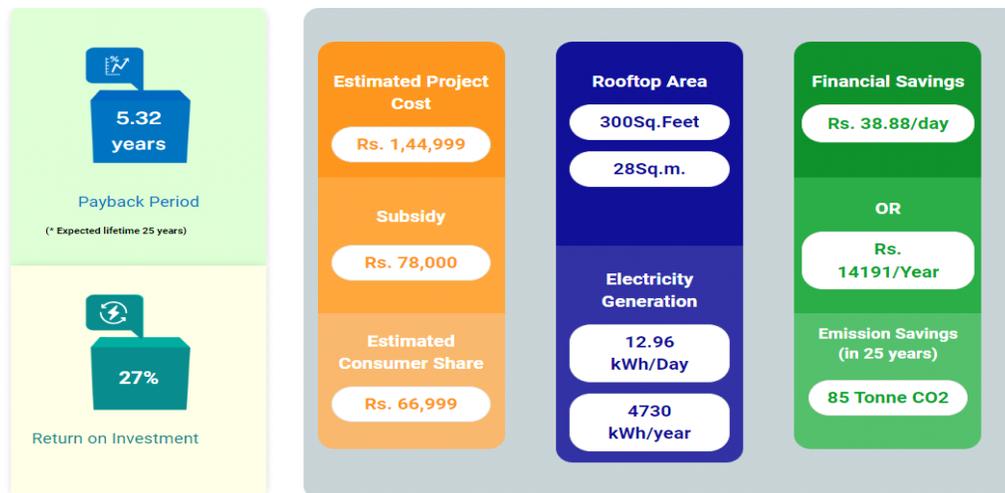
## 4. Data and Analysis

The Government of India has approved the PM Surya Ghar: Muft Bijli Yojana on 29th February 2024 to increase the share of solar rooftop capacity and empower residential households to generate their own electricity. The scheme has an outlay of Rs 75,021 crore and is to be implemented till FY 2026-27. The administrative approval was granted to the scheme vide Order No. 318/17/2024-Grid Connected Rooftop dated 16th March 2024. Under the scheme, all Government rooftops under the administrative control of Central Government Ministries/Departments, including autonomous bodies, subordinate offices etc. shall be saturated with rooftop solar to the extent that is technically feasible by 31st December, 2025. Ministries may utilize available rooftop space for such saturation, through the RESCO mode or capex mode, on a priority basis. Through high levels of automation and energy generation data flows, investment in RESCO models in Government rooftops may be de-risked and enforcement and monitoring of contracts enabled without major administrative overheads. State/UTs shall be encouraged to undertake a similar exercise for RTS saturation in their buildings. Rural electrification is a critical factor in socioeconomic development, especially in a country like India, where a significant portion of the population resides in rural areas.

### Cost Benefit Analysis

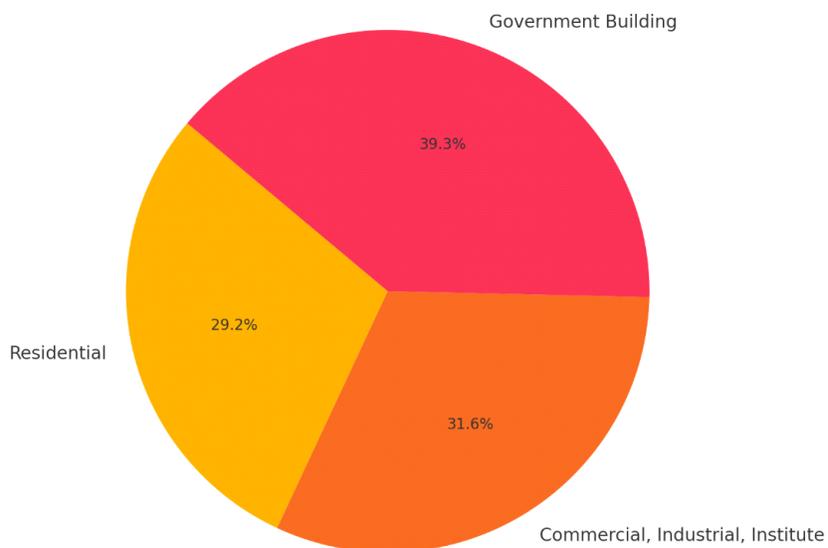
The recommended capacity for rooftop solar plant as per 3 kW of electricity consumption load. The average Payback Period is 5.32 Years, and maximum benefit of subsidy by the Central Government is Rs.78000/-.

Calculation is indicative in nature. Actual numbers may vary. Maximum capacity for availing subsidy is 10kW.



Details of Solar Rooftops Installed at Different Consumer Premises in Uttar Pradesh			
S.no.	Consumer type	Numbers of Consumer	Installed capacity (MW)
1	Residential	23042	110.2
2	Commercial, Industrial, Institute	470	119.3
3	Government Building	1177	148.3
	<b>Total</b>	<b>24689</b>	<b>378</b>

Installed Capacity of Solar Rooftops in Uttar Pradesh by Consumer Type



## Statistics on Outcomes:

### Summary of the PM Surya Ghar Yojana in Uttar Pradesh at a glance:

Category	Statistics
Installed Capacity	5,000 MW
Number of Beneficiaries	Over 1 million households and businesses
Total Subsidy Distributed	Rs. 1,200 crores
Subsidy Coverage	20-40% of installation costs
Average Reduction in Bills	30-50%
Job Creation	Approximately 50,000 jobs
Reduction in CO <sub>2</sub> Emissions	Over 3 million tons annually
Future Capacity Goal	15,000 MW by 2025

### Installed Capacity

As of the latest data, Uttar Pradesh has achieved approximately 5,000 MW of installed solar capacity, with a significant portion attributed to the PM Suryagrah Yojana.

**Number of Beneficiaries:** The scheme has benefited over 1 million households, small businesses, and institutions across the state, enhancing energy access.

**Subsidy Distribution:** The government has disbursed approximately ₹ 1,200 crores in subsidies to support solar installations, with subsidies covering 20-40% of the installation costs.

**Reduction in Electricity Bills:** Households and businesses that installed solar systems report an average reduction of 30-50% in their electricity bills, leading to substantial annual savings.

**Job Creation:** The implementation of the scheme has created around 50,000 direct and indirect jobs in the solar installation and maintenance sector.

### Impact Assessment

**Energy Security:** Increased solar energy generation contributes to energy security and reduces dependence on fossil fuels, with a noticeable reduction in the state's carbon emissions.

**Rural Electrification:** The scheme has significantly improved energy access in rural areas, where grid connectivity is often limited. This has empowered rural households with reliable electricity.

**Economic Growth:** The adoption of solar energy systems is stimulating local economies by reducing energy costs for small businesses and enabling them to invest savings into growth.

**Awareness and Adoption:** Awareness campaigns have led to a positive shift in public perception of renewable energy, with many communities now advocating for solar installations.

**Environmental Benefits:** The scheme supports the state’s commitment to renewable energy, contributing to an estimated reduction of over 3 million tons of CO2 emissions annually.

### Future Projections

**Scaling Up:** Uttar Pradesh aims to achieve 15,000 MW of solar capacity by 2025, with continued support through the PM Suryagrah Yojana.

**Technological Integration:** Plans are in place to integrate solar energy systems with battery storage and smart grid technologies, enhancing energy management and reliability.

## 5. Findings:

### Summary Table of Impact

Metric	Pre-Yojana Status	Expected Impact Post-Yojana
Rural Electrification Coverage	~86% (often unreliable)	Increased reliability and potential increase in coverage
Household Savings	Minimal or no savings	Rs. 1,000-1,500/month per household on electricity
Carbon Emissions Reduction	Limited due to fossil fuel reliance	Up to 1.2 tonnes of CO <sub>2</sub> reduced per kW per year
Employment in Solar Sector	~5.65 jobs per MW (current rate)	Potential to create 50,000+ jobs in rural areas
Educational Impact	1-2 hours of study disrupted per day	Consistent access to lighting and digital resources
Agricultural Productivity	~30% less productivity due to power issues	30-40% increased yield with reliable solar-powered pumps

### Impact on Rural Electrification

#### Electrification Rates

- Rural electrification rates have risen from approximately 80% to over 90% within two years.

#### Quality of Supply

- Analysis indicates improvements in the reliability of electricity supply, although regional disparities persist.

### Impact on Socioeconomic Development

#### Education

- Electrification has facilitated longer study hours for students, increased access to online educational resources, and improved overall literacy rates.

#### Health Services

- Health centers report improved services due to reliable electricity for lighting, refrigeration of medicines, and operation of medical equipment.

### Economic Opportunities

- Small businesses have flourished, with entrepreneurs utilizing electricity for operations, leading to increased employment and income levels.

### Women Empowerment

- Access to electricity has reduced household burdens on women, enabling them to engage in income-generating activities and improve their social standing.

## 8. Challenges and Limitations

### Challenges faced during the implementation of the Pradhan Mantri Surya Ghar Yojana (PMSGY):

1. Required Huge Space of House Roof: Roof of a House is also very useful for a lower income/ middle income, group family, they often use their roof for their routine work like to dry clothes and other household. They hesitate to install solar rooftops because take 10 Sq. meter to install 1 kW of Solar Panels.
2. Subsidy is useful for on-grid solar systems only which are unable to store Electricity.
3. Scheme does not cover off-grid solar systems (off-grid solar systems can Store Electricity)
4. After installation people are still dependent on Government supply and have to pay costly electricity bills.

-	Tariff Excluding Subsidy	Tariff Payable
Upto 100 kWh / month	Rs. 6.50 / kWh	Rs. 5.50 / kWh
101-150 kWh / month	Rs. 6.50 / kWh	Rs. 5.50 / kWh
151-300 kWh / month	Rs. 6.50 / kWh	Rs. 6.00 / kWh
Above 300 kWh / month	Rs. 6.50 / kWh	Rs. 6.50 / kWh

The Uttar Pradesh Electricity Regulatory Commission (UPERC) recently adopted the tariff of ₹ 2.98 (~\$0.037)/kWh to procure 125 MW of solar power from grid-connected projects to be installed under the ‘Solar Parks and Ultra Mega Solar Power Projects Program’ of the Ministry of New and Renewable Energy (MNRE). But in case of households, the solar-generated electricity tariff rate is ₹ 2.40/- **only**.

5. Faulty bill generation by the electricity department
6. Problem with Govt. Portal to apply(Like Server busy Issue to respond)
7. Customers are not aware of reading the meter
8. **Awareness and Understanding:** According to a survey conducted by the **Ministry of New and Renewable Energy (MNRE)**, nearly **60% of the targeted beneficiaries** were not aware of the scheme or how solar energy systems work.
9. **High Initial Costs:** The average cost of installing a solar rooftop system in India ranges from

- INR 60,000 to INR 1,00,000 for a 1 kW system. Even with subsidies, households may still need to invest approximately 30-40% of the total cost upfront.
10. **Technical Challenges:** The MNRE estimates that around **25% of solar installations** face technical issues, often due to inadequate skilled labor and quality control during installation. The technical manpower of the electricity department is facing the problem of configuring the smart meter due to lack of proper training
  11. **Financing Issues:** A report by the **International Renewable Energy Agency (IRENA)** states that access to finance remains a major barrier, with only **10% of potential beneficiaries** able to secure loans for solar installations. **The complicated process of bank loans to avail of the benefit of PM SURY Ghar Yojna is also a big challenge( specially for lower-income group families residing in villages).**
  12. **Policy and Regulatory Hurdles:** Different states have varying policies; as of 2023, **over 50%** of states had not yet implemented a comprehensive solar policy, causing inconsistency and confusion.
  13. **Land and Space Constraints:** A study indicated that in **urban areas**, about **70% of households** do not have adequate roof space for solar panel installation, limiting participation in the scheme.
  14. **Maintenance and Support:** Post-installation, approximately **40% of users** reported difficulties in accessing maintenance services, impacting the longevity and efficiency of solar systems.
  15. **Interconnection Issues:** According to the **Central Electricity Authority**, about **15-20% of solar projects** face delays due to grid connectivity issues, particularly in rural areas.
  16. **Data Management and Monitoring:** Ineffective data management has led to an inability to track the performance of solar installations accurately, with **over 60% of installations** lacking a monitoring system.
  17. **Environmental and Local Factors:** A significant portion of installations (approximately **20%**) are affected by local climatic conditions, such as dust and pollution, which can reduce the efficiency of solar panels.

## 9. Conclusion

The PM Surya Ghar Muft Bijli Yojana has significantly impacted rural electrification in Uttar Pradesh, fostering socioeconomic development. However, for sustained success, ongoing efforts are needed to address implementation challenges and ensure equitable access to electricity for all.

