

Analyzing the Effects of Urbanization, Foreign Direct Investment, Non-Agricultural Sector, and Coastal Geography on Per Capita Income in Indian States: A Post-2008 Economic Crisis Study.

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Abstract

The study delves into the intricate dynamics of India's economic evolution, characterized by rapid urbanization, increased foreign direct investment (FDI), and the growing prominence of the non-agriculture sector, particularly in coastal states. Against the backdrop of the 2008 global economic crisis and its aftermath, the study aims to unravel the nuanced relationships between urbanization, cumulative FDI inflow, the non-agriculture sector's percentage contribution to GDP, and the coastal state status on the per capita net domestic product (PCNDP) of Indian states and Union Territories. As India grappled with economic shifts post-2008, including credit crunch and stock market fluctuations, this paper seeks to elucidate how these factors collectively impact PCNDP. The research underscores the crucial role of understanding these relationships for policymakers and researchers, offering insights into the specific drivers of economic growth at the state level and informing strategic decision-making for balanced development and reduced regional disparities. The study employs robust regression techniques and hypothesis testing to scrutinize the individual and collective influences of urbanization, FDI, non-agriculture sector contribution, and coastal state status on PCNDP. The findings contribute valuable information for policy formulation and strategic decision-making in the context of India's diverse economic landscape.

Keywords: Coastal States, Foreign Direct Investment, Non-agriculture Sector, Urbanization

JEL Classification: C21, R11, O18, F21,

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Introduction

With rapid urbanization, increased inflow of foreign direct investment, the growing contribution of the non-agriculture sector to the GDP, and the emergence of coastal states as significant economic contributors, India has undergone a remarkable economic and social evolution. The shift from agriculture to the service sector, unlike other nations, has made India stand out in South Asia and other emerging countries. Urbanization plays a crucial role in the economic development of any country (Tripathi & Mahey, 2016). Several studies have established a positive link between urbanization and economic growth, considering both developed and developing countries. According to a study conducted by Shaban et al (Khan, 2020), urbanization enables the skilled population to migrate to urban areas, creating an efficient labor market that leads to faster economic growth. Urbanization has a significant impact on the per capita net domestic product of Indian states and Union Territories. Foreign direct investment also plays a vital role in the economic growth of a nation, including India. FDI has a positive impact on the GDP by contributing to the overall capital formation and technological advancement. It also leads to an increase in per capita income by creating more employment opportunities and enhancing the productivity of labor. Studies have shown that FDI inflows have a significant positive impact on the economic growth of a nation, including in India (Sahoo & Mathiyazhagan, 2003). Similarly, non agriculture sector contributes to the diversification

of the economy, increases productivity, and creates employment opportunities. Coastal states in India have also emerged as major contributors to the country's economic growth, benefiting from their proximity to trade and foreign direct investment.

After the economic crisis 2008, India's economic landscape has undergone significant changes. In Indian financial market, despite a conservative banking sector, the crisis led to a credit crunch, affecting Indian firms' working capital. Public sector banks remained stable with low non-performing assets, contrasting with the global financial turmoil. In capital market, Foreign institutional investors (FIIs) withdrew significantly after Lehman Brothers' collapse, causing a stock market collapse. Long-term foreign direct investment (FDI) inflows remained stable, indicating sustained confidence in India's market. Export-oriented sectors, pivotal for India's growth, suffered as growth rates declined sharply after Lehman Brothers' collapse. Employment in key sectors, including mining, textiles, and autos, was adversely affected. Outflows of capital and declining export revenues led to a reduction in foreign exchange reserves (Mehrotra, 2010). The rupee depreciated sharply against the US dollar but later recovered as exports increased and FIIs returned. India felt the global economic crisis through various channels, impacting its banking and capital markets, key sectors, and foreign exchange reserves. The subsequent recovery was influenced by both domestic and global factors shaping India's economic trajectory. In such a situation FDI inflows, the percentage contribution of the non-agriculture sector to GDP, and the presence of coastal states could play crucial roles in determining Per Capita Income of the States and UT's.

