



**INTER-STATE MIGRATION AND ECONOMIC GROWTH OF DESTINATION STATES IN INDIA: AN ECONOMETRIC ANALYSIS**

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**Abstract**

Migration is a significant driver propelling economic progress. According to the Migration in India 2020-21 report, 11.8% of India's 45 crore migrants are Inter-state migrants. In India, workers from less developed states move towards more developed states in quest of employment. These migrants are essential in providing labour to the industries that need it. This makes it easier for the states to have a large supply of reasonably priced labour for services and industries. By boosting labour supply, improving productivity, growing urban markets, and fostering the expansion of the industrial and service sectors, this migration wave has a positive impact on a state's economic growth. This study aims to analyze the impact of inter-state migration on economic growth. The study makes use of the multiple linear regression model. The study uses state-wise cross-sectional data on Gross State Domestic Product, Inter-state migration, Gross enrollment ratio and capital formation. From the analysis it is evident that the Migration and Capital formation have significant positive impact on state's GDP. And the variable Gross enrollment Ratio doesn't have significant impact on the Gross state domestic product of the states.

**Keywords:** Inter-state migration, Gross enrollment ratio, Capital formation, Gross State Domestic Product, Economic growth, Urbanization, Labour Market Dynamics, Human Capital, etc.,

**Introduction**

Migration is a key driver of economic growth of a nation. India is home to 45 crore migrants. According to the Periodic Labour Force Survey 2021 the net migration rate is 28.9%. Out of 45 crore internal migrants 11.8% are inter-state migrants. The Inter-state migration act as a stimulus for economic growth and it also have significant positive impact on the percapita

income. In India the migration influenced growth is undergoing a profound structural transformation as it releases surplus labour from low-productivity agriculture into high-productivity urban sectors. India has 9 million annual flow of Inter-state migrants, The geography of Indian migration follows clear passage from less affluent Sending zones to Receiving powerhouses. According to the economic survey of India 2017 a major new dynamic is the "Southern Pull," driven specifically by Tamil Nadu and Kerala, which have seen significantly increased inward migration. This influx of inter-state migration positively affects the GSDP of the receiving states, by boosting labour supply, improving productivity, growing urban markets, and fostering the expansion of the industrial and service sectors. The present study examined the relationship between inter-state migration and economic growth across Indian states and Union territories using a multiple regression framework. The main objective was to analyze whether inter-state migration contributes to the economic growth of destination states. The study also analyse the role of education and capital formation as additional determinants of growth. Gross State Domestic Product (GSDP) is used as the indicator of economic growth, while inter-state migration, gross enrolment ratio(Higher education), and capital formation are taken as explanatory variables. The analysis is based on cross-sectional data for selected Indian states collected from official sources. Using cross-sectional data for 28 states and 8 union territories, the study estimated the impact of Inter-state migration, gross enrolment ratio(Higher education), and capital on Gross State Domestic Product as an indicator of economic growth.

The result shows that Inter-state migration and capital formation have significant impact on GSDP of the destination states while the GER doesn't have a significant impact on GSDP.

### **Review of literature**

It is evident from the findings of Olena Rayevnyeva, Kostyantyn Stryzhychenko and Silvia Matúšová (2023) The research establishes a significant reciprocal influence level between migration and GDP, quantified at 10–14%. This confirms that "structural migration" is a core component of national economic output rather than a peripheral variable. Economic growth is the primary regulator of migration flows. Migration into a country act as a stimulus for growth, while that very growth serves as the most effective tool for managing and retaining a country's own domestic workforce.

Kudaeva and Redozubov (2021), the model suggests that a 1% migration shock can increase real GDP by 0.1%. it was found that a sharp increase in the flow of migrants to the country and to the "attracting" regions has a significant positive effect on the economic activity. At the same time, the outflow of migrants from the "giving" regions leads to a slight increase in wages.

