



The Status of Development in Uttar Pradesh: A Regional Analysis

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ABSTRACT:

Introduction: Uttar Pradesh, the most populous state in India is divided into four regions- western, eastern, central and southern. As per GSDP, the economy of Uttar Pradesh is 4th largest after Maharashtra, Tamil Nadu and Gujarat in 2021-22. It contributes around 8 percent of country's GDP. The level of development in the state has not been at par with rest of the economy as it stands at 20th among 21 major states with per capita NSDP of Rs. 43420.

Objectives: Economy of Uttar Pradesh has been analysed at regional level for different aspects like demography, economic status, poverty, agriculture, infrastructure, education and land use pattern among others.

Methods: Descriptive research techniques have used in the analysis of data.

Results: The level of development in Uttar Pradesh is not equally distributed among the four regions. The larger share (77.2%) of the population lives in western and eastern regions. The GSDP per capita is highest in western region followed by southern region. The central region is the home of highest proportion of poor people followed by eastern region in the state.

Conclusions: The study found that western region is the most developed followed by central and eastern regions, and southern region is the least developed.

1. Introduction

According to Census 2011, Uttar Pradesh is the home of about 199.8 million people (16.5 percent of India's population) and thus the most populous state of India. It is the fifth largest state after Rajasthan, Madhya Pradesh, Maharashtra and Andhra Pradesh in terms of geographical area in India. It accounts for 7.4 percent land area of the country. The level of urbanisation in Uttar Pradesh is 22.3 percent and 44.5 million people live in urban areas. Its population density is 829 persons per square kilometer and it ranks fourth among the states after Bihar, West Bengal and Kerala. The overall literacy rate is 67.7 percent in Uttar Pradesh. Given its geographical size and population, it has huge impact on the economy of the country. The gross state domestic product (GSDP) of Uttar Pradesh was Rs. 1200093 Crore in 2021-22 at 2011-12 prices, which is about 8 percent of the gross domestic product (GDP) of India (Table 10). Uttar Pradesh has registered an average annual growth rate of 5.2 percent in GSDP at 2011-12 prices for the period between 2011-12 and 2021-22. The level of poverty has declined to 29.5 percent in year

2011-12 in Uttar Pradesh (Table 6). But these macroeconomic indicators and social demographic scenarios of Uttar Pradesh are not evenly distributed across all the regions. Uttar Pradesh exhibits regional disparities on various socio-economic indicators, which requires a proper attention to understand the overall economy of the state.

2. Objectives

The purpose of present paper is to give broader understanding of development scenario in Uttar Pradesh and also to assess the regional variation in terms of different development indicators.

3. Methods

Study uses different secondary sources of data viz. Census of India (2001 and 2011), Planning commission data, 2014, Reports of various National Sample Survey (NSS) rounds, Statistical Abstract, Uttar Pradesh for 2014 and 2021, Reserve Bank of India datasets. Apart from this, data from various research paper have also been used in the study. Throughout the study,



descriptive research methods have been used in the data analysis.

4. Result and Discussion

4.1: Demographic Structure of Uttar Pradesh

Uttar Pradesh ranks first in terms of its population size among all the Indian states and it has recorded the decadal growth rate of 20.09 percent during 2001-2011. Although, it has succeeded to reduce the average annual exponential growth rate of population to 1.85 percent during the decadal period of 2001-2011 from 2.33 percent during 1991-2001. The entire population of Uttar Pradesh is unevenly distributed in four different regions of the state. More than 75 percent population is concentrated in two regions viz. Eastern and Western regions (Table 1). These two regions account for 40.0 percent (Eastern) and 37.2 percent (Western) population in the state. The Central region accommodates 18.0 percent population and the Southern region is the least populous with just 4.8 percent population. Table 1 describes population structure in more detail. It shows that 77.7 percent population still lives in rural areas. The urban population is just 22.3 percent. The share of SC population in total population is 20.7 percent in Uttar Pradesh. The SC population in urban areas constitutes about 13 percent whereas in rural areas it accounts for 23 percent. The ST population constitutes just 0.6 percent of total population of Uttar Pradesh. The child population up to age 6 years and below constitutes 15.4 percent of total population.

Table 1: Population Structure of Uttar Pradesh, 2011

Total population		Absolute			Percentage		
		Total	Rural	Urban	Total	Rural	Urban
Persons		199,812,341	155,317,278	44,495,063	100	77.7	22.3
Males		104,480,510	80,992,995	23,487,515	100	77.5	22.5
Females		95,331,831	74,324,283	21,007,548	100	78.0	22.0
					Percentage of child population (age: 0 to 6 years) to total		

					population		
Regional distribution of population					Total	Rural	Urban
Western	Central	Eastern	Southern	Total	15.4	16.1	12.9
74269758	35972728	79888303	9681552	199,812,341	15.5	16.2	13.0
37.2	18.0	40.0	4.9	100	15.3	16.0	12.9
Percentage of SC population to total population					Percentage of ST population to total population		
	Total	Rural	Urban		Total	Rural	Urban
Persons	20.7	23.0	12.7	Persons	0.6	0.7	0.2
Males	20.7	23.0	12.8	Males	0.6	0.6	0.2
Females	20.6	22.9	12.7	Females	0.6	0.7	0.2

Source: Census of India, 2011

The overall literacy rate of Uttar Pradesh is 67.7 percent with male literacy being 77.3 percent and female literacy is just 57.2 percent (Table 2). The urban population is more literate with 75.1 percent literacy compared to rural population with just 65.5 percent literacy. Male population is more literate in both urban and rural areas. Literacy among SCs and STs is quite low as compared to overall literacy rate in Uttar Pradesh. The low literacy rate in Uttar Pradesh especially among women and SCs and STs have led to population related problems like high fertility rate and birth rate (Bose, 1996), which eventually leads to unbalanced development of the economy.