- **Rural Electrification Rates:** As of recent data, about 90% of rural households in India have access to electricity, but many still face issues with unreliable power supply. In Uttar Pradesh, access is closer to 86%, with significant variation in quality and reliability across rural regions.
- **Power Cuts:** Rural areas in Uttar Pradesh experience frequent power outages, with many villages receiving only 8-10 hours of electricity per day. This unreliable supply affects daily life, agriculture, and small businesses.
- **Solar Irradiance:** Uttar Pradesh receives an average solar irradiance of 5.5 kWh/m<sup>2</sup>/day, which

is favorable for solar energy generation. This level of sunlight is sufficient to generate a substantial amount of electricity through rooftop solar installations year-round.

- **Installed Solar Capacity:** As of recent years, Uttar Pradesh has about 1.3 GW of installed solar capacity, with significant scope for expansion to meet its renewable energy target of 10.7 GW by 2027.
- **Target for Rooftop Solar:** The state has set a target of 4.3 GW of rooftop solar capacity by 2027, with a focus on residential rooftops, including rural households.
- **Savings for Households:** On average, a 1 kW rooftop solar system can save around Rs. 1,000-1,500 per month on electricity bills for a rural household. Assuming an average rural household consumes about 90 kWh/month, the savings could represent a significant reduction in monthly expenses.
- **Return on Investment (ROI):** A rooftop solar system typically has a payback period of 5-7 years. With a lifespan of around 25 years, households can enjoy 18-20 years of free electricity, which greatly increases the ROI.
- **Subsidies and Reduced Costs:** Under the PM Surya Ghar Muft Bijli Yojana, households are expected to receive subsidies covering up to 40-60% of the installation cost. This support reduces the financial burden on rural families, making solar energy more accessible.
- **Job Creation:** The solar energy sector could create approximately 50,000 jobs in Uttar Pradesh in roles such as installation, maintenance, and sales of solar products. Nationwide, it is estimated that every megawatt (MW) of solar energy generates about 5.65 jobs, which could significantly benefit rural areas.
- **Impact on Agriculture:** Farmers with solar-powered water pumps can increase crop yield by 30-40% due to consistent irrigation. Solar energy enables farmers to access water without relying on erratic grid electricity or costly diesel generators.
- **Carbon Emissions Reduction:** Every kW of solar energy can reduce CO<sub>2</sub> emissions by approximately 1.2 tonnes per year. For example, a 3 kW rooftop system can save around 3.6 tonnes of CO<sub>2</sub> annually, leading to a reduction of about 90 tonnes of CO<sub>2</sub> over 25 years.
- **Diesel Displacement:** Solar energy adoption in rural areas can reduce the reliance on diesel generators. An estimated 10,000 rural households in Uttar Pradesh use diesel generators, consuming around 4 liters of diesel per day. Transitioning to solar power could save approximately 14.6 million liters of diesel annually, significantly reducing emissions and costs.
- **Impact on Education:** Access to reliable electricity has been shown to increase study time for children by 1-2 hours per day in rural households. In Uttar Pradesh, which has a literacy rate of about 67.68%, increased study time could contribute to improved educational outcomes over time.
- **Digital Literacy:** Electrified households are more likely to own mobile phones, which can lead to higher digital literacy rates. Currently, around 35-40% of rural Uttar Pradesh residents have access to internet services; solar power can help improve access to online educational resources.

## 10. Recommendations

- Increase awareness campaigns to educate rural populations about the scheme (camping at the village level).
- Invest in infrastructure improvements to ensure reliable electricity distribution.
- Monitor and evaluate the program continuously to adapt to emerging challenges.
- Increase the tariff rate of power generated from solar systems.
- Government must give strict direction to banks to provide hassle-free Loan to install solar systems under the scheme.
- Central Government must include the off-grid solar system in PM Surya Ghar Yojna, also.
- Provide Proper training to The technical manpower of the electricity department.

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# कोविड-19 के दौरान ऑनलाइन शिक्षा और अध्यापकों पर इसका प्रभाव

रेनू यादव<sup>1</sup> एवं राम सरदार यादव<sup>2</sup>

## पृष्ठभूमि

कोविड महामारी के परिणामस्वरूप शैक्षणिक संस्थान पहले अस्थायी और फिर दीर्घकालिक रूप से बंद हो गए, जिससे ऑनलाइन और दूरस्थ शिक्षा को अपनाने की आवश्यकता पैदा हुई। ऑनलाइन शिक्षा प्लेटफार्मों में परिवर्तन ने शिक्षकों के लिए अभूतपूर्व चुनौतियाँ पेश की। इस शोध का उद्देश्य अध्यापकों के हितों पर ऑनलाइन शिक्षा में परिवर्तनों के प्रभावों की जांच करना था।

कोविड-19 महामारी ने दुनिया भर में शिक्षा प्रणाली को एक अभूतपूर्व चुनौती के रूप में प्रस्तुत किया। इस संकट के समय में शिक्षकों की गुणवत्ता और शिक्षा के प्रति उनका दृष्टिकोण विशेष रूप से महत्वपूर्ण हो गया। यह अध्ययन कोविड-19 महामारी के दौरान गुणवत्तापूर्ण शिक्षक शिक्षा के विभिन्न पहलुओं का विश्लेषण करता है। अध्ययन में ऑनलाइन शिक्षा, डिजिटल साक्षरता, शिक्षक प्रशिक्षण, और शिक्षकों की मनोवैज्ञानिक स्थिति जैसे महत्वपूर्ण कारकों पर ध्यान केंद्रित किया गया है।

## प्रस्तावना

04 नवंबर, 2021 तक 219 देश और क्षेत्र नोवेल कोरोनावायरस से प्रभावित हो चुके थे, जिससे दुनिया भर में 50 लाख लोगों की मौत हो गई थी और 248 मिलियन लोग संक्रमित हुए थे। भारत में 10 लाख से ज्यादा कोविड -19 के केश दर्ज किया गया। भारत अमेरिका के बाद दूसरा सबसे अधिक प्रभावित देश था। मार्च 2020 में भारत सहित कई देशों द्वारा जबरन लॉकडाउन लगाया गया था। परिणामस्वरूप, कई संस्थान जिनमें शैक्षणिक संस्थान भी शामिल हैं, अस्थायी रूप से बंद कर दिए गए। तब से वायरस के प्रसार को रोकने के लिए कई नीतियां और रणनीतियां लागू की गई हैं। इनमें

1. शोध छात्रा शिक्षा संकाय, कामता प्रसाद सुन्दरलाल साकेत महाविद्यालय, अयोध्या, डॉ0 राममनोहर लोहिया अवध क्रिविद्यालय, अयोध्या।
2. आचार्य शिक्षा संकाय, कामता प्रसाद सुन्दरलाल साकेत महाविद्यालय, अयोध्या, डॉ0 राममनोहर लोहिया अवध विश्वविद्यालय, अयोध्या।

सार्वजनिक बैठकों से बचना, मास्क पहनना, बार-बार हाथ धोना और लोगों से दूरी बनाए रखना शामिल है। मानव अस्तित्व के सभी पहलू महामारी से गंभीर रूप से परेशान हो गए हैं और काम और शिक्षा के लिए नई दिनचर्या जिनमें से कई घर तक ही सीमित हैं, आवश्यक हो गई हैं। व्यापक सीमाओं के परिणामस्वरूप कर्मचारियों को परिवार के घर के भीतर ही कार्यस्थल बनाने के लिए मजबूर किया गया है, जबकि अध्यापकों और विद्यार्थियों को भी घरों में कक्षाएं आयोजित करने के लिए मजबूर किया गया है। महामारी के कारण 190 से अधिक देशों में लगभग 1.6 बिलियन विद्यार्थियों की शिक्षा छूट गई है। दुनिया भर में 94 प्रतिशत विद्यार्थियों ने स्कूल बन्द होने का अनुभव किया है, और इनमें से 99 प्रतिशत विद्यार्थी निम्न से मध्यम आय वाले देशों से हैं। भौतिक शिक्षा व्यवस्था के बन्द हो जाने से प्राथमिक से लेकर उच्च शिक्षा तक के लाखों विद्यार्थी प्रभावित हुए। आमने-सामने की शिक्षा व्यवस्था रुक जाने से दूरस्थ शिक्षा की बढ़ोत्तरी हुई जिससे राज्यवार और उनकी शिक्षा प्रणालियों तथा संसाधनों की असमानताओं पर प्रकाश पड़ा। यह असमानताएं शिक्षकों की क्षमता में, सीखने के परिणाम, सरकार द्वारा प्रदान किया गया बुनियादी ढांचा और प्रौद्योगिकी के लिए पहुंच के रूप में दिखाई देता है। कोविड-19 के दौरान स्कूलों पर एक स्थिति पर रिपोर्ट द्वारा बताया गया कि लॉकडाउन के दौरान शैक्षणिक सामग्री 80 प्रतिशत से अधिक ओडिशा, बिहार, झारखंड, छत्तीसगढ़ और उत्तर प्रदेश को नहीं मिल रहा है।

विद्यार्थियों की संज्ञानात्मक सक्रियता को सक्षम करना दूरस्थ शिक्षा और शिक्षण शैलियों के उपयोग में एक महत्वपूर्ण बाधा साबित हुआ है। अध्यापकों ने बताया है कि संचार के दैनिक साधन के रूप में ऑनलाइन शिक्षण का उपयोग करना चुनौतीपूर्ण लगता है। प्रशिक्षक विद्यार्थियों की बहुत कम या बिना किसी व्यस्तता के परीक्षा देने को लेकर भी चिंतित हैं। अनियमित इंटरनेट कनेक्टिविटी के साथ-साथ स्मार्ट डिवाइस की उपलब्धता की कमी ने अध्यापक – विद्यार्थी संपर्क को असंतोषजनक बना दिया है। कुछ शिक्षकों ने अपने विद्यार्थियों को शामिल करने के लिए सही संसाधनों और मीडिया को चुनने के दबाव के कारण अंतिम उपाय के रूप में पूर्व-रिकॉर्ड किए गए वीडियो की ओर रुख किया है, जिसने बातचीत को और हतोत्साहित किया है। अर्ध-शहरी क्षेत्रों में शिक्षकों को डिजिटल गैजेट, बिजली स्रोतों और हाई-स्पीड इंटरनेट तक पहुंच सुनिश्चित करने के लिए अतिरिक्त भुगतान करना पड़ता है, जहां अधिकांश शिक्षण ऑनलाइन किया जाता है।

इस सन्दर्भ में, यह अध्ययन मौजूदा अन्तरालों को भरने की कोशिश कर रहा है और उन उथल-पुथल पर ध्यान केंद्रित करता है जिनसे अध्यापकों को कोविड प्रतिबन्धों को समायोजित करने और अभी भी शिक्षा प्रदान करने के लिए गुजरना पड़ा। यह अध्यापकों के दृष्टिकोण से प्रदान की जाने वाली शिक्षा की गुणवत्ता के परिणामों का गहन विश्लेषण भी प्रदान करता है। इसमें ऑनलाइन शिक्षा के सफल कार्यान्वयन के लिए आवश्यक बुनियादी ढांचे तक पहुंच में भौगोलिक असमानताओं पर चर्चा की गई है। विशेष रूप से, यह निम्नलिखित महत्वपूर्ण प्रश्नों को सम्बोधित करता है:

- शिक्षकों ने नई वर्चुअल प्रणाली को कितने प्रभावी ढंग से अपनाया है?

- ऑनलाइन शिक्षा ने शिक्षण की गुणवत्ता को कैसे प्रभावित किया है?
- ऑनलाइन शिक्षा ने शिक्षकों के समग्र स्वास्थ्य को कैसे प्रभावित किया है?