Kirandeep Brar<sup>1</sup> & Bosu Seo<sup>1</sup>(2021) state in their work that is a persistent positive correlation between a state's level of development—measured by per capita income and literacy rates—and its inward migration rate. They documented interdependent relationship between migration rates, per capita income, and literacy. Higher literacy rates facilitate access to high-paying professional jobs, driving up state per capita income and attracting further inward migration.

According to the economic survey of India 2017, the shift of labour toward higher-productivity sectors is accelerating, serving as a critical engine for India's GDP growth. The correlation between a state's "Log Real Income per Capita" and its CMM score is strongly positive: the most developed states are successfully attracting the most human capital.

Kanu, Success Ikechi & Ozurumba, Benedict Anayochukwu(2014) state that, The level of economic growth in Nigeria bears a significant relationship with gross fixed capital formation in both the short and long runs and so desires a closer watch for improved economic performance.

According to Ortega and Peri (2013) it is evident from the analysis, that openness to the movement of people is a more potent and robust driver of long-run economic prosperity than the movement of goods. While trade remains a focus of globalization policy, the significant unrealized efficiency gains may lie in the regulation of international migration. The evidence suggests that diverse immigration increases a nation's "Total Factor Productivity" by enriching the talent pool and fostering innovation, without necessarily increasing domestic inequality.

### **Data and Methodology**

The data of 28 states and 8 UTS on GSDP and Migration, Gross enrollment ratio and Capital formation were taken for this study. GSDP and Capital formation Data are sourced from Handbook of statistics of Indian states. GER data sourced from AISHE report. Migration data sourced from Ministry of Labour & Employment report.

#### **Methodology**

Multiple linear regression model

$$\ln(EG_i) = \beta_0 + \beta_1 \ln(MIG_i) + \beta_2 GER_i + \ln \beta_3 (CAP_i) + u$$

Where

EG= Economic growth of the state I measured by Gross State Domestic Product (GSDP)

MIG<sub>i</sub>= Number of Inter-state migrant in state i

GER<sub>i</sub>= Gross enrolment ratio in state i

CAP<sub>i</sub>= Capital formation in state i.

Logarithmic transformation is applied to EG, MIG, and CAP to improve normality and to interpret coefficients as elasticities, while GER is retained in level form since it is already expressed as a ratio..

### **Data analysis**

### Linear Regression

Model Fit Measures

Model	R	R <sup>2</sup>	Overall Model Test			
			F	df1	df2	p
1	0.972	0.946	157	3	27	<.001

Note. Models estimated using sample size of N=31

Omnibus ANOVA Test

	Sum of Squares	df	Mean Square	F	p
MIG	1.9171	1	1.9171	61.52	<.001
GER	0.0551	1	0.0551	1.77	.195
CAP	0.5650	1	0.5650	18.13	<.001
Residuals	0.8414	27	0.0312		

Note. Type 3 sum of squares

[3]

Since the p value is lower than 0.05 and 0.01 the null hypothesis is rejected

This indicates independent variables have a statistically significant effect on dependent variable

Model Coefficients - EG

Predictor	Estimate	SE	95% Confidence Interval		t	p	Stand. Estimate	95% Confidence Interval	
			Lower	Upper				Lower	Upper
Intercept	2.83624	0.32833	2.16257	3.50991	8.64	<.001			
MIG	0.66860	0.08524	0.49370	0.84350	7.84	<.001	0.6520	0.481	0.822
GER	-0.00354	0.00266	-0.00901	0.00193	-1.33	.195	-0.0597	-0.152	0.032
CAP	0.18471	0.04338	0.09571	0.27371	4.26	<.001	0.3538	0.183	0.524

- From the analysis it is evident that the Migration and Capital formation have significant positive impact on state’s GDP at 5% level of significance.
- For 1% growth in inter-state migration the GSDP increases by 0.67% at 5% level of significance.
- 1% growth in Capital formation the GSDP increases by 0.18% at 5% level of significance.
- And the variable Gross Enrollment Ratio doesn’t have significant impact on the Gross state domestic product of the states at 5% level of significance.