The study aims to examine the impact of urbanization, cumulative FDI inflow, the percentage contribution of the non-agriculture sector to GDP, and coastal states on the per capita net domestic product of Indian states and Union Territories., and the coastal state on the per capita net domestic product of Indian states and UTs. Understanding the relationship between these factors and economic performance is crucial for policymakers and researchers alike. This research paper will provide insights into the role of urbanization, foreign direct investment, the non-agriculture sector, and coastal states on the economic development of Indian states and UTs (Tripathi & Mahey, 2016).

The rapid urbanization and economic changes witnessed in India post the 2008 global economic crisis have prompted a need to understand the multifaceted factors influencing the Per Capita Net Domestic Product (PCNDP) of Indian States and Union Territories (UTs). This study focuses on comprehensively analyzing the interplay of Urbanization, Cumulative Foreign Direct Investment (FDI) inflow, the Percentage contribution of the Non-agriculture Sector to Gross Domestic Product (GDP), and the Coastal state status in shaping the PCNDP landscape. Thus, the main research problem addressed in this study is to assess the effect of urbanization, cumulative FDI inflow, the percentage contribution of the non-agriculture sector to GDP, and coastal state on the per capita net domestic product of Indian states and UTs. The specific objectives of the study are as follows:

- i. To Examine the Impact of Urbanization on Per Capita Net Domestic Product of Indian States and UTs.
- ii. To Assess the Influence of Cumulative FDI Inflow on Per Capita Net Domestic Product of Indian States and UTs.
- iii. To Analyze the Relationship between the Percentage Contribution of the Non-agriculture Sector to GDP and the Per Capita Net Domestic Product of Indian States and UTs.
- iv. To explore the impact of coastal states' geographical location on Per Capita Net Domestic Product of Indian States and UTs.

Literature Review

Previous research has extensively investigated the factors influencing the economic performance of Indian states and UTs. K. Kaliappa et. al. studied state-level development disparities, noting improvements in some areas but a persistent gap. The paper explores the roles of state, market, and community in development, finding that despite economic reforms, the state's role in providing essential services prevents further disparities. Equitable sharing of central resources and targeted spending on services like health and education contribute to spatial equity, fostering balanced development (Kalirajan et al., 2010). This suggests that the economic growth and development have not been uniform across all Indian states and Union Territories, thereby warranting further research to understand the underlying factors contributing to this disparity.

Several studies, including those by Bhide et al., Chand and Chauhan, Mukherjee and Koruda, and Ghosh, have explored the impact of various agricultural outcomes, such as per capita agriculture and net state domestic product, on the economic divergence across Indian states. Their findings point towards increasing disparities, especially when tested through measures of sigma convergence and unconditional beta convergence (Mukherjee & Kuroda, 2003). This highlights the need to delve deeper into the role of urbanization, FDI, the non-agriculture sector, and the influence of coastal states on economic growth and divergence across Indian states and UTs.

Moreover, the impact of urbanization on economic growth has been a topic of considerable interest in the literature. Studies have established positive links between urbanization and economic growth (Turok & McGranahan, 2013), emphasizing the role of skilled migration to urban areas in creating an efficient labor market and driving faster economic growth (Imbert & Papp, 2020). Additionally, the significant impact of FDI on a nation's economic growth, particularly in terms of capital formation, technological advancement, and increased employment opportunities, has been well-documented.

In the context of coastal states, their proximity to trade and FDI has positioned them as major contributors to India's economic growth. Understanding the specific impact of the coastal state status on the economic development and per capita net domestic product of Indian states and UTs is crucial for comprehensive policy formulation and strategic decision-making.

Given the complex interplay of these factors, it is imperative to conduct a thorough analysis to examine their individual and collective influence on the economic landscape of Indian states and UTs. This study seeks to fill this gap by exploring the interconnectedness of urbanization, FDI, the non-agriculture sector, and coastal states, and their impact on the per capita net domestic product across Indian states and UTs.