Table 2: Literacy Rate in Uttar Pradesh, 2011

	UP			SC			ST		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Persons	67.7	65.5	75.1	60.9	59.8	67.5	55.7	54.5	67.0
Males	77.3	76.3	80.4	71.8	71.1	75.6	67.1	66.2	74.8
Females	57.2	53.7	69.2	48.9	47.3	58.2	43.7	42.3	58.0

Source: Census of India, 2011



4.2: Labour Market situation in Uttar Pradesh

Uttar Pradesh has huge workforce of about 6.6 crore persons, which accounts for about 33% of the state population. The rural workforce constitutes approximately 5.2 crore and urban workforce is about 1.4 crore. The workforce participation rate (WPR) in Uttar Pradesh is below overall workforce participation rate of India (Table 3). If WPR of 2011 is compared with 2001 for Uttar Pradesh then it is observed that there has been slight increase in WPR and this increase has been due to increased WPR in urban areas only. The similar trend is also observed for all India. The total workforce of Uttar Pradesh as well as of all India is dominated by the main workers. The main workers constitute 67.8% and marginal workers are 32.2% of total workers in the state. But Uttar Pradesh has lesser proportion of main workers compared to the main workers proportion of all India. There is a decline in the proportion of main workers in both rural and urban areas of Uttar Pradesh between 2001 and 2011. At the same time, the proportion of marginal workers has increased for both rural and urban areas of Uttar Pradesh. This trend is also visible in case of all India. Increase in the proportion of marginal workers reflects the deteriorating quality of employment in terms of regularity and wage rates. The casualisation of employment has increased across all the regions of Uttar Pradesh during 2004-05 to 2011-12 (Mamgain and Verick, 2017).

Table 3: Comparison of Workforce Participation Rate between India and Uttar Pradesh

	Total		Rural		Urban	
	2001	2011	2001	2011	2001	2011
	Workforce participation rate					
India	39.1	39.8	41.7	41.8	32.3	35.3
Uttar Pradesh	32.5	32.9	33.9	33.4	26.9	31.2
	Percentage of main workers to total workers					
	2001	2011	2001	2011	2001	2011
	Percentage of marginal workers to total workers					
India	77.8	75.2	73.9	70.5	90.8	87.6
Uttar Pradesh	72.9	67.8	69.9	64.6	87.0	80.0
	Percentage of marginal workers to total workers					
	2001	2011	2001	2011	2001	2011
	Percentage of marginal workers to total workers					
India	22.2	24.8	26.1	29.5	9.2	12.4
Uttar Pradesh	27.1	32.2	30.1	35.4	13.0	20.0

Pradesh						
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Source: Census of India, 2001, 2011

Table 4 gives data of workers and non-workers in Uttar Pradesh as per Census, 2011. This data is also given as per gender and sector of the workers. It clearly shows that the female workforce participation rate is very low compared to male workforce participation rate in both rural and urban areas in the state. Female WPR is just 16.7 percent compared to male WPR of 47.7 percent. The urban female WPR is 11.3 percent, which is less than their male counterparts (48.9 percent). Among urban workers, 80% are main workers and 20 percent are marginal workers, whereas 64.6 percent workers in rural areas are main workers and 35.4 percent are marginal workers. Among male workers, 75.1 percent are main workers and 24.9 percent are marginal workers, whereas among female workers, 45.2 percent are main workers and 54.8 percent are marginal workers.

Table 4: Workers and Non-Workers in Uttar Pradesh, 2011

	Total percentage of workers			Total percentage of non-workers		
	Total	Rural	Urban	Total	Rural	Urban
Persons	32.9	33.4	31.2	67.1	66.6	68.8
Males	47.7	47.4	48.9	52.3	52.6	51.1
Female	16.7	18.3	11.3	83.3	81.7	88.7
	Percentage of main Workers			Percentage of marginal workers		
	Total	Rural	Urban	Total	Rural	Urban
Persons	67.8	64.6	80.0	32.2	35.4	20.0
Males	75.1	72.5	83.6	24.9	27.5	16.4
Female	45.2	42.1	62.8	54.8	57.9	37.2

Source: Census of India, 2011

Table 5 provides details of different category of workers in Uttar Pradesh. It shows that there are 29 percent cultivators, about 30 percent agriculture labourers, 6 percent household industry workers and 35 percent are other types of workers in Uttar Pradesh. Male cultivators constitute 31 percent and female cultivators constitute 22 percent of total workers respectively. Most



of these cultivators live in rural areas of Uttar Pradesh. The size of male agricultural workers is 27.7 percent and female agricultural workers are 38.4 percent of total workers of Uttar Pradesh in their respective category. The size of female household industry workers is double as compared to their male counterparts in Uttar Pradesh. Other types of workers are mainly concentrated in urban areas (about 80 percent).