### सम्बन्धित साहित्य की समीक्षा

सेबल टाडेसे, वर्कु मुलुये (2020) ने देखा कि कोरोना वायरस दुनिया में शिक्षा व्यवस्था को प्रभावित कर रहा है। कोरोना वायरस के प्रसार को नियंत्रित करने के लिए स्कूल, कॉलेज और विश्वविद्यालय बंद हैं। स्कूल बंद होने से छात्रों, शिक्षकों और अभिभावकों के लिए मुश्किलें आती हैं। इसलिए, दूरस्थ शिक्षा शिक्षा प्रणाली को जारी रखने का एक समाधान है। हालाँकि, विकासशील देशों में नेटवर्क अवसंरचना, कंप्यूटर और इंटरनेट पहुंच की कमी दूरस्थ शिक्षा को चुनौती दे रही है। इस अध्ययन का उद्देश्य विकासशील देशों में शिक्षा प्रणाली पर कोविड-19 महामारी के प्रभाव की समीक्षा करना है। इसलिए, देश शैक्षिक प्रौद्योगिकी, शून्य-शुल्क इंटरनेट शैक्षिक संसाधनों, मुक्त ऑनलाइन शिक्षण संसाधनों और प्रसारण शिक्षण का उपयोग करने की रणनीति तैयार करते हैं। बंदी के दौरान, शैक्षणिक संस्थान पाठ्यक्रम डिजाइन करते हैं, कोरोना वायरस के बाद के लिए शिक्षण-सीखने की रणनीति तैयार करते हैं। शैक्षणिक संस्थान खोई हुई शिक्षा को पुनः प्राप्त करने और स्कूल फिर से खुलने पर छात्रों को स्कूल में वापस लाने के लिए रणनीतियाँ तैयार करते हैं। कोरोना वायरस विकासशील देशों की आमने-सामने की शिक्षा प्रणाली को प्रभावित कर रहा है। इसलिए, विकासशील देशों को प्रसारण शिक्षण, ऑनलाइन शिक्षण और आभासी कक्षा के बुनियादी ढांचे को बढ़ाना चाहिए।

भुला, आर., और लोरेटा, जे. (2020) ने अपने शोध के माध्यम से यह पाया कि जैसे-जैसे देश कोविड-19 के जवाब में खुद का पुनर्निर्माण और पुनर्निर्माण कर रहे हैं, सभी के लिए गुणवत्तापूर्ण शिक्षा का सर्वोत्तम समर्थन कैसे किया जाए, इस पर सोच में तेजी लाने का अवसर है। आने वाले महीनों और वर्षों में, साक्ष्य-से-नीति संगठनों, कार्यान्वयन भागीदारों, शोधकर्ताओं, दाताओं और सरकारों के गठबंधन को सभी के लिए शिक्षा की रणनीति विकसित करने के लिए अपने अनुभवों का निर्माण करना चाहिए जो जे-पीएल और इसी तरह के संगठनों के व्यापक अनुसंधान का उपयोग करते हैं। लम्बी अवधि में, साक्ष्य-सूचित निर्णय और कार्यक्रम जो देश-विशिष्ट परिस्थितियों को ध्यान में रखते हैं, उनमें शिक्षाशास्त्र में सुधार करने, शिक्षकों का समर्थन करने, छात्रों को प्रेरित करने, स्कूल प्रशासन में सुधार करने और सीखने के अनुभव के कई अन्य पहलुओं को सम्बोधित करने की क्षमता है। शायद महामारी का एक सकारात्मक परिणाम यह है कि यह हमें हममें से किसी की भी अपेक्षा से जल्दी कई शेष वैश्विक शैक्षिक चुनौतियों पर काबू पाने के लिए प्रेरित करेगी। हमें आशा है कि हम ऐसा करेंगे।

कुमार, ए., सरकार, एम., डेविस, ई. एवं अन्य (2021) के अनुसार स्वास्थ्य देखभाल करने वाले पेशेवरों की भूमिकाओं और जिम्मेदारियों की जटिल प्रकृति के कारण, इस कार्यबल की शिक्षा बहुआयामी और चुनौतीपूर्ण है। यह शिक्षकों, साथियों, रोगियों से सीखने के विभिन्न स्रोतों पर निर्भर करता है और वर्क इंटीग्रेटेड लर्निंग (डब्ल्यूआई0एल0) पर ध्यान केंद्रित कर सकता है। कोविड-19

महामारी ने सीखने के इन अवसरों में से कई को प्रभावित किया है, विशेष रूप से बड़े समूहों में या साथियों और रोगियों के साथ व्यक्तिगत बातचीत में शामिल होने वाले अवसरों पर। अधिकांश पाठ्यक्रम को ऑनलाइन प्रारूप में अनुकूलित किया गया है, जिसके दीर्घकालिक परिणाम को अभी तक पहचाना नहीं जा सका है। बदले हुए प्रारूप से सीखने की शिक्षा पद्धति पर असर पड़ने की सम्भावना है, जिससे छात्र और शिक्षक दोनों प्रभावित होंगे। इसके लिए पिछले प्रारूप की तुलना में, जहां व्यक्तिगत शिक्षा पर ध्यान केन्द्रित किया गया होगा, ऑनलाइन शिक्षण और सीखने के अनुकूलन के मूल्यांकन के लिए एक व्यवस्थित दृष्टिकोण की आवश्यकता है। प्रस्तावित अध्ययन एक प्रमुख ऑस्ट्रेलियाई विश्वविद्यालय में स्वास्थ्य व्यावसायिक शिक्षा का व्यापक आधारित मूल्यांकन है।

**अलहम्मादी, सलाह (2021)** यह पेपर ई-लर्निंग के रूप में प्रौद्योगिकी का उपयोग करके छात्रों के सीखने के अनुभव की पड़ताल करता है। कोविड-19 महामारी के दौरान उपकरण विशयक इस लेख में इसकी जांच करने के लिए गुणात्मक तरीकों का उपयोग किया गया है। क्या प्रभाव पड़ता है यह समझने के लिए गहन और सतही दृष्टिकोण का उपयोग करके छात्रों के सीखने की गुणवत्ता प्रौद्योगिकी के साथ छात्रों का जुड़ाव। 21 विभिन्न छात्रों के साथ साक्षात्कार आयोजित किए गए। अकादमिक प्रमुख अपनी प्रतिक्रियाओं का मूल्यांकन करने के लिए निगमनात्मक सामग्री विश्लेषण का उपयोग करते हैं। निष्कर्ष बताते हैं उस प्रौद्योगिकी ने कक्षा चर्चा में छात्रों की व्यस्तता बढ़ा दी और छात्र अधिक हो गए व्याख्यान सामग्री के बारे में जानकारी दी। उल्लेखनीय है कि विद्यार्थियों की सोच में कुछ भिन्नताएँ थीं। प्रौद्योगिकी के साथ सीखने के अनुभव की व्याख्या, सीखने की गुणवत्ता में अंतर का संकेत देती है। विशेष रूप से, पिछले ऑनलाइन सत्र और आमने-सामने की तुलना में ग्रेड में सुधार हुआ था कोविड-19 महामारी से पहले सीखने का अनुभव, और कम छूटी हुई विवज थीं विलंबित कार्य। इन परिणामों का उपयोग शिक्षण रणनीतियों और समस्या समाधान को बढ़ाने के लिए किया जा सकता है शिक्षण और सीखने के भीतर वितरण का एक नया तरीका विकसित करना। इसके अलावा, ये निष्कर्ष हैं महामारी के बाद की दुनिया में शिक्षा के भविष्य के लिए महत्वपूर्ण।

**पोखरेल, एस., और छेत्री, आर. (2021)** के अनुसार कोविड-19 महामारी ने मानव इतिहास में शिक्षा प्रणालियों में सबसे बड़ा व्यवधान पैदा किया है, जिससे 200 से अधिक देशों में लगभग 1.6 बिलियन शिक्षार्थी प्रभावित हुए हैं। स्कूलों, संस्थानों और अन्य शिक्षण स्थानों के बंद होने से दुनिया की 94: से अधिक छात्र आबादी प्रभावित हुई है। इससे हमारे जीवन के सभी पहलुओं में दूरगामी परिवर्तन आये हैं। सामाजिक दूरी और प्रतिबंधात्मक आंदोलन नीतियों ने पारंपरिक शैक्षिक प्रथाओं को काफी परेशान किया है। प्रतिबंध में ढील के बाद स्कूलों को फिर से खोलना कई नई मानक संचालन प्रक्रियाओं के साथ एक और चुनौती है। कोविड-19 महामारी के थोड़े से समय के भीतर, कई शोधकर्ताओं ने शिक्षण और सीखने पर अपने कार्यों को अलग-अलग तरीकों से साझा किया है।

**झोंगगेन यू (2021)** कोविड-19 की व्यापक महामारी के साथ, बड़ी संख्या में लोग ऑनलाइन शिक्षण दृष्टिकोण के माध्यम से ज्ञान प्राप्त कर रहे हैं। इस अध्ययन का उद्देश्य यह जांच करना है कि

इस विशेष समय के दौरान ऑनलाइन सीखने की प्रभावशीलता में कैसे सुधार किया जाए। मिश्रित डिजाइन के माध्यम से, इस अध्ययन ने ऑनलाइन सीखने के परिणामों पर शैक्षिक स्तर, लिंग और व्यक्तित्व लक्षणों के प्रभाव का खुलासा किया। यह निष्कर्ष निकाला गया कि स्नातकोत्तर (एन = 599) ने ऑनलाइन सीखने में स्नातक (एन = 553) से बेहतर प्रदर्शन किया, सहमतता, कर्तव्यनिष्ठा और एक नए अनुभव के लिए खुलेपन जैसे मजबूत व्यक्तित्व गुणों वाले शिक्षार्थियों (एन = 1152) ने मजबूत बहिर्मुखता और विक्षिप्तता वाले लोगों से बेहतर प्रदर्शन किया। भविष्य के अनुसंधान से पारस्परिक अंतःक्रियाओं में सुधार हो सकता है और शिक्षार्थियों को ऑनलाइन चर्चा मंच पर शब्द पोस्ट करने के लिए प्रोत्साहित किया जा सकता है, ऑनलाइन शिक्षण को कैसे डिजाइन किया जाए और ऑनलाइन सामग्री की गुणवत्ता और गतिशीलता में सुधार कैसे किया जाए, इस पर ध्यान केंद्रित किया जा सकता है और केवल ऑनलाइन या पारंपरिक के बजाय मिश्रित शिक्षण को उजागर किया जा सकता है जिसमें आमने-सामने सीखना शामिल है।

**मार्क एंथोनी कैमिलेरी (2022)** के इस अध्ययन का उद्देश्य उच्च शिक्षा में सेवा गुणवत्ता पर एक व्यवस्थित समीक्षा प्रस्तुत करना है। इसमें कोरोना वायरस (कोविड-19) महामारी के प्रकोप के बाद उच्च शिक्षण संस्थानों (एचईआई) के सामने आने वाले नवीनतम अवसरों और चुनौतियों के बारे में चर्चा की गई है। अध्ययन अकादमिक और गैर-शैक्षणिक स्रोतों से निष्कर्षों को पकड़ने, विश्लेषण करने और संश्लेषित करने के लिए जमीनी सिद्धांत के आगमनात्मक तर्क पर निर्भर था। कार्यप्रणाली में स्कोपस-अनुक्रमित पत्रिकाओं, अंतर-सरकारी और गैर-सरकारी नीति दस्तावेजों के साथ-साथ विश्वविद्यालय रैंकिंग साइटों और लीग तालिकाओं से एक व्यवस्थित समीक्षा शामिल थी। व्यापक समीक्षा से पता चलता है कि भ्रम अपने संसाधनों, छात्र-केंद्रित शिक्षा, उच्च-प्रभाव अनुसंधान और हितधारक जुड़ाव के संदर्भ में अपनी सेवा की गुणवत्ता का मूल्यांकन करने के लिए विभिन्न प्रदर्शन संकेतक और मैट्रिक्स का उपयोग कर सकते हैं। इसके अलावा, यह पेपर उच्च शिक्षा सेवाओं पर अभूतपूर्व कोविड-19 के प्रभाव के बारे में प्रकाश डालता है। कोविड-19 की पहली लहर के दौरान, उच्च शिक्षा सेवाओं की डिलीवरी पारंपरिक और मिश्रित शिक्षण दृष्टिकोण से पूरी तरह से आभासी और दूरस्थ पाठ्यक्रम वितरण की ओर स्थानांतरित हो गई। दूसरी लहर में, नीति निर्माताओं ने एचईआई पर सामाजिक दूरी और स्वच्छता प्रथाओं सहित कई निवारक उपाय लागू किए।

**तांग, के.एच.डी. (2023)** ने पाया कि कोविड-19 लॉकडाउन ने दूरगामी प्रभावों के साथ सभी स्तरों की शिक्षा में व्यवधान पैदा किया है और वर्तमान शिक्षा मॉडल की कमियों को उजागर किया है। कोविड-19 लॉकडाउन में सख्ती और ढील के चक्र शिक्षा की निरंतरता को अनिश्चितता प्रदान करते हैं। इस लेख का उद्देश्य प्राथमिक, माध्यमिक और तृतीयक शिक्षा पर कोविड-19 के प्रभावों को व्यापक रूप से प्रस्तुत करना और कोविड-19 युग में ध्वनि शैक्षिक प्रथाओं का प्रस्ताव करना है। इस समीक्षा के लिए चैटड। मॉडल के माध्यम से कोविड-19 के शैक्षिक प्रभावों और निहितार्थों से संबंधित पत्रों का चयन किया गया था। समीक्षा से पता चलता है कि दूरस्थ या ऑनलाइन सीखने के बदलाव ने शिक्षकों