Database and Methodology

The research utilizes secondary data, consisting of datasets obtained from various sources. The datasets include information on the Population in urban areas of the states or Union Territories (UTs), Total Population of the states or UTs, Net State Value Added by Economic Activity - Agriculture, and Net State Domestic Product. These datasets have been sourced from the "Handbook of Statistics on Indian States" published by the Reserve Bank of India (RBI). All values are reported in terms of constant prices, with the base year set as 2004-05. Specifically, the data related to the Population in urban areas and the Total Population of the states or UTs are derived from the 2011 census. Moreover, information on Foreign Direct Investment (FDI) inflow is obtained from the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry, Government of India.

Dependent Variable

pci: The dependent variable “pci” represents the **Per Capita Net State Domestic Product** of different States/UTs in India for the year 2011-12 (₹ Lakh). It is calculated at constant price taking 2004-05 as base year.

Independent Variables:

The independent variables i.e. included in the model are

- i. **Urbanization Status (Ubn):** Examining how the level of urbanization within a state correlates with its Per Capita Net State Domestic Product. Urbanization Status of a state is measured through the percentage of people live in urban area. The inclusion of the variable "Urbanization Status" in the analysis suggests an interest in understanding the relationship between the level of urbanization within a state and Per Capita Net State Domestic Product. Urbanization is a multifaceted process involving the growth of urban areas, characterized by an increase in the proportion of a population living in cities and towns compared to rural areas. It is derived from the 2011 census.
- ii. **Cumulative Foreign Direct Investment (FDI) Inflow (Cfdiin):** Assessing the influence of cumulative FDI inflow on the economic performance of states. It is the cumulative FDI inflow over four years from 2008-09 to 2011-12 of the states and UTs (US \$ million). Here for all states and UTs FDI equity inflows include ‘equity capital component’ only.
- iii. **Percentage Contribution of Non-Agriculture Sector to GDP (Nagri):** Analyzing the role of the non-agricultural sector in contributing to the overall economic prosperity of a state. The inclusion of the variable "Nagri" in regression analysis suggests an investigation into the relationship between the share of the non-agricultural sector in a state's Gross Domestic Product (GDP) and the state's Per Capita Net State Domestic Product.
- iv. **Coastal Dummy Variable (Cs):** Investigating whether being a coastal state has a significant impact on the state's Per Capita Net State Domestic Product. The inclusion of a "Coastal Dummy Variable" in your regression analysis suggests an investigation into whether being a coastal state has a significant influence on the Per Capita Net State Domestic Product of different States/UTs in India.

Techniques used to arrange the data

For the variable “ubn” We take percentage of population live in urban areas as the measure of urbanization status. Thus, formula for measuring urbanization status is –

$$ubn = \frac{\text{Population in urban area of the state or UTs}}{\text{Total Population of the state or UTs}} \times 100$$

For the variable “cfdiin” we calculated the cumulative FDI inflow over four years from 2008-09 to 2011-12 of the states and UTs (US \$ million). Here for all states and UTs FDI equity inflows include ‘equity capital component’ only.

In case of variable “nagri” we use the following formula to measure the Percentage Contribution of Non-Agriculture Sector to GDP (Nagri) –

$$nagri = \left\{ 1 - \frac{\text{Net state Value added by Economic Activity} - \text{Agriculture}}{\text{Net State Domestic Product}} \right\} \times 100$$

For the variable “Cs”, as there are two categories for States or UTs: (i) Coastal State and (ii) Non-Coastal State. Thus, to measure this variable we use one dummy “Cs”. The values are given as -

Cs = 1; for Coastal state

$Cs = 0$; for Non-Coastal state

Hypotheses of the Study

Urbanization: It is hypothesized that states with higher levels of urbanization will exhibit a positive association with PCI. It is anticipated that there exists a positive correlation between the level of urbanization and PCI. The hypothesis suggests that as a state becomes more urbanized, its economic development and per capita income tend to increase.