Table 5: Category of Workers (Main + Marginal) in Uttar Pradesh, 2011

Percentage of cultivators				Percentage of agricultural labourers		
	Total	Rural	Urban	Total	Rural	Urban
Persons	29.0	35.6	4.0	30.3	36.4	7.4
Males	31.1	39.2	4.2	27.7	33.8	7.4
Females	22.2	25.5	3.2	38.4	43.8	7.7
Percentage of household industry workers				Percentage of other workers		
	Total	Rural	Urban	Total	Rural	Urban
Persons	5.9	5.2	8.7	34.8	22.8	79.8
Males	4.7	3.9	7.5	36.5	23.1	81.0
Females	9.7	8.8	14.8	29.7	21.9	74.3

Source: Census of India, 2011

4.3: Poverty Situation in Uttar Pradesh

In a welfare state, it is the prime responsibility of the state to eliminate poverty with all sincerity on perpetual basis. All governments of Uttar Pradesh have tried to reduce poverty from the society through the introduction of various anti-poverty, employment generation and welfare programmes over the period of time. Uttar Pradesh government has basically adopted a two-pronged strategy for the reduction of poverty in the state. Firstly, it has made a constant effort to achieve overall development of the economy through development of various infrastructural facilities in both rural as well as urban areas by increase of public and private investment. Secondly, it has launched various welfare schemes like rural development programmes, employment generation programmes and other anti-poverty schemes with state funding along with various centrally sponsored schemes of the central government such as Mahatma Gandhi National Rural Employment Generation Scheme (MGNREGS), National Social Assistance Programme (NSAP) for old age, widow and most deprived households, National Rural Livelihood

Mission (NRLM), Pradhan Mantri Gram Sadak Yojana (PMGSY) and Pradhan Mantri Awas Yajana (Grameen and Urban) etc. In all these schemes the government assumed that poverty can be reduced by extending direct benefits of various schemes to the deprived and less privileged households and by facilitating them to the access of infrastructural facilities of the economy. But, in spite of all these efforts, Uttar Pradesh has witnessed massive poverty among its masses. About 6 crore people are below poverty line in the year 2012. The overall poverty rate of Uttar Pradesh is above national poverty rate. According to planning commission, the all-India poverty figure is about 22 percent whereas the poverty figure for Uttar Pradesh is 29.4 percent. The level of poverty in both rural and urban areas of Uttar Pradesh is more than all India estimate in the respective areas (Table 6).

The higher level of poverty in Uttar Pradesh has been basically due to low illiteracy, casualisation of workforce, marginal land holdings and large household size among others (Arora and Singh, 2015). In his field survey-based study of rural Uttar Pradesh, Ojha (2007) has found that successive crop failure, low saving due to high average propensity to consume (due to low income), sudden high expenditure on illness, marriage and debt financing etc. are also contributing to higher level of poverty in rural areas of the state.

Table 6: Comparison of Poverty between Uttar Pradesh and all India, 2011-12

	Rural	Urban	Total
India	25.7	13.7	21.9
Uttar Pradesh	30.4	26.1	29.4

Source: Planning Commission of India, 2014

Also, there exists huge regional disparity in the level of poverty in the state. Table 7 depicts the regional pattern of poverty in Uttar Pradesh. It is apparent from the table that Central and Eastern regions have been witnessing the severe concentration of poverty. The eastern region has witnessed almost equal level of poverty in both rural and urban areas. The level of poverty in Southern region is comparatively less than the Central and Eastern regions. The Western region is the richest region, where the level of poverty is also least among all the regions in both rural as well as urban areas.



Table 7: Regional Pattern of Poverty in Uttar Pradesh, 2011-12

Regions	Rural	Urban	Total
Western	19.2	21.2	19.8
Central	42.2	30.2	39.2
Eastern	34.6	33.2	34.4
Southern	30.2	26.9	29.5
Uttar Pradesh	30.4	26.2	29.5

Source: Arora and Singh, 2015

The incidence of poverty also varies across different social groups. Historically disadvantaged and deprived sections of society have been witnessing higher incidence of poverty across all the regions of Uttar Pradesh. Table 8 presents data about incidence of poverty among different social groups across different regions of Uttar Pradesh. The incidence of poverty is found to be the highest among SCs, followed by OBCs and 'Others' category for both rural and urban areas. The SCs population of western region is less poor than their counterparts in rest of the regions (central, eastern and southern) in both rural and urban areas. The SC people of eastern and central Uttar Pradesh are markedly poorer than the western (both rural and urban areas) and rural southern regions.

Table 8: Region-wise Incidence of Poverty by Social groups in Uttar Pradesh, 2011-12

Social Groups/Regions	Western	Central	Eastern	Southern
Rural				
SC	26.5	49.8	47.5	45.4
OBC	20.1	43.3	34.1	29.1
Others	8.6	24.2	11.6	4.7
Total	19.2	42.2	34.6	30.2
Urban				
SC	30.1	52.1	60.8	38.3
OBC	26.7	37.1	37.3	33.5
Others	11.0	19.3	9.6	4.3
Total	21.2	30.2	33.2	26.9

Source: Arora and Singh, 2015

Table 9 presents data of household type for rural areas in Uttar Pradesh and its regions. From the table it is apparent that the higher proportions of households

derived their income from agricultural sector in Uttar Pradesh. The central and southern regions witnessed high proportion of agricultural households (both self and casual employment in agriculture) and the combined percentages of these two are 63.4 percent and 53.5 percent respectively in central and southern regions. These two regions also exhibit very low proportion of regular household type which is 2.7 percent in central and 4.6 percent in southern regions. Approximately the similar pattern is also observed in eastern region but the western region has high proportion of regular salaried households. Hence it can be inferred that the regions witnessing higher incidence of poverty has high proportion of self and casual workers employed in agriculture and very low proportion of regular salaried workers. It is because agriculture in India is a low productive sector which generates modest income particularly to the workers employed as agricultural casual workers or self-employed as marginal and small land operating households.