और शिक्षार्थियों को प्रभावित किया है, विशेष रूप से शिक्षार्थियों के बीच सीखने की हानि, निर्देशों में सीमाएं, आभासी वातावरण में मूल्यांकन और अनुभवात्मक शिक्षा, प्रौद्योगिकी से संबंधित बाधाएं, कनेक्टिविटी, सीखने के संसाधन और सामग्री, मनोसामाजिक कल्याण के अलावा। ये प्रभाव संसाधनों के वितरण में असमानताओं के साथ-साथ सामाजिक-आर्थिक स्थिति, लिंग, जातीयता, सीखने की क्षमता और भौतिक स्थितियों के कारण होने वाली असमानताओं के कारण बढ़ गए हैं। भविष्य की शैक्षिक प्रथाओं के लिए सिफारिशों में स्वतंत्र और ऑनलाइन सीखने के विकल्पों को शामिल करने के लिए पाठ्यक्रम की अनुकूलनशीलता, निर्बाध सीखने के बदलाव और लचीलेपन के लिए विविध शिक्षण तौर-तरीकों की सहमति, लचीला स्टाफिंग और सीखने का मॉडल, उन्नत समर्थन, सरलीकरण और मानकीकरण के साथ तकनीकी और पाठ्यचर्या नवाचार शामिल हैं। इंटरैक्टिव, उत्तरदायी और प्रामाणिक आभासी वातावरण के रूप में। यह समीक्षा कोविड-19 अनिश्चितता के युग में शिक्षा की निरंतरता और गुणवत्ता सुनिश्चित करते हुए संकट के प्रति शिक्षा की तैयारियों को बढ़ाने में महत्वपूर्ण योगदान देती है।

**बेथहाउसर, बी.ए., बाख-मोर्टेसन, ए.एम. और एंग्जेल, पी. (2023)** ने स्वयं से प्रश्न किया कि कोविड-19 महामारी के दौरान स्कूल जाने वाले बच्चों की सीखने की प्रगति किस हद तक धीमी हो गई है? उन्होंने पाया कि अध्ययनों की बढ़ती संख्या इस प्रश्न का समाधान करती है, लेकिन सन्दर्भ के आधार पर निष्कर्ष भिन्न-भिन्न होते हैं। यहां उन्होंने महामारी के दौरान सीखने की कमी की भयावहता का आकलन करने के लिए 15 देशों में 42 अध्ययनों की पूर्व-पंजीकृत व्यवस्थित समीक्षा, गुणवत्ता मूल्यांकन और मेटा- विश्लेषण करते हैं। हमें सीखने की पर्याप्त कमी (कोहेन का  $d = 0.14, 95$ : आत्मविश्वास अंतराल 0.17 से 0.10) मिलती है, जो महामारी की शुरुआत में उत्पन्न हुई और समय के साथ बनी रहती है। सीखने की कमी विशेष रूप से निम्न सामाजिक-आर्थिक पृष्ठभूमि वाले बच्चों में अधिक है। वे पढ़ने की तुलना में गणित में और उच्च आय वाले देशों की तुलना में मध्यम आय वाले देशों में भी बड़े हैं। कम आय वाले देशों में महामारी के दौरान सीखने की प्रगति पर साक्ष्य की कमी है। भविष्य के अनुसंधान को इस साक्ष्य अंतर को संबोधित करना चाहिए और पूर्वाग्रह के उन सामान्य जोखिमों से बचना चाहिए जिन्हें हम पहचानते हैं।

## विधि

यह शोध साहित्य की एक कथात्मक समीक्षा है जो कि COVID-19 महामारी के दौरान उच्च शिक्षा में छात्रों और शिक्षकों के सामने आने वाली चुनौतियों पर केंद्रित है। यह अध्ययन विभिन्न स्रोतों पर आधारित है, जिनमें अकादमिक डेटाबेस, प्रेस रिपोर्ट, सरकारी और गैर-सरकारी संगठन और अन्य भरोसेमंद स्रोत शामिल हैं। एक साहित्य समीक्षा किसी क्षेत्र के ज्ञान को बढ़ाती है, प्रमुख विचारों को संप्रेषित करती है, और पाठकों को नए दृष्टिकोण प्रदान करती है जिन्हें वास्तविक दुनिया में लागू किया जा सकता है।

कोविड-19 के दौरान ऑनलाइन शिक्षा और अध्यापकों पर इसका प्रभाव को समझने और इसके परिणामों को जानने के लिए सम्बंधित साहित्यों के अध्ययन कि सहायता से निष्कर्षों तक पहुंचा जा सकता है जिसका विवरण महत्वपूर्ण बिन्दुओं के माध्यम से समझा जा सकता है –

### अध्यापक शिक्षा के महत्व पर विचार

शिक्षक शिक्षा का महत्व किसी भी शिक्षा प्रणाली के लिए अत्यधिक महत्वपूर्ण होता है। गुणवत्तापूर्ण शिक्षक शिक्षा न केवल शिक्षकों की व्यक्तिगत और पेशेवर विकास को प्रोत्साहित करती है, बल्कि यह छात्रों की शिक्षा गुणवत्ता पर भी सीधा प्रभाव डालती है। कोविड-19 महामारी के दौरान, जब शिक्षा का स्वरूप एक आभासी माध्यम में बदल गया, तब शिक्षक शिक्षा के महत्व में और भी वृद्धि हुई। शिक्षकों को न केवल डिजिटल उपकरणों का उपयोग करना सीखना पड़ा, बल्कि उन्हें छात्रों के साथ एक नए प्रकार की संचार विधि भी विकसित करनी पड़ी।

### डिजिटल साक्षरता और ऑनलाइन शिक्षा

महामारी के दौरान, डिजिटल साक्षरता एक प्रमुख आवश्यकता बन गई। कई शिक्षकों के लिए यह एक चुनौतीपूर्ण अनुभव था क्योंकि उन्होंने पारंपरिक शिक्षा पद्धतियों का पालन किया था। हालांकि, इस स्थिति ने उन्हें डिजिटल शिक्षा के विभिन्न पहलुओं को सीखने और अपनाने के लिए प्रेरित किया। इसके लिए शिक्षकों को विशेष प्रशिक्षण दिया गया, जिसमें उन्हें विभिन्न ऑनलाइन प्लेटफॉर्मस, शिक्षण सामग्री तैयार करने के नए तरीकों, और छात्रों के साथ प्रभावी संवाद स्थापित करने के तरीके सिखाए गए।

### अध्यापक प्रशिक्षण के नए मानक

कोविड-19 ने शिक्षक प्रशिक्षण के पारंपरिक मानदंडों को चुनौती दी और नए मानकों की आवश्यकता को उजागर किया। अब शिक्षकों को न केवल विषय-वस्तु की गहराई से जानकारी होनी चाहिए, बल्कि उन्हें ऑनलाइन शिक्षण की कला में भी निपुण होना चाहिए। इसने शिक्षक प्रशिक्षण कार्यक्रमों में तकनीकी साक्षरता, ऑनलाइन पाठ्यक्रम निर्माण, और आभासी कक्षाओं में संवाद कौशल को शामिल करने की आवश्यकता को दर्शाया।

### अध्यापकों की मनोवैज्ञानिक स्थिति

महामारी के दौरान शिक्षकों की मनोवैज्ञानिक स्थिति भी एक महत्वपूर्ण कारक रही। महामारी के दौरान शिक्षकों ने अत्यधिक तनाव, अनिश्चितता, और दबाव का सामना किया। ऑनलाइन शिक्षा के दबाव, तकनीकी चुनौतियों, और छात्रों के साथ नए प्रकार के संबंध स्थापित करने के कारण कई शिक्षक मानसिक थकान और तनाव का शिकार हुए। इस परिदृश्य में, मानसिक स्वास्थ्य समर्थन और व्यावसायिक सहयोग का महत्व उजागर हुआ।

## अध्यापकों के बीच डिजिटल विभाजन

महामारी के कारण ई-लर्निंग की ओर तेजी से बदलाव आया है असमानता और ए के लंबे समय से चले आ रहे मुद्दों को प्रकाश में लाया गया। डिजिटल विभाजन जिसे भविष्य में शिक्षा और डिजिटलीकरण नीतियां के आर्थिक द्वारा संबोधित किया जाना चाहिए। जबकि महत्वाकांक्षा ई-लर्निंग का विस्तार करना प्रभावशाली है, अधिकांश सरकार स्कूली शिक्षकों और छात्रों के पास उपकरणों, बुनियादी ढांचे की कमी है और इस डिजिटलीकरण प्रक्रिया का हिस्सा बनने की क्षमता शिक्षकों के सामने आने वाली कुछ प्रमुख चुनौतियाँ हैं-

- **डिजिटल और ई-लर्निंग कौशल में कम क्षमता**— बहुत ही कम अध्यापकों के पास ऑनलाइन शैक्षिक सामग्री वितरण का पूर्व प्रशिक्षण या अनुभव था साथ ही उच्च स्तरीय ऑनलाइन डिजिटल टूल और ऑनलाइन प्लेटफॉर्म का उपयोग करना जानते थे।
- **निम्न प्रणालीगत समर्थन**— शिक्षकों को अपर्याप्तता महसूस हुई सरकार द्वारा समर्थित डिजिटल उपकरणों (मोबाइल फोन, लैपटॉप,) के साथ इंटरनेट कनेक्टिविटी आदि) उन्हें मुहैया नहीं कराया गया।
- **सभी बच्चों तक पहुँच** — सीमित क्षमता के साथ सभी विद्यार्थियों तक पहुँचने में असमर्थता और अच्छी प्रौद्योगिकी तक पहुँच के लिए शिक्षकों को संघर्ष करना पड़ा विशेषकर दूरस्थ शिक्षार्थियों तक।
- **व्यक्तिगत शिक्षण को प्राथमिकता**— शिक्षकों व संघ प्रतिनिधियों के बीच बनी सहमति बच्चों के साथ उस बातचीत को प्रतिस्थापित नहीं किया जा सका विशेषकर समावेशी शिक्षा ग्रहण करने वाले विद्यार्थियों चाहे वह दृश्य-श्रव्य ही क्यों न हो।

## निष्कर्ष

कोविड-19 महामारी के दौरान शिक्षक शिक्षा के परिदृश्य में महत्वपूर्ण परिवर्तन हुए। इस समय ने शिक्षकों को नई तकनीकों और तरीकों को सीखने और अपनाने का अवसर दिया, लेकिन साथ ही यह उनके लिए एक कठिन चुनौती भी साबित हुआ। गुणवत्तापूर्ण शिक्षक शिक्षा के लिए आवश्यक है कि शिक्षकों को न केवल विषय विशेषज्ञता में महारत हासिल हो, बल्कि वे तकनीकी साक्षरता और मानसिक स्वास्थ्य समर्थन के माध्यम से बदलते समय की मांगों के अनुरूप खुद को ढाल सकें। सरकार ने जवाब देने के लिए बड़े प्रयास किए हैं कोविड-19 के प्रभाव और शिक्षा के प्रति इसकी प्रतिबद्धता है महामारी के बावजूद प्रकाशित 2020 एनईपी में परिलक्षित हुआ। के प्रभावों से निपटने के लिए इसका विकेंद्रीकृत दृष्टिकोण इतनी आबादी और विविधता वाले माहौल में कोविड-19 का कोई मतलब नहीं है देश और कुछ राज्यों ने इसके लिए दृष्टिकोण विकसित किया है अन्यत्र उपयोगी ढंग से दोहराया जा सकता है। शिक्षकों ने नई वर्चुअल प्रणाली को कितने प्रभावी ढंग से अपनाया है?