H_0 = urbanization has significant effect on Per Capita Income.

H_A = urbanization doesn't have significant effect on Per Capita Income.

FDI Inflow: The study anticipates a positive relationship between cumulative FDI inflow and PCI, suggesting that higher FDI contributes to increased economic well-being. It is hypothesized that there is a positive correlation between the cumulative FDI inflow over four years and the economic performance of states. The expectation is that states attracting more foreign direct investment will experience improved economic outcomes.

H_0 = the cumulative FDI inflow has significant effect on Per Capita Income.

H_A = the cumulative FDI inflow doesn't have significant effect on Per Capita Income.

Non-Agriculture Sector Contribution: The hypothesis posits that a higher percentage contribution of the non-agriculture sector to GDP will be positively correlated with PCI. The hypothesis proposes that there is a positive correlation between the percentage contribution of the non-agriculture sector to GDP and the Per Capita Income (PCI) of a state. In simpler terms, the expectation is that states with a higher proportion of economic activity in non-agricultural sectors will, on average, have higher PCI.

H_0 = Percentage contribution of the non-agriculture sector to GDP has significant effect on Per Capita Income.

H_A = Percentage contribution of the non-agriculture sector to GDP doesn't have significant effect on Per Capita Income.

Coastal Dummy Variable: The study hypothesizes that being a coastal state may positively influence PCI due to potential economic activities associated with coastal regions. The hypothesis posits that being a coastal state is associated with a positive influence on Per Capita Income (PCI). In other words, the expectation is that coastal states, on average, exhibit higher PCI compared to non-coastal states.

H_0 = Being a coastal state has significant effect on Per Capita Income.

H_A = Being a coastal state doesn't have significant effect on Per Capita Income.

Functional Form of the Model:

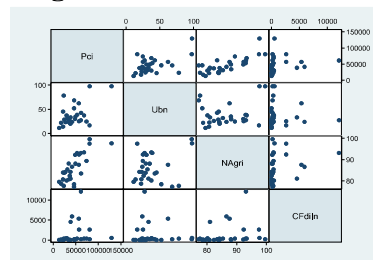
The model assumes a linear relationship between the dependent variable “pci” and the independent variables “ubn”, “nagri”, “cfdiin” and “Cs” :

$$pci = \beta_0 + \beta_1 ubn + \beta_2 nagri + \beta_3 cfdiin + \beta_4 cs + \varepsilon$$

Model Validation

Visualizing relationships among variables& looking for possible non-linear relationships we got-

Figure 1: Scatter Plots



Source: Author's calculation done in Stata 15.

The Scatter Plots (Hirschberg et al., 2005) maybe give a little bit of mixed evidence but we can notice some positive relationship between the variable “Ubn” and “Nagri”. There is also some positive relationship between variable “cfdiin” and “nagri”

Matrix of correlations and significance

The matrix of correlations (Ramsay et al., 1984) is also showing the same relations with significance level as displayed below.

Figure 2: Matrix of correlations

	pci	ubn	nagri	cfdiin	cs
pci	1.0000				
ubn	0.5139 0.0043	1.0000			
nagri	0.7737 0.0000	0.2269 0.2366	1.0000		
cfdiin	0.1778 0.3562	-0.0881 0.6495	0.2526 0.1861	1.0000	
cs	0.2324 0.2250	0.0898 0.6431	0.2907 0.1261	0.5809 0.0010	1.0000

Source: Author’s calculation done in Stata 15.