Table 9: Percentage distribution of Household Type in Rural areas in Uttar Pradesh at regional level, 2011-12

Regions	Self-employed in agriculture	Self-employed in non-agriculture	Regular wage/salary earning	Casual labour in agriculture	Casual labour in non-agriculture	Others
Western	41.7	14.6	7.1	13.7	18.2	4.6
Central	48.5	10.5	2.7	14.9	20.7	2.7
Eastern	42.6	18.2	6.8	8.9	15.5	8.0
Southern	44.1	14.1	4.6	9.4	24.7	3.1
Uttar Pradesh	43.5	15.3	6.0	11.7	17.9	5.6

Source: NSSO, Employment-Unemployment Survey, 68th round

4.4: The Economy of Uttar Pradesh

Although, the decadal GSDP growth rate (5.2 percent) in Uttar Pradesh has been lower as compared to the GDP growth rate of India (5.8 percent) for the period 2011-12 to 2021-22 at 2011-12 prices, but it has maintained the fair share in India's economy with



around 8 percent of India's GDP in the mentioned period (Table 10). There has been decline in the growth rate of GDP for Uttar Pradesh and all India both but it is more evident for all India. This decline in GSDP growth rate owes to the decline of GDP growth in Indian Economy due to global slowdown and covid-19 outbreak.

Table 10: GDP of India and GSDP of Uttar Pradesh at 2011-12 prices (in Rs. Crore)

Year	India	Uttar Pradesh	%Share of Uttar Pradesh	% Growth over previous year	
				Uttar Pradesh	India
2011-12	8631489	724050	8.4	4.7	5.7
2012-13	9122724	758205	8.3	5.8	6.5
2013-14	9716897	802070	8.3	4.0	6.1
2014-15	10304870	834432	8.1	8.8	8.6
2015-16	11186816	908241	8.1	11.4	9.3
2016-17	12223253	1011500	8.3	4.4	6.9
2017-18	13066626	1056399	8.1	3.9	6.3
2018-19	13891147	1097353	7.9	4.0	3.9
2019-20	14431049	1141630	7.9	-4.3	-4.3
2020-21	13816276	1092787	7.9	9.8	9.6
2021-22	15143599	1200093	7.9		

Source: Reserve Bank of India

In spite of larger share in the National GDP and one of the fastest growing states, Uttar Pradesh has failed to raise its per capita income. It has a very dismal performance in terms of income transfer to its residents which is also reflected in the large-scale poverty in the state. It stands at 20th position among 21 major states of India in terms of net state domestic product (NSDP) per capita 2021-22 (Table 11). It has just Rs. 43420 as compared to national average of Rs. 92583. The NSDP per capita of Uttar Pradesh is just around 47 percent of national average.

Table 11: Per Capita Net State Domestic Product of major states in India at 2011-12 prices (in Rs.)

States	Per capita NSDP 2021-22	Rank	States	Per capita NSDP 2021-22	Rank

Delhi	252024	1	Andhra Pradesh	117464	12
Haryana	172657	2	India	92583	
Gujarat	170384	3	Odisha	81178	13
Karnataka	164471	4	Rajasthan	80545	14
Telangana	158202	5	Chhattisgarh	78377	15
Tamil Nadu	154557	6	West Bengal	69890	16
Uttarakhand	149015	7	Assam	65726	17
Kerala	148810	8	Madhya Pradesh	61534	18
Himachal Pradesh	143639	9	Jharkhand	56559	19
Maharashtra	138490	10	Uttar Pradesh	43420	20
Punjab	118227	11	Bihar	28679	21

Source: Reserve Bank of India

4.5: The Regional Structure of Uttar Pradesh Economy

The economy of Uttar Pradesh is the 4th largest after Maharashtra and Tamil Nadu and Gujarat in the year 2021-22 in terms of GSDP at 2011-12 prices in India. Its GSDP share accounts for 7.9 percent of total GDP of India. The share of agriculture and allied sectors, industry and services of Uttar Pradesh accounts for 13.0 percent, 6.7 percent and 7.6 percent respectively in India's respective sectors in 2012-13 (Table 12). In the year 2012-13, the share of agriculture and allied sectors is 22.4 percent within the Uttar Pradesh economy, which is quite high compared to 13.9 percent in case of Indian economy. Table 13 also reveals that service sector is the largest sector of the Uttar Pradesh economy with little over 55 percent share and industry accounts for 22.4 percent share.

Table 12: Sectoral Composition of GDP of Uttar Pradesh and all India for 2012-13 at 2004-05 prices

	India	Uttar Pradesh	Percentage of Uttar Pradesh in India
Agriculture and allied sectors	13.9	22.4	13.0
Industry	27.3	22.4	6.7



Services	58.8	55.2	7.6
Total	100.0	100.0	8.1

Source: Data-book compiled for use of Planning Commission, 2014, planning commission.

All the regions of Uttar Pradesh contribute to the state GSDP as per its strength and size of population. The largest contributor to the state economy is the western region and it is followed by eastern region, and the southern region has the least contribution in 2011-12. Eastern region is the second contributor to the state economy despite having largest share in the overall population of Uttar Pradesh. The western region contributed fairly large share in GSDP compare to its proportionate share of population in the state (Table 13). The GSDP per capita of western region is also the highest but surprisingly the GSDP per capita of the southern region is at the second position among four regions of Uttar Pradesh. The eastern region has the least GSDP per capita.