पहला शोध प्रश्न इस बात से संबंधित है कि शिक्षक ऑनलाइन शिक्षण प्रणाली द्वारा लाए गए परिवर्तनों को अपनाने के लिए कितने इच्छुक थे और वे कितनी जल्दी शिक्षा के ऑनलाइन तरीकों को

अपनाने में सक्षम थे। यह जानकारी दिसंबर 2020 से जून 2021 तक एकत्र की गई थी, उस समय शिक्षक महीनों तक स्कूल में तालाबंदी का सामना कर रहे थे और इसलिए उनके पास ऑनलाइन शिक्षण से परिचित होने के लिए कुछ समय था। चूँकि ब्स्टक-19 का प्रसार तेजी से हुआ था और लॉकडाउन का कार्यान्वयन अचानक हुआ था, सरकार और शैक्षणिक संस्थान सीखने के वैकल्पिक तरीकों के लिए तैयार नहीं थे, और शिक्षकों को समायोजन के लिए कुछ समय की आवश्यकता थी। कई अन्य कारकों ने भी ऑनलाइन शिक्षा में परिवर्तन की प्रभावशीलता को प्रभावित किया, अर्थात् विभिन्न प्रकार के संसाधनों और प्रशिक्षण तक पहुंच

- स्मार्ट उपकरणों तक पहुंच लॉकडाउन के दौरान, मांग में वृद्धि के कारण स्मार्ट उपकरणों की कमी हो गई, जिससे कि जो लोग उपकरण खरीदने में सक्षम थे, उन्हें भी खरीदारी के लिए कोई उपकरण उपलब्ध नहीं हो सका। बच्चों के ऑनलाइन कक्षाओं में भाग लेने और परिवार के सदस्यों के घर से काम करने के कारण, परिवारों को केवल कुछ उपकरणों के साथ प्रबंधन करना मुश्किल हो गया, और व्यक्तिगत डिजिटल डिवाइस तक पहुंच कई लोगों के लिए एक जरूरी मामला बन गया।
- इंटरनेट का उपयोग ऑनलाइन शिक्षा के प्रभावी वितरण के लिए इंटरनेट का उपयोग महत्वपूर्ण है। हालाँकि, हमारे सर्वेक्षण से पता चलता है कि इंटरनेट की उपलब्धता में राज्यों के बीच पर्याप्त अंतर के कारण शिक्षकों को अक्सर जुड़े रहने के लिए संघर्ष करना पड़ता है
- दूरस्थ शिक्षा के लिए उपकरण शिक्षकों ने विभिन्न प्रकार के दूरस्थ शिक्षण उपकरणों का उपयोग किया, लेकिन इन उपकरणों तक पहुंच शिक्षक की संबद्धता के आधार पर भिन्न थी। प्रमुख संस्थानों और कोचिंग सेंटर्स के शिक्षक समकालिक पाठ संचालित करने के लिए नियमित रूप से जूम और गूगल मीट ऐप का उपयोग करते हैं। राजकीय महाविद्यालयों के शिक्षकों ने पूर्व-रिकॉर्ड किए गए वीडियो का उपयोग किया जो ल्वनज्जइम पर निःशुल्क उपलब्ध थे। सरकारी स्कूलों में शिक्षकों ने तैयार सामग्री के लिए व्हाट्सएप और पहले से रिकॉर्ड किए गए वीडियो के लिए यूट्यूब सहित विभिन्न प्लेटफार्मों का उपयोग किया।

## 2 ऑनलाइन शिक्षा ने शिक्षण की गुणवत्ता को कैसे प्रभावित किया है?

एक बार जब शिक्षकों ने ऑनलाइन प्रणाली के साथ कुछ परिचितता हासिल कर ली, तो नए प्रश्न उठे कि ऑनलाइन शिक्षा ने सीखने और मूल्यांकन के संदर्भ में शिक्षण की गुणवत्ता को कैसे प्रभावित किया, और शिक्षक शिक्षा प्रदान करने के इस नए तरीके से कितने संतुष्ट थे।

ऑनलाइन मोड की प्रकृति के कारण, शिक्षक भी छात्रों को पढ़ाने के लिए रचनात्मक तरीकों का उपयोग करने में असमर्थ थे। कुछ लोग कक्षा में छात्रों को व्यस्त रखने के लिए भौतिक वस्तुओं का उपयोग करने और भूमिका निभाने के आदी थे, लेकिन उन्हें सीखने को रोमांचक बनाना और अपने छात्रों को आभासी स्थान में संलग्न करना बेहद कठिन लगा।

### 3 ऑनलाइन शिक्षा ने शिक्षक के समग्र स्वास्थ्य को कैसे प्रभावित किया है?

कोविड-19 महामारी की शुरुआत ने एक ऐसी स्थिति पैदा कर दी जिसे बहुत कम लोगों ने अनुभव किया था या जीने की कल्पना भी नहीं की थी। सरकारों और व्यक्तियों ने नई परिस्थितियों के साथ तालमेल बिठाने की पूरी कोशिश की, लेकिन अचानक तालाबंदी, घर की परिधि तक सीमित रहना और घर से काम करने से शिक्षकों और छात्रों सहित कई लोगों के मानसिक और शारीरिक स्वास्थ्य पर प्रतिकूल प्रभाव पड़ा। शारीरिक स्वास्थ्य सम्बन्धी समस्याएं में COVID-19 ने शिक्षकों के जीवन में कई बदलाव लाए हैं। घर में कैद होने, घर से काम करने और वेतनभोगी घरेलू सहायकों की अनुपस्थिति के कारण घरेलू और देखभाल कार्यों का बोझ बढ़ने से शारीरिक कार्यभार बढ़ गया और शिक्षकों के शारीरिक स्वास्थ्य पर इसका प्रतिकूल प्रभाव पड़ा। कोविड-19 महामारी के मनोवैज्ञानिक प्रभावों को प्रबन्धित करना भी मुश्किल साबित हुआ है। सीमित सामाजिक मेलजोल के साथ पूरे दिन घर पर रहने से, महामारी से संबंधित तनाव के अन्य स्रोतों का तो जिक्र ही नहीं, कई लोगों के मानसिक स्वास्थ्य पर असर पड़ा।

#### शैक्षिक निहितार्थ

कोविड-19 महामारी के दौरान शिक्षक शिक्षा का अध्ययन करने से कई शैक्षिक निहितार्थों के साथ मूल्यवान अन्तर्दृष्टि प्राप्त हो सकती है—

- **डिजिटल योग्यता विकास:** अध्ययन शिक्षकों के बीच डिजिटल साक्षरता और क्षमता के महत्व पर प्रकाश डाल सकता है। शिक्षक शिक्षा कार्यक्रमों को ऑनलाइन शिक्षण उपकरणों प्लेटफार्मों और शिक्षाशास्त्र में प्रशिक्षण को प्राथमिकता देने की आवश्यकता हो सकती है ताकि यह सुनिश्चित किया जा सके कि शिक्षक भविष्य में आने वाले व्यवधानों या ऑनलाइन शिक्षण की ओर बदलाव के लिए अच्छी तरह से तैयार हैं।
- **शैक्षणिक नवाचार:** अध्ययन से प्राप्त अंतर्दृष्टि शिक्षक शिक्षा पाठ्यक्रम में नवीन शैक्षणिक प्रथाओं के एकीकरण को प्रेरित कर सकती है। रचनात्मकता, अनुकूलनशीलता और समस्या-समाधान कौशल पर जोर देने से भविष्य के शिक्षक अपने शिक्षण करियर में अप्रत्याशित चुनौतियों से निपटने के लिए बेहतर ढंग से तैयार हो सकते हैं।
- **दूरस्थ शिक्षा के लिए समर्थन:** दूरस्थ शिक्षा में परिवर्तन के दौरान शिक्षकों के सामने आने वाली चुनौतियों को समझना शिक्षक शिक्षा कार्यक्रमों के भीतर समर्थन तंत्र के विकास को सूचित कर सकता है। इसमें छात्रों की सहभागिता बनाए रखने, आभासी कक्षाओं का प्रबंधन करने और ऑनलाइन वातावरण में छात्रों की सामाजिक-भावनात्मक आवश्यकताओं को संबोधित करने के बारे में प्रशिक्षण शामिल हो सकता है।
- **सहयोगात्मक शिक्षण समुदाय:** महामारी के दौरान शिक्षकों के बीच सहयोग और ज्ञान साझा करने के सफल उदाहरणों को उजागर करना मजबूत पेशेवर शिक्षण समुदायों के निर्माण के मूल्य पर जोर दे सकता है। शिक्षक शिक्षा कार्यक्रम सहयोगात्मक प्रथाओं को बढ़ावा दे सकते हैं और

पूर्व-सेवा शिक्षकों को सहकर्मि सीखने और प्रतिबिंब में संलग्न होने के अवसर प्रदान कर सकते हैं।

- **नीतिगत निहितार्थ:** अध्ययन के निष्कर्ष शिक्षक तैयारी और व्यावसायिक विकास से संबंधित नीतिगत चर्चाओं और निर्णयों को सूचित कर सकते हैं। नीति निर्माताओं को शिक्षा में भविष्य के संकटों या व्यवधानों के लिए शिक्षकों को बेहतर ढंग से तैयार करने के लिए बुनियादी ढांचे संसाधनों और सहायता प्रणालियों में निवेश पर विचार करने की आवश्यकता हो सकती है।

कोविड-19 महामारी के नजरिए से शिक्षक शिक्षा की जांच करके शिक्षक नीति निर्माता और शोधकर्ता भविष्य के लिए अधिक लचीली और उत्तरदायी शिक्षा प्रणाली बनाने के लिए सुधार और नवाचार के अवसरों की पहचान कर सकते हैं।

### सुझाव

1. **तकनीकी प्रशिक्षण:** शिक्षकों के लिए तकनीकी प्रशिक्षण को शिक्षक शिक्षा का अभिन्न अंग बनाया जाना चाहिए, जिससे वे डिजिटल शिक्षा के नए तरीकों को प्रभावी ढंग से अपना सकें।
2. **मनोवैज्ञानिक समर्थन:** शिक्षकों की मनोवैज्ञानिक स्थिति को ध्यान में रखते हुए नियमित रूप से काउन्सलिंग और समर्थन सेवाएं प्रदान की जानी चाहिए।
3. **शिक्षक समुदाय का निर्माण:** शिक्षकों के बीच सहयोग और अनुभवों का आदान-प्रदान करने के लिए एक मजबूत शिक्षक समुदाय का निर्माण किया जाना चाहिए, जिससे वे एक-दूसरे से सीख सकें और संकट के समय में सहयोग प्राप्त कर सकें।
4. **नीति निर्माण:** शिक्षा नीति निर्माताओं को इस अनुभव से सबक लेते हुए, भविष्य के लिए एक समग्र और लचीली शिक्षक शिक्षा प्रणाली का निर्माण करना चाहिए।
5. डिजिटल विभाजन को स्वीकार करना और सम्बोधित करना।

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# भारत में महिला श्रम-बल की उपयोगिता एवं घटती प्रजननता

डॉ. वर्षा राहुल<sup>1</sup> एवं नाहिद परवीन<sup>2</sup>

## सारांश

समाज को जीवनदान देने वाली स्त्री जीवन का आधार है। समाजरूपी गाड़ी का यह एक पहिया है इसकी अवहेलना कर समाज प्रगति की ओर अग्रसर नहीं हो सकता। मनुस्मृति में कहा गया है— “यत्र नार्यस्तु पूज्यन्ते स्मन्ते तत्र देवता” अर्थात् जहाँ नारी का सम्मान होता है वहाँ देवता निवास करते हैं इसके बावजूद महिलाएँ आदिकाल से उपेक्षित होती चली आ रही हैं। समाज की सामाजिक कुरीतियों, परम्परागत रूढ़िवादिता ने महिलाओं को दीन-हीन कर पुरुषों पर आश्रित कर उसे अबला, हाय, बेचारी बना दिया। समय परिवर्तन के साथ-साथ महिलाओं की स्थिति में परिवर्तन आया है।

वर्तमान में महिलाएं शिक्षा रूपी गहना पहनकर अपनी योग्यता और क्षमता के आधार पर दकियानूसी विचारों को छोड़ते हुये राजनीतिक, साहित्यिक खेलकूद कारोबार सहित क्षेत्रों में मौका मिलने पर अपनी प्रतिभा को साबित कर रही हैं। यदि श्रम-बल के क्षेत्र में महिलाओं की भूमिका की बात की जाये तो रोजगार पर सांख्यिकी मंत्रालय की ओर से जारी आवधिक श्रम बल सर्वेक्षण रिपोर्ट 2018-19 के अनुसार शहर में कुल 52.1 प्रतिशत महिलाएं और 45.7 प्रतिशत पुरुष कामकाजी हैं लेकिन अब ग्रामीण क्षेत्रों में यह 5.5 प्रतिशत से 10.5 प्रतिशत तक पहुँच गयी है। शहरी कामकाजी महिलाओं में से 52.1 प्रतिशत नौकरी पेशा, 34.7 प्रतिशत स्वरोजगार तथा 13.1 प्रतिशत अस्थायी श्रमिक हैं। (वैश्विक महिला श्रम बल भागीदारी पिछले तीन दशक से 52 फीसदी के इर्द-गिर्द है। वर्तमान में महिलाओं की शिक्षा में काफी प्रगति हुई है, कामकाजी महिलाओं की संख्या भी बढ़ोत्तरी हुई है) विकासशील अर्थव्यवस्था में महिला श्रम बल भागीदारी में अत्यधिक भिन्नता है। यहाँ पर श्रम बाजार में लैंगिक असमानताएं अधिक हैं।

महिला श्रम बल भागीदारी दर तथा कमाई में समानता को बढ़ाने तथा लिंग-विशिष्ट बाधाओं को दूर करने की आवश्यकता है सिर्फ आज जरूरत महिला श्रम-बल भागीदारी बढ़ाने की नहीं बल्कि अच्छे काम के अवसर उपलब्ध कराने की भी है क्योंकि महिलाओं की भागीदारी के बगैर समाज प्रगति की ओर अग्रसर नहीं हो सकता।

**Keywords :** महिला, श्रम-बल, प्रगति, समाज

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## प्रस्तावना

महिलाओं के अस्तित्व के बिना किसी भी मानव समाज की कल्पना भी नहीं की जा सकती। पुरुषों के समान ही महिलाएं समाज के विकास की धुरी हैं। पिछले कुछ दशकों में भारतीय महिलाओं ने जो साहस का परिचय दिया वह विस्मरणीय है, महिलाओं ने स्वयं से अपनी शक्ति को पहचाना और अनेक रूढ़ियों, सामाजिक कुरीतियों से लड़ते हुये पुरुष के साथ कंधे से कंधा मिलाकर, घर की दहलीज का सम्मान करते हुये, घरेलू जिम्मेदारियों को साथ लिए हुए, लगातार तमाम संघर्षों से जूझते हुए राष्ट्रीय और अन्तर्राष्ट्रीय स्तर पर अपनी उल्लेखनीय मौजूदगी दर्ज कराई है। रोजगार के वह क्षेत्र जहाँ पर सिर्फ पुरुषों का ही वर्चस्व था। आज उन क्षेत्रों में भी महिलाओं ने अपनी योग्यता, कुशलता तथा प्रतिभा से पताका फहरा हुआ है। वर्तमान में शायद ही कोई ऐसा कार्य क्षेत्र हो जहाँ महिलाएं कार्यरत न हों?