Identifying problems with Multicollinearity using Variance inflation factor (VIF):

In order to identify the existence of serious Multicollinearity statically we use the Variance inflation factor (VIF) (Shrestha, 2020). High VIF values indicate that a predictor variable may be highly correlated with other predictor variables in the model, which can cause issues such as unstable parameter estimates and inflated standard errors. Typically, a VIF greater than 10 or 5 is considered indicative of a problematic level of multicollinearity. The values of VIF are found as follow-

Figure 3: Variance inflation factor

Variable	VIF	1/VIF
cfdiin	1.59	0.628321
cs	1.59	0.629025
nagri	1.17	0.855294
ubn	1.10	0.909467
Mean VIF	1.36	

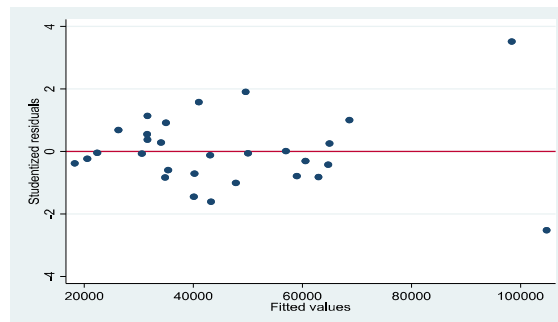
Source: Author’s calculation done in Stata 15.

As the VIF value is between 1 and 5 for all the variables thus, there is Moderate multicollinearity. The variance of the coefficient estimates is moderately inflated. This cannot be a cause of unstable parameter estimates and inflated standard errors.

Assumptions looking at residual’s plots

We can look the residual plot against fitted value to verify whether the constant variant assumption is valid or not. i.e. Assumption of homoscedasticity. The result is as follow-

Figure 4: Residual plot

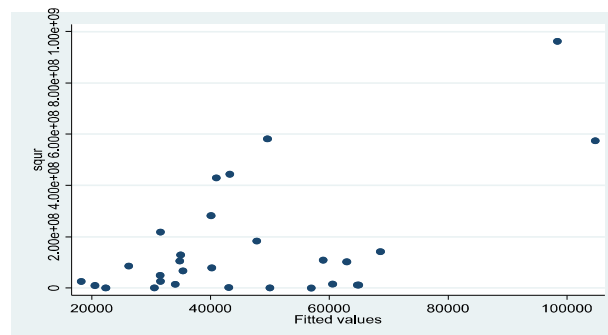


Source: Author's calculation done in Stata 15.

It is noticed that there is no Homogeneity in variance That is there is evidence of heteroscedasticity.

We can re-verify the result with Plot of squared (unstandardized) residuals against fitted values. This can also be used to identify potential violation of constant variance assumption:

Figure 5: Plot of squared (unstandardized) residuals against fitted values



Source: Author's calculation done in Stata 15.

Breush-Pagan Test

We have another option to test statistically using tests of constant variance Breush-Pagan Test (Breusch & Pagan, 1979).

Figure 6: Result of Breush-Pagan Test

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Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of pci

chi2(1)      =    9.10
Prob > chi2   =   0.0026
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Source: Author's calculation done in Stata 15.

As the P value is less than chosen significance level (e.g., 0.05), we reject the Null. That is there is evidence of heteroscedasticity, suggesting that the variance of the errors is not constant across all levels of the independent variables.

White's test

We have another option to test statistically using tests of constant variance White's test (Corradi & White, 1999).

Figure 7: Result of White's Test

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity	21.49	13	0.0637
Skewness	10.31	4	0.0355
Kurtosis	0.00	1	0.9572
Total	31.81	18	0.0232

Source: Author's calculation done in Stata 15.

Here also, as the P value is less than chosen significance level (0.05), We reject the Null. That is there is evidence of heteroscedasticity. Thus, we will go for Robust Regression instead of simple Regression.

Testing normality assumption with residuals

Figure 8: Summary of Residual

Residuals				
	Percentiles	Smallest		
1%	-23964.97	-23964.97		
5%	-21066.28	-21066.28		
10%	-16805.85	-16805.85	Obs	29
25%	-8879.26	-13549.1	Sum of Wgt.	29
50%	-934.6		Mean	-.0000147
		Largest	Std. Dev.	12909.79
75%	7049.117	14780.11		
90%	20731.55	20731.55	Variance	1.67e+08
95%	24119.46	24119.46	Skewness	.4296133
99%	31017.15	31017.15	Kurtosis	2.969549

Source: Author's calculation done in Stata 15.