One of the prominent reasons for regional disparity in Uttar Pradesh is its large size of population apart from some other inherited disparities in terms of levels of agricultural development, social structure, industrial development and modes of agrarian settlement (Singh, 2016).

Table 13: Regional Structure of Uttar Pradesh Economy, 2011-12 at 2004-05 prices

	Western	Central	Eastern	Southern	Uttar Pradesh
GDP share (%)	46.9	18.5	29.0	5.6	100
Population share (%)	37.2	18.0	40.0	4.8	100
GSDP per capita (Rs.)	26735.1	21767.9	15360.47	24462.5	21182.95

Source: Statistical Abstract, Uttar Pradesh, 2014

Tertiary sector is the largest sector in the state economy and also in each region of the state (Table 14). The share of tertiary sector is about 54 percent in Uttar Pradesh Economy. The primary sector and secondary sector both contribute almost equally in the state economy. The primary sectors of southern and eastern

regions have larger share as compared to the secondary sectors in their respective regional economies.

Table 14: Region-wise Sectoral Share of GSDP of Uttar Pradesh, 2011-12 at 2004-05 prices

Sectors/Regions	Western	Central	Eastern	Southern	Uttar Pradesh
Primary	23.2	19.4	22.0	29.6	22.5
Secondary	27.1	21.1	21.0	18.7	23.7
Tertiary	49.8	59.5	57.0	51.7	53.8
GSDP	100	100	100	100	100

Source: Statistical Abstract, Uttar Pradesh, 2014

To understand the sectoral development of the regions, we investigate the region-wise sectoral distribution of the state economy. Table 15 shows that the western region is the largest contributor (48.3 percent) followed by eastern region (28.4 percent) in the primary sector of Uttar Pradesh Economy. The southern region contributes the least, just 7.4 percent to the primary sector of state economy. The western region has exploited the benefits of green revolution as well as higher public and private investment in agriculture sector. The eastern region has also benefitted from green revolution lately in early eighties through the spread of irrigation facilities. Both of these regions have above 80 percent net irrigated areas under cultivation. The main reason for the poor share in the primary sector for the southern region is basically its drought prone nature and therefore this region has the least irrigated areas under cultivation. This region is the least beneficiary of the green revolution.

For secondary sector, the western region is the highest contributor with 53.5 percent and then eastern region with 25.6 percent and again southern region has the least share with just 4.4 percent (Table 15). There are many factors responsible for proper development of secondary sector such as infrastructure, high level of investment, credit facilities, skilled labour and energy etc. The western region is better equipped in almost all factors of development compared to the rest of the regions of Uttar Pradesh. In case of tertiary sector also the western region leads with 43.4% share followed by eastern region (30.7 percent), and the share of rest of the



two regions is just 20.5 percent and 5.5 percent respectively for central and southern regions (Table 15).

It is very much clear from the above discussion that the western region is the most advanced region among all the regions in Uttar Pradesh. There are many reasons for the advancement of western part of the state. First among others is the early success of green revolution in this region and advancement of agriculture sector. Second, the proximity of this region to the national capital of the country has led to the development of industry and manufacturing sector in the region. The rapid urbanisation and industrialisation have attracted huge amount of public and private investment in this region which resulted into industrial development of this region.

Table 15: Sectoral Share of GSDP of Uttar Pradesh at Regional level, 2011-12 at 2004-05 prices

Regions/Sectors	Primary	Secondary	Tertiary	GSDP (%)
Western	48.3	53.5	43.4	46.9
Central	16.0	16.5	20.5	18.5
Eastern	28.4	25.6	30.7	29.0
Southern	7.4	4.4	5.5	5.6
Uttar Pradesh	100	100	100	100

Source: Statistical Abstract, Uttar Pradesh, 2014

The growth of secondary sector is extremely important for the generation of non-farm employment opportunities particularly in the labour surplus region. The eastern region which accounts for 40% population of Uttar Pradesh has just around 26% contribution in the secondary sector of the state (Table 15). Therefore, it is very important to initiate some measures in eastern region to increase the share of secondary sector in the state economy. In this regard the recommendation of Planning Commission (Uttar Pradesh state Development Report, 2014) is very relevant. In the report, it is suggested to create three Special Economic Zones (SEZs) in three cities of Eastern region viz. Gorakhpur, Allahabad and Varanasi to accelerate the pace of industrialisation in the region. Further, Investment in social, physical and financial infrastructure is also required for rapid industrialisation. In their study, Srivastava and Ranjan (2016) have recognised the importance of rapid industrialisation in

Uttar Pradesh for the generation of non-farm employment for the new entrants in the economy. Therefore, government must increase the share of expenditure on education, health, roads, communication and financial infrastructure among others. This will further induce private investment and will lead to new employment opportunities in the region.

4.6: Agricultural Development of Uttar Pradesh

Although, agriculture contributes only 22.5 percent in the GSDP of Uttar Pradesh yet it is the backbone of state Economy because it employs 49.7 percent of the total workers in Uttar Pradesh in 2011-12 (Table 16). Table 16 provides information about the importance of agriculture in Indian Economy as well as in Uttar Pradesh Economy. It is clearly visible from the table that the share of employment in agricultural sector is declining over the period but it still dominates in terms of largest labour absorbing sector in the country as well as the state. The growth of Indian economy still depends on agricultural sector through its linkages with other sectors of the economy (Singh et. al., 2003). Therefore, growth of the overall economy of Uttar Pradesh will also depend on the performance of agricultural sector in the state.