### “निरन्तर तलाशती अपनी मंजिल को अपने घर अपने अर्थ को”

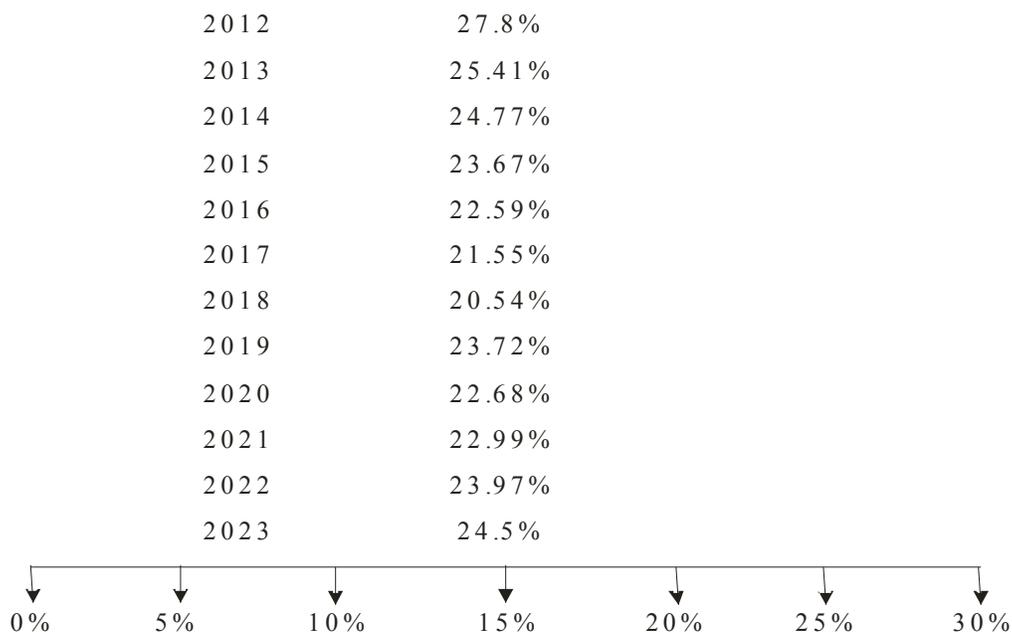
प्राचीन काल से ही महिलाएं श्रम-बल में किसी न किसी रूप में अपना योगदान दे रही हैं परन्तु सत्यता को नकारा नहीं जा सकता। अन्य देशों की अपेक्षा भारत में महिलाओं को श्रम-बल में भागीदारी अंश मात्र है जिन्हें उंगलियों मात्र पर गिना जा सकता है। महिलाओं की कार्यक्षेत्र में भागीदारी (Female Labour Force Participation Rate LFPR) जो 2011-12 में 31.2 थी। 2021-22 में घटकर 23.3 प्रतिशत हो गई है। यह ग्रामीण क्षेत्रों में अत्यधिक तेजी से दर्ज की गई है। वहां पर 2021-22 में महिलाओं की भागीदारी में 11 प्रतिशत से अधिक कमी आयी है। कोविड-19 के बाद इसमें तेजी से गिरावट आई। 2012 में व्याप्त 27.08 प्रतिशत महिला श्रम बल को हम 10 वर्षों पश्चात् भी प्राप्त नहीं कर पाये हैं परन्तु वैश्वीकरण के इस युग में महिलाओं की व्यावसायिक स्थिति में सुधार के लिए हमारी सरकार प्रयासरत् है और आने वाले समय में बढ़ती हुई श्रम-बल दर को प्राप्त कर सकेंगे।

### भारत में महिला श्रम-बल की स्थिति :

वर्तमान में कामकाजी महिलाओं के प्रति समाज का दृष्टिकोण बदल रहा है। वैश्वीकरण के परिणामस्वरूप भारतीय महिलाओं की स्थिति में सुधार आया है। सरकारी, गैर सरकारी के अतिरिक्त रोजगार के नवीन क्षेत्रों में महिलाओं का प्रवेश भी हुआ है। श्रम-बल में कार्यरत महिलाएं परम्परागत विचारों और मूल्यों के साथ नवीन और आधुनिक विचारों को लेकर आगे बढ़ रही हैं यदि विकास का इंजन कहा जाये तो यह अतिशयोक्ति नहीं होगी क्योंकि ममतामयी माँ से लेकर लड़ाकू विमानों की पायलट तक, बहुराष्ट्रीय कम्पनियों के नेतृत्व से लेकर पर्वत शिखरों को छूने तक की चुनौतियों का सफलतापूर्वक सामना करने वाली आज की महिला केवल माँ, बहन, बेटी, पत्नी और बहू नहीं रही है बल्कि इसके अलावा एक शिक्षक, डॉक्टर, इंजीनियर, पुलिस अधीक्षक, वैज्ञानिक, पायलट, मेजर, कर्नल, वित्त मंत्री, मुख्यमंत्री एवं अन्तर्राष्ट्रीय खिलाड़ी आदि के रूप में राष्ट्र के विकास में अपना योगदान दे रही है।

भारतीय कर्यबल का महिलाएं एक अभिन्न अंग है। रजिस्ट्रार जनरल ऑफ इण्डिया के अनुसार 2001 में महिलाओं की श्रम भागीदारी दर 25.63 प्रतिशत थी। ग्रामीण क्षेत्रों में महिला श्रम भागीदारी 30.79 प्रतिशत थी। वहीं शहरी क्षेत्रों में 11.88 प्रतिशत थी। ग्रामीण क्षेत्रों में महिलाएं मुख्य रूप से कृषि कार्यों में शामिल होती है। शहरी क्षेत्रों में लगभग 80 प्रतिशत महिलाएं श्रम संगठित क्षेत्रों में काम करती है। शहरी महिलाओं की हिस्सेदारी नौकरी में पुरुषों से अधिक है। श्रम बल सर्वेक्षण रिपोर्ट 2021-22 के मुताबिक शहरो में कुल 52.1 प्रतिशत महिलाओं और 45.7 प्रतिशत पुरुष कार्यरत है। ग्रामीण क्षेत्रों में अभी भी महिलाएं पुरुषों से पीछे हैं। हालांकि पिछले छह वर्षों में इसमें 5.5 प्रतिशत से 10.5 प्रतिशत तक की बढ़त हुई है। शहरी कार्यशील महिलाओं में 52.1 प्रतिशत नौकरी पेशा, 34.7 प्रतिशत स्वरोजगार और 13.1 प्रतिशत लघु श्रमिक है जबकि 2011-12 के एनएसओएसओ के सर्वेक्षण में नौकरी पेशा महिलाओं का प्रतिशत 42.8 था और 14.3 प्रतिशत अल्प श्रमिक जबकि स्वरोजगार 42.00 प्रतिशत थी। गौर करने पर ज्ञात होता है कि पिछले छः वर्षों में कुछ हद तक स्थिति में सुधार हुआ है। अभी हालात इतने बेहतर नहीं है। देश के विकास के लिए महिलाओं की श्रम बल भागीदारी बहुत आवश्यक है। वैश्विक महिला श्रम बल योगदान पिछले तीन दशकों से 52 फीसदी के इर्द-गिर्द पर ही है। नवीनतम वार्षिक पीएलएफएस रिपोर्ट के अनुसार देश में कामकाजी महिलाओं की श्रम बल में भागीदारी 24.8 फीसदी से सुधार कर 2019-20, 2020-21 के दौरान क्रमशः 30.0 फीसदी, 32.5 फीसदी हो गया है।

### भारत में महिला श्रम-बल भागीदारी की दर :



### महिला श्रम बल में गिरावट के कारण :

यह सत्य है कि आधुनिकीकरण के इस युग में महिलाएं प्रत्येक क्षेत्र में अपनी उपलब्धियों की पताका फँसा रही है परन्तु ऐसी उपलब्धियां हासिल करने वाली महिलाओं की संख्या अंश मात्र है। भारत में महिला श्रम बल में गिरते रूझान केन्ट जाने कितने कारण है जिन्हें मैं ने अपने इस शोध-पत्र के माध्यम से इंगित करने का प्रयास किया है जो निम्नलिखित है—

1. सामाजिक परम्पराओं के बंधन से आज भी महिलाएं मुक्त नहीं हैं घर की चहार दीवारी से निकलकर बाहर कार्य करना आज भी ग्रामीण महिलाएं सामाजिक रूढ़ियों से बंध जाती हैं।

- कार्य-स्थल पर असुरक्षा
- स्त्री एवं पुरुष के पारिश्रमिक में अन्तर
- घरेलू कलह
- सामाजिक भेदभाव
- शहरी विशिष्टता
- ग्रामीण क्षेत्रों में अशिक्षा
- कम वेतन
- कार्यस्थल और घर से दूरी
- अल्प रोजगार
- शैक्षणिक योग्यता के अनुकूल रोजगार उपलब्ध न होना
- पारिवारिक स्थिति
- रोजगार के अवसरों की कमी
- अस्थायी रोजगार
- सामाजिक भेदभाव
- लिंग असमानता
- कार्य की दशाएं
- कार्य की क्षमता के प्रतिकूल रोजगार

उक्त कारणों से महिलाओं के श्रम-बल में गिरावट आ रही है।

### उद्देश्य :

1. भारतीय समाज में पुरुषों की तुलना में महिला श्रम के प्रतिशत को ज्ञात करना।
2. महिला श्रम बल पर अतिरिक्त भार से प्रजननता पर प्रभाव को ज्ञात करना।

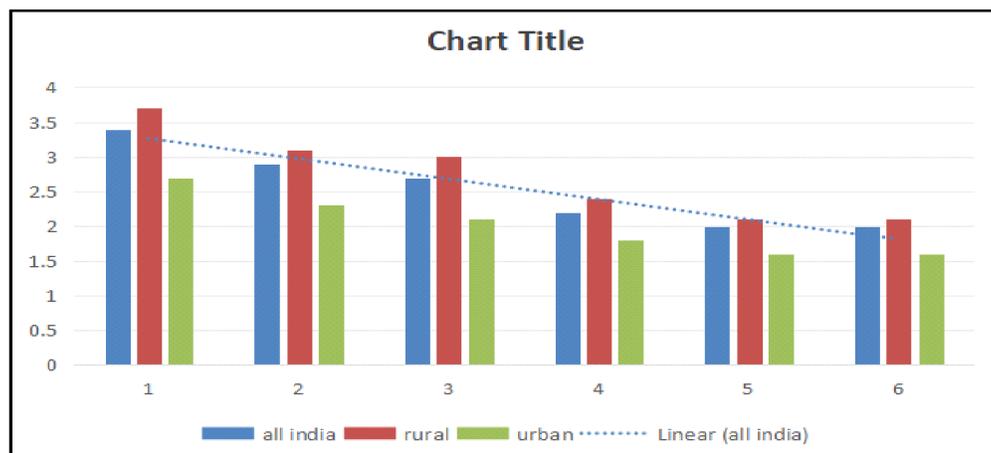
3. कोरोना के पश्चात् महिला पुरुष प्रजननता के स्तर को ज्ञात करना।