Significant test for normality: Skewness and kurtosis Test

Let us firstly use skewness and kurtosis test to test the normality. Our test hypothesis are as follows-

H₀: Data set are consistence with normality

H_a: Data set are inconsistency with normality

Figure 9: Result of Skewness and Kurtosis Test

Skewness/Kurtosis tests for Normality					
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
ur	29	0.2779	0.6317	1.52	0.4682

Source: Author's calculation done in Stata 15.

In terms of skewness and kurtosis statistics the P values are greater than 0.05 which would be an indication that our data are reasonably normal on that dimension. And we have the significance test over all in terms of whether or not the data are departing

from normality. Our p value is greater than 0.05 and so we would have evidence that the residual appears to be fairly normally distributed.

Shapiro-Wilk W test for normality test:

We can also go for Shapiro-Wilk W test to test normality using following hypothesis-

H₀: The null hypothesis of the Shapiro-Wilk test is that the sample is drawn from a normally distributed population.

H_A: The alternative hypothesis is that the sample is not drawn from a normally distributed population.

Figure 10: Result of Shapiro-Wilk W Test

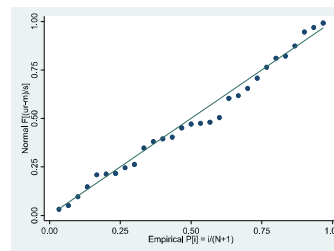
Shapiro-Wilk W test for normal data					
Variable	Obs	W	V	z	Prob>z
ur	29	0.97918	0.645	-0.903	0.81687

Source: Author's calculation done in Stata 15.

Here W is close to 1, it suggests that the sample is close to a normal distribution. And p-value is greater than chosen significance level (0.05), We fail to reject the null hypothesis. There is insufficient evidence to suggest that the sample does not come from a normally distributed population. We may assume normality.

Testing normality of residuals using P-P and Q-Q plots:

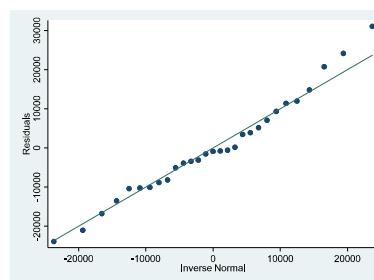
Figure 11: P-P Plot



Source: Author's calculation done in Stata 15.

This is plotting data against what would be expected with a normal distribution and so we are looking for is that the data points are following reasonably closely to line and places where data are departing substantially that might be evidence that we would have a departure from normality. The data are largely consistent it looks like they are following pretty close to the line it's not perfect but it's not enough to give us a whole lot of pauses concerning that issue.

Figure 12: Q-Q Plot



Source: Author's calculation done in Stata 15.

In the Q-Q plot line maybe a little bit of mixed evidence in terms of the issue of normality but in large parts probably reasonably in the ballpark it's reasonably consistent. This is a evidence of presence of normality.

Result and Discussion:

The result of Robust Regression is as follow

Figure 13: Result of Robust Regression

Linear regression	Number of obs	=	29
	F(4, 24)	=	13.68
	Prob > F	=	0.0000
	R-squared	=	0.7213
	Root MSE	=	13944

pci	Robust		t	P> t	[95% Conf. Interval]	
	Coef.	Std. Err.				
ubn	396.5823	178.5487	2.22	0.036	28.07585	765.0887
nagri	2609.379	518.1606	5.04	0.000	1539.949	3678.81
cfdiin	.5091147	.9149021	0.56	0.583	-1.37915	2.39738
cs	-1662.165	7484.742	-0.22	0.826	-17109.91	13785.58
_cons	-193745.7	45248.3	-4.28	0.000	-287133.6	-100357.8

Source: Author's calculation done in Stata 15.

Model Summary:

Number of Observations (Number of obs): There are 29 observations in the dataset.