Table 16: Percentage Share of Employment in Agriculture

Years	1993-94	2004-05	2011-12
Uttar Pradesh	67.2	58.7	49.7
India	62.6	55.1	45.2

Source: NSSO, Employment-Unemployment Survey, various rounds

Uttar Pradesh had markedly benefited from the early success of green revolution in the country. It is the largest food grains producing state in India. It has produced a total of 44.0 million tons of food grains which is 17.5 percent share of all India food grains production of 252.2 million tons in 2014-15 (Pocket Book of Agricultural Statistics, 2017). Uttar Pradesh ranks 1st in the production of wheat and second in rice and it also ranks 1st in the production of cash crop sugarcane in 2014-15 (Agricultural Statistics at a Glance, 2016). Uttar Pradesh also stands at 3rd position in the production of fruits and it has 8 percent share in the production of pulses in 2014-15. Hence it is very



evident that agricultural sector in Uttar Pradesh is very important sector not only for the state economy but for overall economy of the country.

But, development of agriculture is not even in the state. There is regional disparity in agricultural development due to various reasons, which has resulted the different degrees of poverty and backwardness among four regions of the state. We look into the details of different dimensions of agriculture at regional level to understand the regional disparity in agricultural development. Table 17 provides information about land utilisation pattern at regional level in 2018-19. From the table it is clear that the western region has the highest ratio of net sown area (75.1 percent) followed by central, southern and eastern regions respectively. The western region has the least proportion of fallow land and the central region has the highest proportion of fallow land.

Table 17: Percentage Distribution of Different Uses of Land in Uttar Pradesh at Regional level, 2018-19

	Western	Central	Eastern	Southern	Uttar Pradesh
Forest	4.9	5.4	9.3	9.0	7.1
Land put under non-agricultural use	13.3	12.7	14.4	9.6	13.1
Barren and uncultivable land	1.4	2.2	1.5	3.3	1.8
Permanent pastures & other graze land	0.2	0.6	0.2	0.2	0.3
Other uses	0.6	1.2	1.8	0.4	1.1
Cultivable waste	1.1	1.9	1.4	3.0	1.6
Fallow land	3.4	9.6	7.1	8.9	6.5
Net area sown	75.1	66.5	64.2	65.6	68.4
Total	100.0	100	100	100	100
Area sown more than once	39.3	16.5	36.1	8.1	100

Source: Statistical Abstract, Uttar Pradesh, 2021

Table 18 shows that the western region has the highest proportion of net irrigated area to net area sown with 96.9 percent followed by central region with 87.4 percent then eastern region and it is least in southern region with about 68.2 percent only. Table 18 also depicts the information about region-wise area by type of irrigation and the eastern region has the largest share

under irrigation by canal followed by western region. This means these two regions enjoy the less cost of irrigation by availing the better facility of irrigation through canal. The southern region is the least irrigated region and it has only about 7 percent irrigated area by tube-wells and wells in the state which indicates probably the high cost of irrigation in the southern region. Further, the economic condition of agricultural workers improves with increased irrigational facilities in agricultural sector through increase in labour demand. Narayanmoorthy and Deshpande (2003) in their study concluded that improvement in irrigation increases the agricultural wages through increase in cropping intensity and demand for labour, and also by shifting the cropping pattern from low value crops to high value crops.

Table 18: Region-wise Percentage of Net Area Irrigated by Different Sources of Irrigation in Uttar Pradesh, 2018-19

Regions	Canals	Tube-wells & Wells	Tanks & Lakes	Other sources	Total	Percentage of net irrigated area to net area sown
Western	26%	44%	1%	50%	41%	96.9
Central	18%	18%	1%	1%	18%	87.4
Eastern	38%	31%	42%	32%	32%	82.6
Southern	18%	7%	56%	16%	9%	68.2
Uttar Pradesh	100%	100%	100%	100%	100%	87

Source: Statistical Abstract, Uttar Pradesh, 2021

The western region has witnessed the highest percentage of gross irrigated area with 89.6 percent in Uttar Pradesh and the central region stands for the 2nd position with 84.7 percent. The southern region is the least irrigated region with just 51.6 percent. On the basis of gross irrigated area also, the western region stands first with about 9.0-million-hectare irrigated land, the eastern region comes 2nd with 7.2-million-hectare irrigated land. Eastern region followed by western region have higher Irrigation intensity (Table 19).



Table 19: Region-wise Gross Area Irrigated, Irrigation Intensity in Uttar Pradesh, 2018-19

Regions	Gross area irrigated (Hect.)	Percentage to state total	Percentage of gross irrigated to total area sown	Irrigation intensity
Western	9037590	41.69	89.61	154.52
Central	3965114	18.29	84.75	152.37
Eastern	7240121	33.39	77.75	156.84
Southern	1437750	6.63	51.66	108.54
Uttar Pradesh	21680575	100	80.72	150.64

Source: Statistical Abstract, Uttar Pradesh, 2021

As per the Uttar Pradesh state Development Report (Planning Commission, 2014), the strength of Uttar Pradesh is its strong agricultural base, but agriculture in the state is not market based as in Punjab and Haryana. Therefore, there is an urgent need for surplus production in agricultural sector of Uttar Pradesh for generation of farm as well as non-farm employment. For new agricultural technology like biotechnology, genetic engineering the quality of seeds, efficient irrigation and mechanisation must be encouraged. New agriculture technology and water resource management for efficient irrigation like optimal combination of tube-wells and canal irrigation should be adopted. In policy perspective, it has been recognised that there should be adoption of strategy of combining agricultural growth, enhanced social development and generation of non-farm employment for high growth in rural areas (Radhakrishna, 2002).