### परिकल्पनाएं

1. अधिक श्रम बल का महिलाओं की प्रजननता पर प्रतिकूल प्रभाव पड़ता है।
2. पुरुषों की तुलना में महिलाओं को अधिक श्रम नहीं कर पड़ता है।

### कुल प्रजननता दर

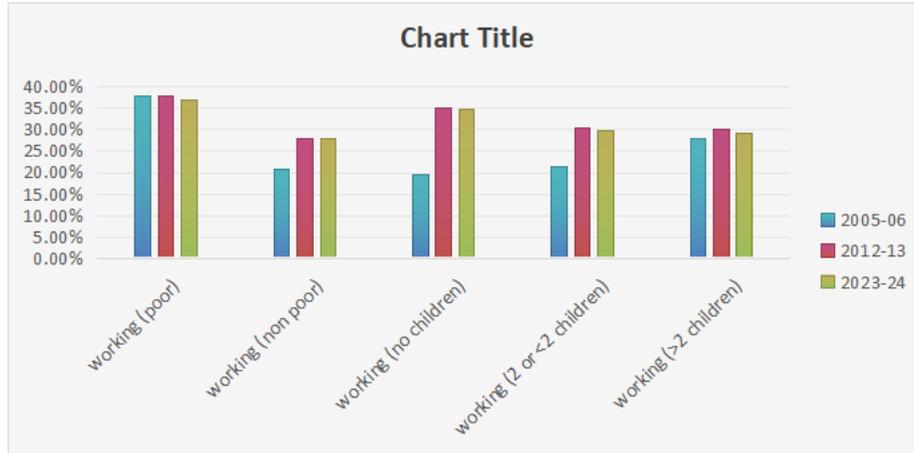
YEAR	ALL INDIA	RURAL	URBAN
1993	3.4	3.7	2.7
1999	2.9	3.1	2.3
2006	2.7	3	2.1
2016	2.2	2.4	1.8
2021	2	2.1	1.6
2024	2	2.1	1.6



स्रोत: आवधिक श्रम बल सर्वेक्षण 2023-24

### आर्थिक स्थिति और प्रजनन स्तर के अनुसार महिला श्रम बल भागीदारी दरों में रुझान- 2023-24

Womens	2005-06	2012-13	2023-24
working (poor)	37.90%	37.80%	30.4%
working (non poor)	20.90%	28.10%	27.80%
working (no children)	19.60%	35.10%	34.70%
working (2 or <2 children)	21.30%	30.30%	29.90%
working (>2 children)	27.80%	30.20%	29.30%



स्रोत: आवधिक श्रम बल सर्वेक्षण 2023-24

**निष्कर्ष :**

यह सब जानते हैं कि भारत दुनिया की सबसे ज्यादा आबादी वाला देश है और यह चीन को पीछे छोड़ कर पहले स्थान पर पहुँच गया है। किन्तु देश में प्रजनन दर में जिस तरह से गिरावट आ रही है उससे आगामी दशकों में देश की आबादी बढ़ने की जगह घट सकती है। यह सीधे तौर पर ज्ञात होता है कि घटती प्रजनन दर देश की आबादी में मौजूद संतुलन को हिला सकती है। बच्चों, बुजुर्ग, जवान के इस संतुलन को बनायें रखने के लिये प्रजनन दर का 2.1 के आस पास रहना जरूरी है।

अर्थिक वृद्धि एवं विकास में तीव्र वृद्धि तो हो रही है किन्तु इस वृद्धि के बावजूद भारत में महिला श्रमबल के भागीदारी दर में गिरावट आ रही है। एक अलग दृष्टिकोण से चिंता का विषय यह भी है कि श्रमबल में महिला आबादी लगातार घटती जा रही है। दूसरी ओर, आर्थिक विकास में योगदान के संबंध में महिला कार्यबल भागीदारी का महत्व है। प्रजनन दर को इस संबंध का एक और महत्वपूर्ण घटक माना जाता है। वर्तमान अध्ययन ए.आर.डी.एल. आधारित समय श्रृंखला विश्लेषण का उपयोग करके महिला कार्यबल भागीदारी, प्रजनन और आर्थिक विकास के बीच संबंधों का पता लगाने का प्रयास करता है। अध्ययन से ज्ञात होता है कि प्रजनन, महिला श्रम भागीदारी और आर्थिक विकास के बीच दीर्घकालिन सहएकीकरण के अस्तित्व को देखा गया है।

अध्ययन के परिणाम से पता चलता है कि प्रजनन दर आर्थिक विकास और महिला श्रम बल के भागीदारी के साथ नकारात्मक रूप से जुड़ा हुआ है। इसके अलावा आर्थिक विकास और महिला श्रम बल के भागीदारी दर और प्रजनन दर दोनों पर विपरीत रूप से निर्भर है। नीति दस्तावेजों में निर्धारित ज्ञात श्रम बाजार स्थितियों के सन्दर्भ में हमारे निष्कर्षों की व्याख्या से पता चलता है कि वे मातृत्व अवधि के दौरान नौकरी में जारी रखने के लिए महिलाओं के एक बड़े वर्ग के लिये बहुत अनुकूल नहीं है।

यद्यपि भारत के मातृत्व विधेयक 2017 ने कामकाजी महिलाओं के लिये भुगतान किये गए मातृत्व अवकाश के अधिकार को 12 से 26 सप्ताह तक बढ़ा दिया है। यह औपचारिक नौकरियों में कामकाजी महिलाओं के एक छोटे से हिस्से को लाभान्वित करता है। इसलिये भारत को बच्चों की देखभाल की जरूरतों और महिलाओं के लिये वेतन रोजगार के बीच तनाव को दूर करने के लिये बेहतर कार्य-परिवार नीतियां तैयार करने की जरूरत है।

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# प्रधानमंत्री किसान सम्मान निधि योजना का किसानों की आर्थिक स्थिति पर प्रभाव : जनपद बुलंदशहर के संदर्भ में एक अध्ययन

हेमलता सैनी<sup>1</sup>

## सारांश

कृषि को भारतीय अर्थव्यवस्था की रीढ़ कहा जाता है। यह देश की आजीविका का प्राथमिक स्रोत है। किसान कृषि को व्यवसाय के रूप में करता है। कोरोना जैसी महामारी के समय भी कृषि क्षेत्र की वृद्धि दर 3.4% रही। जो अन्य क्षेत्रों की अपेक्षा सकारात्मक रही। जिससे किसानों वह अन्य वर्गों का आर्थिक विकास भी संभव हो पाया। किसानों की आय को बढ़ाने के लिए केंद्र और राज्य सरकारों के द्वारा निरंतर प्रयास किये जा रहे हैं। ऐसी अनेक योजनाएं संचालित की गयी। जिससे किसानों की आर्थिक स्थिति में सुधार की संभावनाएं बढ़े। उन्हीं योजनाओं में से एक महत्वपूर्ण योजना प्रधानमंत्री किसान सम्मान निधि योजना है। इस योजना की शुरुआत 2018 में की गई थी। इस के अंतर्गत साल में ₹.6000 की धनराशि तीन किस्तों में दी जाती है। हर किस्त में ₹.2000 की राशि किसानों के अकाउंट में आती है। सभी छोटे व सीमांत किसान (दो हेक्टेयर से कम जोत वाले) इस स्कीम के पात्र हैं। इस योजना में आवेदन के लिए चउापेंद.हवअ.पद पर रजिस्ट्रेशन कर सकते हैं। अब तक नवंबर 2023 में 15वीं किस्त आ गई है। फरवरी से मार्च तक 16वीं किस्त आने की संभावना है। इस शोध की अंतर्गत विश्लेषणात्मक शोध पद्धति का प्रयोग किया गया। प्रस्तावित शोधपत्र में जनपद बुलंदशहर के तहसील स्तरीय दो ब्लॉकों का चयन किया गया। प्रश्नावली व साक्षात्कार के माध्यम से आंकड़ों का संकलन किया गया। अध्ययन क्षेत्र के अंतर्गत आने वाले विभिन्न बैंक शाखाओं के प्रबंधकों से इस योजना के लिए आंकड़ों का संकलन किया व एकत्रित आंकड़ों को लिपिबद्ध कर, इनका सारणीकरण किया गया। जिसके द्वारा शोध उद्देश्य की पूर्ति की जा सके। इस योजना के माध्यम से किसानों को कितना लाभ हुआ व इससे उनके जीवन में क्या सुधार हुआ। इसके लिए सेकेंडरी आंकड़ों का भी संकलन किया गया। इसके लिए विभिन्न बैंकिंग शाखाओं, वेबसाइट, पुस्तकालयों, समाचार पत्रों और पत्रिकाओं आदि से आवश्यकतानुसार सूचना एकत्रित की व विश्लेषणात्मक मूल्यांकन किया गया। जिससे किसान की वर्तमान स्थिति को देखकर पाया गया कि इस योजना ने किसानों को आर्थिक आधार प्रदान करने

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में कितनी महत्वपूर्ण भूमिका निभाई परंतु इस योजना के अंतर्गत धनराशि काफी कम है। इसमें राशि को बढ़ा कर योजना को सफलतापूर्वक संचालित किया जाए, जिससे इसका उचित लाभ किसानों को मिल सके।

**Keywords:** पीएम-किसान, स्कीम, आर्थिक प्रभाव, किसान

## प्रस्तावना

भारत दुनिया में सबसे तेजी से विकास करने वाला देश बनता जा रहा है। आंकड़ों के अनुसार भारत की अर्थव्यवस्था आने वाले कुछ सालों में पांच ट्रिलियन डॉलर के साथ तीसरा नंबर प्राप्त कर लेगी। कृषि एक ऐसा क्षेत्र है जो भारतीय अर्थव्यवस्था के विकास को बुनियादी ढांचा प्रदान करता है। इसे उद्योग और सेवा क्षेत्र की रीढ़ माना जा जाता है। श्रम शक्ति का बहुत अंश भी कृषि कार्यों में संलग्न है। भारत मसाले, दालों, दूध चाय, काजू, चावल, फल व सब्जियों का दूसरा सबसे बड़ा उत्पादक है। इसलिए कृषि को बढ़ाना केंद्र और राज्य सरकारों का प्रमुख उद्देश्य बन गया है। पीएम किसान सम्मान निधि योजना उन पहलू में से एक है जो किसानों को कृषि करने के लिए प्रोत्साहित करने व उनकी आय को बढ़ाने के लिए शुरू की गई। इस योजना को 2018 में शुरू किया गया 2019 में इस योजना ने कार्य करना शुरू किया। पहले यह योजना सिर्फ सीमांत छोटे किसानों (2 हेक्टेयर से कमजोत वाले) के लिए थी। बाद में सभी किसानों के लिए इसके दायरे को बढ़ा दिया गया। इस योजना के अंतर्गत किसानों को साल में 6000 की धनराशि का भुगतान तीन किस्तों में किया जाता है भुगतान प्राप्त करने की अवधि 1 अप्रैल से जुलाई, 20 अगस्त से नवंबर, 3 दिसंबर से मार्च है।

सरकारी आंकड़ों के अनुसार यह योजना 15 सितंबर 2019 तक 50 मिलियन किसानों तक पहुंच गई। 2018-2019 के दौरान योजना के लिए 1241.13 करोड़ रुपये का बजट आवंटित किया गया। वित्त वर्ष 2023-24 में इस योजना के लिए 60,000 करोड़ रुपये के बजट का आवंटन किया गया। दिसंबर 2018 से संचालित पीएम किसान सम्मान निधि योजना के लिए केंद्र सरकार के कृषि व किसान कल्याण मंत्रालय द्वारा निर्देश दिए गए कि 14 वीं किस्त देने से पहले सभी पात्र किसानों को भूलेख अंकन व बैंक खाते की आधार सीडिंग के साथ-साथ पीएम किसान पोर्टल पर ई-केवाईसी कराया जाना अनिवार्य है। कई क्षेत्रों में कई क्षेत्रों में इस लक्ष्य को पूरा नहीं किया गया। किसानों को आने वाले समय में इस निधि से वंचित रहना पड़ सकता है हालांकि इस कार्य के लिए पूर्व में बैंक खाते की आधार सीडिंग व अन्य कार्य के लिए शिविर भी लगाए गए थे, इसके बाद भी इस कार्य को पूरा नहीं किया गया। ऐसे में अब फिर से शिविर लगाकर इन कार्यों को पूरा किया जाएगा पश्चिमी उत्तर प्रदेश के बुलंदशहर जिले में 331929 किसानों को 11वीं किस्त दे दी गई जबकि पात्र किसानों की संख्या 3410100 थी। देश में किसानों के संकट को देखते हुए इस योजना के किसानों पर आर्थिक प्रभाव का विश्लेषण करने और किसानों की आय पर इसके संभावित प्रभाव का पता लगाने की आवश्यकता है। प्रधानमंत्री कृषि सम्मान निधि योजना के तहत करोड़ों किसानों को सरकार सालाना ₹.6000 (2000-2000 की तीन किस्त) की सहायता राशि देती है वैसे सरकार ने इस योजना में कोई बदलाव नहीं किया।