F-statistic (F(4, 24)): The overall significance of the model is tested using the F-statistic. In this case, $F(4, 24) = 13.68$, with a p-value (Prob > F) of 0.0000. The small p-value suggests that at least one of the coefficients in the model is significantly different from zero. i.e. our model is overall significant.

R-squared: The R-squared value is 0.7213, indicating that approximately 72.13% of the variability in the dependent variable is explained by the independent variables.

Root Mean Squared Error (Root MSE): The Root MSE is a measure of the standard deviation of the residuals. In this case, it is 13944.

Coefficients:

➤ **ubn (Urbanization Status):**

Coefficient (Coef.): 396.5823

Standard Error (Std. Err.): 178.5487

t-statistic (t): 2.22

p-value (P>|t|): 0.036

95% Confidence Interval: [28.07585, 765.0887]

Interpretation: The coefficient for **ubn** is 396.5823. Holding other variables constant, a one-percent increase in the number of people live in urban area of the states or UTs is associated with an increase of 396.5823 in the Per Capita Net State Domestic Product of the states or UTs (pci). The p-value suggests that the coefficient is statistically significant.

➤ **nagri (Percentage Contribution of Non-Agriculture Sector to GDP):**

Coefficient: 2609.379

Standard Error: 518.1606

t-statistic: 5.04

p-value: 0.000

95% Confidence Interval: [1539.949, 3678.81]

Interpretation: The coefficient for “nagri” is 2609.379. Holding other variables constant, a one-unit increase in Percentage Contribution of Non-Agriculture Sector to GDP of the states or UTs is associated with an increase of 2609.379 in the Per Capita Net State Domestic Product of the states or UTs (pci). The p-value indicates statistical significance.

➤ **cfdiin (Cumulative Foreign Direct Investment (FDI) Inflow):**

Coefficient: 0.5091147

Standard Error: 0.9149021

t-statistic: 0.56

p-value: 0.583

95% Confidence Interval: [-1.37915, 2.39738]

Interpretation: The coefficient for “cfdiin” is 0.5091147. The p-value is greater than 0.05, it suggests that this coefficient is not statistically significant at conventional significance levels.

➤ **cs (Coastal Dummy Variable):**

Coefficient: -1662.165

Standard Error: 7484.742

t-statistic: -0.22

p-value: 0.826

95% Confidence Interval: [-17109.91, 13785.58]

Interpretation: The coefficient for “cs” is -1662.165. The p-value suggests that this coefficient is not statistically significant at conventional significance levels.

➤ **Constant Term (_cons):**

Coefficient: -193745.7

Standard Error: 45248.3

t-statistic: -4.28

p-value: 0.000

95% Confidence Interval: [-287133.6, -100357.8]

Interpretation: The constant term represents the estimated value of the dependent variable when all independent variables are zero. The p-value indicates statistical significance.

The overall model is statistically significant, as indicated by the F-statistic. The R-squared value suggests a relatively good fit. The coefficients for ubn (Urbanization Status) and nagri (Percentage Contribution of Non-Agriculture Sector to GDP) are statistically significant, while the coefficient for cfdiin (Cumulative Foreign Direct Investment (FDI) Inflow) and cs (Coastal Dummy Variable) are not statistically significant. The constant term is also statistically significant. The 95% confidence intervals provide a range of plausible values for the coefficients. Interpretation should consider both statistical significance and practical significance in the context of the data.

Conclusion:

Understanding the factors that contribute to Per Capita Net State Domestic Product variations among states in India is crucial for policymakers, economists, and researchers. At it is found that for ubn (Urbanization Status) and nagri (Percentage Contribution of Non-Agriculture Sector to GDP) has significant effect on Per Capita Net State Domestic Product of the states/UTs. The findings can inform regional development

strategies, economic policies, and investment decisions to foster balanced economic growth and reduce disparities among states. The results of this study may provide insights into the specific drivers of economic growth at the state level, offering policymakers targeted information to enhance development initiatives. Additionally, the findings could be relevant for investors and businesses seeking opportunities in regions with the potential for increased economic prosperity.

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