Table 20 indicates that the western region has the highest crop intensity followed by eastern and central regions and the least crop intensity is in southern region. The crop intensity refers to growing number of crops from same agricultural land during a year. It is expressed as the ratio of gross cropped area to net sown area. The higher crop intensity shows that a higher portion of the net area is being cropped more than once during a year. Higher crop intensity also implies higher productivity per unit of land during the year. And income of the farmers is directly linked with the productivity of land. Hence, the region which is more

productive or having higher crop intensity will generate higher income to the farmers.

Table 20: Region-wise Per Capita Net Area Sown and Crop Intensity, 2012-13

Regions	Per capita net area sown	Cropping intensity
Western	0.07	167.17
Central	0.07	157.2
Eastern	0.06	166.68
Southern	0.18	143.3

Source: Statistical Abstract, Uttar Pradesh, 2021

As we know, for the betterment of agricultural sector, it is important that the people engaged in agriculture benefit from the production and the farmers get the fair price of their produce. There should be regulated market and standardisation of market procedure, availability of storage facility, electricity, and access to institutional credit facilities etc. The western region has comparative advantage in many of these facilities over the rest of the regions of Uttar Pradesh. The western region has the highest percentage of regulated markets (main and sub-market) followed by eastern, central and southern region respectively (Table 21).

Table 21: Region-wise Percentage of Regulated Markets in Uttar Pradesh in Agriculture, 2020-21

Regions	Percentage of main markets	Percentage of sub-markets	Percentage of total markets
Western	46.6%	41.6%	43.6%
Central	16.3%	20.9%	19.1%
Eastern	25.9%	29.8%	28.3%
Southern	11.2%	7.6%	9.0%
Uttar Pradesh	100.0%	100.0%	100.0%

Source: Statistical Abstract, Uttar Pradesh, 2021

The western region has disproportionately highest proportion (58.6 percent) of electricity consumption in agriculture followed by the eastern region with 22.6 percent and it is least in the southern region with only 6.3 percent (Table 22). The consumption of electricity in agriculture could be the single deciding or indicating factor that there is agricultural advancement in the western region. The higher level of electricity consumption indicates that the people in this region use



new technology in agriculture, which results in higher productivity and income in agriculture sector.

Table 22: Region-wise Percentage Share of Electricity Consumption in Agriculture in Uttar Pradesh, 2020-21

Regions	Western	Central	Eastern	Southern	Uttar Pradesh
Percentage	58.6	12.4	22.6	6.3	100

Source: Statistical Abstract, Uttar Pradesh, 2021

Table 23 provides information about region-wise cooperative banks and credit societies of Uttar Pradesh. Traditionally these are the institutions which provide substantial agricultural credits. The western region has the highest number of district cooperative banks followed by the eastern and central regions and it is least in southern region. But the Eastern region has the maximum number of cooperative credit societies followed by the western, central and southern regions in Uttar Pradesh.

Table 23: Region-wise Percentage Share of Cooperative Banks and Credit Societies in Uttar Pradesh, 2020-21

Regions	District cooperative bank	Co-operative credit societies	Central consumer cooperative store	District cooperative federation
Western	40.0	30.0	40.0	36.2
Central	18.0	19.4	15.0	15.5
Eastern	32.0	46.0	38.3	39.7
Southern	10.0	4.6	6.7	8.6
Uttar Pradesh	100.0	100.0	100.0	100.0

Source: Statistical Abstract, Uttar Pradesh, 2021

Table 24 provides regional information about live Stocks, Poultry and milk distribution in Uttar Pradesh. The share of allied sector in the GSDP of Uttar Pradesh is 2 percent in 2012-13 at 2004-05 prices. The allied sector in primary sector is very important in terms of employment and income generation in rural areas of Uttar Pradesh. The live Stocks and Poultry are the important sources of income for the poor in rural economy. Table 24 indicates that the western region has the highest proportion of live Stocks followed by the eastern region but in case of Poultry the reverse

situation exists. The western region has the highest percentage of milk distribution by co-operative department (43.1 percent) followed by eastern region whereas the southern region has the least percentage of milk distribution by the cooperative department (7.5 percent).

Table 24: Region-wise Percentage Share of Livestock, Poultry and Milk distribution in Uttar Pradesh, 2019

Regions	Live Stocks	Poultry	Milk distribution by Co-operative department
Western	36.9%	27.0%	43.1%
Central	19.0%	24.1%	22.9%
Eastern	36.1%	47.2%	26.5%
Southern	8.1%	1.7%	7.5%
Uttar Pradesh	100.0%	100.0%	100.0%

Source: Statistical Abstract, Uttar Pradesh, 2021

Table 25 presents regional picture of average yield of crops produced in Uttar Pradesh. From the table, regional variations in the average yields of these crops are clearly visible. For each mentioned crop the yield of western region has been highest and it is followed by either central region or eastern region as the average yield has been lowest in southern region. However, southern region has second highest average yield in potato and third highest in pulses.