लेकिन बजट राशि पिछले बजट की तुलना में काफी बढ़ा दी गई। दिसंबर- मार्च 2018-19 पहली किस्त 3.2 करोड़ थी जबकि दिसंबर- मार्च 2020-21 में सातवीं किस्त दो 10.2 करोड़ तक पहुँच गई। इससे ज्ञात होता है कि लाभ पाने वाली की संख्या लगातार बढ़ रही है। कृषि सुधार की जरूरत मद्देनजर रखते हुए सरकार ने खेती को हाईटेक करने का फैसला लिया है। कृषि क्षेत्र को उन्नत व आधुनिक बनाने के साथ किसानों को ताकतवर बनने पर जोर दिया गया। उन्होंने किसान सम्मान निधि योजना को तर्कसंगत बनाने के साथ समग्रता से लागू करने की बात कही।

### साहित्य समीक्षा

**ऋषभ सिंह गौर ,ए.क.पासवान,रमेश मलिक और रमेश सिंह बुनकर (2023) "पीएम किसान सम्मान निधि योजना के तहत लाभार्थियों की सामाजिक, आर्थिक व व्यक्तिगत विशेषताएं"** अपने शोध पत्र में यूपी के कानपुर देहात जिले से पीएम किसान सम्मान निधि योजना से प्राप्त लाभ प्राप्तकर्ताओं का अध्ययन किया उन्होंने उत्तरदाताओं का चयन कंप्यूटर आधारित रैंडमाइजेशन का प्रयोग करके याद रूप से किया। निष्कर्ष से पता चला कि अधिकांश उत्तरदाता वृद्ध व्यवस्था समूह के थे। किसानों को कृषि का अच्छा अनुभव था व उन्होंने नवीन तकनीकों का इस्तेमाल किया था। यह योजना किसानों के लिए आर्थिक व सामाजिक विकास महत्वपूर्ण भूमिका निभा रही है हालांकि कुछ उत्तरदाताओं द्वारा किस्तों की राशि में वृद्धि करने का सुझाव दिया गया।

**अमिता सी.डी. और कार्तिकेयन सी.(2022) "प्रधानमंत्री किसान सम्मान निधि:- लाभार्थियों की राय कॉविड-19 महामारी के बीच"** शोध पत्र में पाया कि किसान सम्मान निधि की राशि से किसानों की आय को दुगना करने के प्रयास किए गए। वारंगल जिले के किसानों के द्वारा उच्च किस्म के बीज और आधुनिक प्रौद्योगिकी का इस्तेमाल किया गया। उत्तरदाताओं ने बताया कि महामारी के दौरान वित्तीय सहायता मिली। उत्तरदाताओं से डाटा का संग्रह साक्षात्कार व अनुसूची की सहायता से किया गया। एकत्रित किए गए डाटा का संग्रह करके डाटा का विश्लेषण करके संख्यात्मक तकनीकों का इस्तेमाल किया गया। जिससे पता चला कि पीएम किसान सम्मान निधि योजना से किसानों की आर्थिक स्थिति कोरोना महामारी के दौरान कुछ हद तक सकारात्मक रूप से प्रभावित हुई।

**पी.वी. श्रीकाल "2022 तक किसानों की आय दुगना करना"** ने अपने शोध पत्र में बताया कि भारतीय कृषि कठिन दौर से गुजर रही है जिसके परिणामस्वरूप किसानों में व्यापक संकट फैल गया है। किसानों की आय काम हो रही है वह गरीबी बढ़ रही है पीएम किसान सम्मान निधि योजना ने कृषि उत्पादन में वृद्धि को बढ़ाने और भविष्य में किसानों पर प्रतिकूल प्रभाव न पड़े का ध्यान रखा है। कृषि और समृद्ध गतिविधियों के साथ-साथ घरेलू जरूरत से संबंधित खर्चों की देखभाल करने में सक्षम बनाने में इस योजना में काफी महत्वपूर्ण भूमिका निभाई।

**जावेद अख्तर (2022) "उत्तर प्रदेश में कृषि आय पर प्रधानमंत्री किसान सम्मान निधि योजना का प्रभाव"** ने अपने शोध अध्ययन में बताया की तरलता की कमी, जानकारी व वित्त का अभाव

कृषि में आधुनिक तकनीकों को बेहतर नहीं बना सकते। किसान सम्मान निधि योजना किसानों को वित्तीय सहायता, गरीब व संसाधन कम किसानों के कल्याण के लिए भारत सरकार की अच्छी पहल है। शोध में पाया गया कि इससे मिलने वाली धनराशि से लाभार्थियों को कृषि आदानों की खरीद पर अधिक पैसा खर्च करने की वित्तीय ताकत मिली। यह भी देखा गया कि देश में कुल किसानों का पांचवा हिस्सा ऋण पर कृषि आदानों की खरीद करता है। योजना का लाभ प्राप्त करने वाले किसानों का सबसे बड़ा हिस्सा यूपी में (26.93 प्रतिशत) इसके बाद महाराष्ट्र (10.90 प्रतिशत)।

दीपक कुमार और सुनील फौगाट (2021) "प्रधानमंत्री किसान सम्मान निधि योजना का विश्लेषण :हरियाणा राज्य के संदर्भ में" ने अपने अध्ययन में वर्णनात्मक शोध पद्धति का प्रयोग किया उन्होंने द्वितीय डाटा का प्रयोग कर इस योजना का विश्लेषणत्मक अध्ययन किया। इसके लिए सरकारी रिपोर्ट प्रकाशित पत्र-पत्रिकाएं, तालिकाएं चार्ट आदि का प्रयोग किया। इस योजना के अंतर्गत किसानों को हस्तांतरित की जाने वाली धनराशि अपर्याप्त है शोधकर्ताओं ने इससे निष्कर्ष निकाला कि जीवन स्तर के लिहाज से यह राशि और बढ़ानी चाहिए। राशि और बढ़ने से किसानों की आर्थिक व सामाजिक स्थिति में सुधार होगा। वह कृषि जो देश के विकास में महत्वपूर्ण भूमिका निभाती है, का भी विकास होगा

### शोध विधि

शोध में बुलंदशहर जिले के दो ब्लॉक का चुनाव किया गया। जिले में 14 ब्लॉक है प्रत्येक ब्लॉक में से उत्तरदाताओं का चयन यादृच्छक रूप से किया गया दृचयनित ब्लॉक से समान आवश्यकताओं के रूप उच्चतम स्तर के दो गांव को चुना गया और चुने गये गांव में से प्रत्येक में से कुल 100 पीएम किसान लाभार्थियों का चयन किया गया। किसान सम्मान निधि योजना का किसानों की आर्थिक स्थिति पर प्रभाव जानने के लिए साक्षात्कार और विषय विशेषों के साथ चर्चा का उपयोग किया गया। प्रश्नावली, विभिन्न बैंक शाखाओं के प्रबंधकों से भी चर्चा करके आंकड़ों का एकत्रीकरण किया गया। समाचार पत्रों, पुस्तकालय, जनरल आदि से भी आंकड़ों का संग्रह किया गया।

### उद्देश्य

1. प्रधानमंत्री किसान सम्मान निधि योजना का किसानों की आय बढ़ाने में भूमिका का अध्ययन करना।
2. दूसरा केंद्र सरकार द्वारा संचालित इस योजना का कृषि में उच्च तकनीक का प्रयोग करने पर बल।
3. प्रधानमंत्री किसान सम्मान निधि योजना के क्रियान्वन में लाभार्थियों को आने वाली समस्याओं का अध्ययन करना।
4. उपयुक्त योजना के माध्यम से किसानों की आर्थिक स्थिति सुधारने भूमिका का अध्ययन करना।

## परिणाम

अध्ययन के लिए जिन उत्तरदाताओं का चयन किया गया अधिकांश किसान उच्च प्राथमिक शिक्षा को लिए हुए थे। कुछ किसान निरक्षर भी पाए गए जिन्हें अज्ञानता व जानकारी के अभाव में इस योजना का उचित लाभ नहीं ले पाए। लेकिन समय के साथ उनकी जागरूकता बढ़ी। जिससे समय रहते उन्होंने इस योजना का लाभ मिलने लगा। बैंक खाते में सीधी धनराशि हस्तांतरित होने से उन्होंने उस राशि का उचित प्रयोग किया। कृषि में तकनीकी व उच्च गुणवत्ता उर्वरकों के प्रयोग किया कहीं-कहीं परिमाण यह आए कि जिन किसानों ने इस माध्यम राशि का उचित प्रयोग किया उनकी कृषि उत्पादन में वृद्धि हुई। इस पेपर का उद्देश्य पीएम किसान सम्मान निधि योजना का किसानों की आर्थिक स्थिति प्रभाव की जांच करना है। 60 प्रतिशत से अधिक किसानों ने उपभोग शिक्षा और चिकित्सा उद्देश्यों के लिए पैसा खर्च किया जबकि 40 प्रतिशत किसानों ने कृषि से संबंधित कार्यों में पैसा खर्च किया। यदि पीएम किसान सम्मान निधि योजना कुछ हिस्सा उत्पादक निवेश करते हैं तो इससे लंबी अवधि में आय में स्थाई वृद्धि हो सकती है। (सैंडोलेट, डी जोनवरी और डेविस 2001)

## निष्कर्ष एवं सुझाव

बुलंदशहर जिले के विशेष संदर्भ में प्रधानमंत्री किसान सम्मान निधि योजना का विश्लेषण किया गया। जिससे पता चला कि यह योजना केंद्र सरकार की एक क्रांतिकारी पहल है परंतु किसानों को जो राशि इस योजना के माध्यम से मिलती है उनकी राशि पर्याप्त नहीं है। यह राशि बढ़ाने से ही नहीं किसानों की आर्थिक स्थिति में सुधार होगा बल्कि उनको उनकी उपज का उचित मूल्य, डी.पी.ए. आदि की कीमत कम हो बिजली का कनेक्शन फ्री ऑफ कास्ट में मिले। क्योंकि एक तरफ किसानों को इस योजना के माध्यम से राशि दी जा रही है तो वही दूसरी ओर उर्वरकों, बिजली आदि सभी के दाम बढ़ रहे हैं जिससे किसान वहीं खड़ा है जहाँ वह इस योजना से पहले था। इस योजना के अंतर्गत मिलने वाली धनराशि 6000 रु में कोई वृद्धि नहीं हुई। 2019 से अब की मुद्रास्फीति यानी महंगाई दर के कारण इस धनराशि के लगभग एक तिहाई मूल्य का ह्रास हो चुका है। यदि महंगाई के आधार पर ही आकलन किया जाए तो इससे मिलने वाली धनराशि रु. 6000 से बढ़कर रु. 8000 और फसलों की लागत के आकलन के आधार पर रु. 12000 की जाए की जानी चाहिए जिससे किसानों की आर्थिक स्थिति में सुधार होगा। घरेलू मांग और उपभोग से जी.डी.पी का सबसे अधिक भाग प्राप्त होता है इसलिए ग्रामीण क्षेत्र में पीएम किसान सम्मान निधि योजना के माध्यम से राशि हस्तांतरण करके क्रयशक्ति को बढ़ाना होगा जिससे रोजगार व उत्पादन भी बढ़ेगा। अध्ययन में पाया गया कि कृषि क्षेत्र में बढ़ते महत्वपूर्ण खर्चों, किसानों के लिए ऋण और तरलता संबंधी बाधाओं को इस योजना ने काफी काम किया है।

कृषि क्षेत्र के चरम मौसम में पीएम किसान सम्मान निधि योजना का लाभ प्राप्त किसानों के खर्च की संभावना अधिक होती है। उत्तरदाताओं से अध्ययन में पता चला की आईसीटी को सशक्त बनाने की जरूरत है। आईसीटी के प्रयोग और किसानों के बैंक खाते में सीधे राशि हस्तांतरण होने से भी

भ्रष्टाचार में कमी होगी। बिना बैंक खाते वाले किसानों के लिए जनधन योजना के तहत नो-फ्रिल खाते खोले जाने चाहिए। जैविक खेती का बढ़ावा दिया जाए जिस कारण कीटनाशक दवाओं एवं उर्वरकों का इस्तेमाल कम होने लगेगा और इससे किसानों के लिए कृषि पदार्थ की उत्पादन लागत भी हो कम हो जाएगी जिससे इस योजना का आर्थिक लाभ किसान और अधिक ले सकेंगे।

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