### Results and Discussions

The Economic Growth and migration are closely related, it is evident from our analysis that the migration and Capital formation have a significant impact on the GSDP on Indian states and UTs. This result aligns with major domestic and international studies.

The Migration is a significant contributor towards economic growth. Both inter-state migration and intra-state migration contributes significantly to the GSDP of the state. States receiving higher levels of inter-state migrants tend to experience better economic performance due to the availability of additional labour force, improved productivity, and expansion of economic activities. Migration provides necessary labour for Industrial and service sectors at a cheap

cost. The High income states lacks Unskilled or low Skilled labours across sectors due to high level of education, there prevails shortage for these workers.

This gap is addressed by migration especially by inter-state migration. Most of the migrants have low levels of education result in low wages, these low wages increase the economic surplus the businesses that employs them. Higher profits resulting in higher investment levels. This study shows that for 1% increase Inter-state migration, the GSDP of the states and UTs increases by 0.67% the results supports the findings of Kudaeva and Redozubov (2021), their model suggests that a 1% migration shock can increase real GDP by 0.1%, and the work of Olena Rayevnyeva, Kostyantyn Stryzhychenko, and Silvia Matúšová(2023) their research establishes a significant reciprocal influence level between migration and GDP, quantified at 10–14%. This confirms that "structural migration" is a core component of national economic output rather than a peripheral variable.

The capital formation is an important contributor of economic growth. Higher the level of capital formation higher will be the economic growth. Output or GDP directly depends on the availability of capital and investment in the country. In our study it is evident that capital formation has a significant positive impact on the GSDP of the states. A one percent increase in the capital results in 0.18 percent growth on the GSDP of the states and UTs. This result supports the work of Kanu, Success Ikechi & Ozurumba, Benedict Anayochukwu(2014).

Education and economic growth are deeply associated with one another. Increase in the level of education positively contributes to the economic growth of the nation. The Higher education gross enrollment ratio is taken as the measure of level of education in an economy. In this study the GER doesn't have a significant impact on the GSDP of the states. This result rejects the results of Kobzev Kotásková, S., Procházka, P., Smutka, L., Maitah, M., Kuzmenko, E., Kopecká, M., & Hönig, V. (2018). In India, areas like Chandigarh that have a high GER on higher education also have lower GSDP. Additionally, states with higher GSDP have lower GER, Gujarat and a few other states have this kind of association. As a result, GER has little effect on states' and UTs' GSDP.

### **Conclusion**

The empirical results indicate that inter-state migration has a significant influence on economic growth, suggesting that labour mobility plays an important role in the economic growth of destinations. Similarly, capital formation has a strong positive impact on economic growth, indicating that investment in physical infrastructure and productive assets remains a key driver of regional economic development. The results also show that education doesn't have a statistically significant effect on economic growth.

From the policy perspective the findings suggest that Inter-state migrants should not be viewed merely as a demographic phenomenon but as an important economic factor influencing regional growth. Government policies should focus on improving the absorptive capacity of destination states by investing in urban infrastructure, housing, and employment opportunities. Work permit system may regulate the flow and helps in data collection for future purposes.

However, this study has certain limitations. The analysis is based on cross-sectional data, a limited number of variables are included due to constraints in data availability. Other important factors such as technology, industrialization, and inequality could not be included in the model. In addition, the study focused only unskilled migration, skilled migration may also have impacts on economic growth.

Future research may extend the analysis using panel data for 5 years or more. Some selected areas or specific districts can be taken for drawing deep insights in analysing the impact of migration. To conclude this study confirms that inter-state migration and capital formation has a significant positive impact on the economic growth. Regulated flow of migration and supportive policies can lead to higher economic growth.

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