Table 25: Region-wise Average Yield of Total Food Grains, Sugarcane, Total Pulses, Total Oil seeds and Potato in Uttar Pradesh, 2019-20

	Average Yield (Qtls./Hect.)				
Regions/Crops	Total food grain	Sugarcane	Total Pulses	Total Oil seeds	Potato
Western	33.98	845.88	11.68	14.54	286.9
Central	31.06	821.66	10.22	8.54	242.93
Eastern	28.82	707.82	10.95	6.97	227.86
Southern	19.95	390.5	10.39	4.03	269.2
Uttar Pradesh	29.89	813.13	10.64	8.91	269.2

Source: Statistical Abstract, Uttar Pradesh, 2021



On the basis of above analysis on agricultural development, it can be stated very convincingly that the western region is agriculturally most advanced and southern region is the most back-ward region in the state. In case of central and eastern regions, it is difficult to point out specifically which one is agriculturally more developed as in some indicator's eastern region while in other indicators central region are better placed. However, overall analysis confirms the better position of central region than eastern region in agricultural development.

4.7: Level of Infrastructure Development in Uttar Pradesh at regional level

Infrastructure is the backbone of any economy. Infrastructure directly facilitates economic development through better enhanced trade, ease of doing business, better connectivity through roads, communication etc. Educational institutions produce skilled workforce and well-trained managers equipped with latest skills to handle today's globalised trade system.

Overall, the percentage of villages linked with roads is 85 percent in Uttar Pradesh. But in the western region, it is the highest (90 percent) followed by central and southern regions with 89 percent and 87 percent respectively and finally the least connected villages are in eastern region with just 80 percent (table 26). The rural road connectivity is one of the important determinants of income generation in rural economy. The rural connectivity reduces the cost and time in visiting the neighboring business centers. It also helps to enhance the trade between villages and rural-urban areas, which ultimately results in increased income generation and overall development of the region through spread of education and other services in rural areas.

Table 26: Region-wise Surfaced Road Length Maintained by P.W.D. in Uttar Pradesh, 2020-21

Regions	Length of roads per 1000 sq. km. area (km.)	Length of roads per lakh population (km.)	Percentage of villages linked with road
Western	975	90	90
Central	955	106	89
Eastern	1431	133	80

Southern	546	146	87
Uttar Pradesh	1082	113	85

Source: Statistical Abstract, Uttar Pradesh, 2021

Educational infrastructure is very vital for overall development of the economy through better learning process and human development. Investment in educational infrastructure leads to better learning (Koppar et. al, 2003). Educational progress helps in better governance and better governance leads to rapid economic development (Mundle et. al, 2016).

Table 27 shows that the western region has the highest number of universities followed by eastern region. However, for Degree colleges, higher secondary school, upper primary schools and primary schools, western region stands second after the eastern region. In all the categories central region comes third. The southern region lags behind in all kinds of educational infrastructure in the state.

Table 27: Region-wise Number of Universities, Degree Colleges, Schools and Primary Schools in Uttar Pradesh, 2020-21

Regions	University	Degree college	Higher secondary school	Upper primary school	Primary school
Western	25	2926	10551	32201	49590
Central	8	1056	4501	13504	24559
Eastern	11	3536	11752	34531	56146
Southern	4	356	1088	5334	7850
Uttar Pradesh	48	7874	27892	85570	138145

Source: Statistical Abstract, Uttar Pradesh, 2021

Table 28 indicates that the western region has the highest proportion of electricity consumption by domestic, commercial and industrial use followed by eastern, central and southern regions respectively. The industrial power consumption is highest in western region for high as well as low & medium enterprises. The western region also tops in commercial and domestic consumption of power. The eastern region comes second in terms of power consumption for all types of uses except high industrial use (central region is the 2nd in this category) in Uttar Pradesh. The



southern region has the least consumption in all types of power consumption in Uttar Pradesh.

Table 28: Region-wise Percentage Share of Consumption of Electricity Power by Use & Consumers in Uttar Pradesh, 2020-21

Regions	Domestic use	Commercial use	Industrial power use	
			Low & Medium	High
Western	42.2	39.7	52.6	63.2
Central	18.6	20.2	18.5	20.8
Eastern	34.5	36.2	26.3	13.9
Southern	4.7	3.9	2.6	2.1
Uttar Pradesh	100	100	100	100

Source: Statistical Abstract, Uttar Pradesh, 2021

5. Conclusion

Uttar Pradesh is the most populous state and the third largest economy in India. It is one of the fastest growing states in the country. The state is divided into four regions- western, central, eastern and southern regions. The development of these regions has not been even as there is marked regional disparity in the economy of Uttar Pradesh. The western region has emerged as the most developed region in almost all the parameters of development. The level of poverty in western region is least among all the regions. The level of poverty is the highest in central region followed by eastern and southern regions. The western region has the highest share in GSDP of Uttar Pradesh followed by eastern, central and then southern regions respectively. The western region also tops in per capita GSDP in Uttar Pradesh. The western region stands first in almost all the parameters of development such as net and gross irrigated area, electricity consumption in agriculture as well as industry, number of villages connected to roads, number of educational institutions and yield of various crops in Uttar Pradesh. Hence, it can be concluded indisputably that the western region is the most developed region of Uttar Pradesh. Although the southern region stands at second place in terms of GSDP per capita, yet it lags behind in many parameters. So, it can be credibly stated that this region is the most backward region of Uttar Pradesh. Between central and

eastern regions, it is difficult to precisely conclude about the order of their development. The central region has higher per capita GSDP than eastern region but it is also the home of highest proportion of poor people. In the analysis it was noticed that some development indicators are better performing for central region while other indicators favours eastern region. However, on the whole it seems that central region is relatively better placed than eastern region in the overall development.

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