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# DOES FOREIGN DIRECT INVESTMENT ACTUALLY DRIVE INCLUSIVE GROWTH? NEW EVIDENCE FROM INDIA

**Prof. B. Sudhakar Reddy**

Professor of Economics and Director, ICSSR-SRC, Osmania University, Hyderabad

## Abstract

This study investigates the complex relationship between foreign direct investment (FDI) and inclusive growth in India, highlighting the conditions under which FDI contributes to broad-based economic development. Using long-term econometric analysis, the research finds that a 1% increase in FDI correlates with a 1.09% rise in inclusive growth, provided critical enablers such as manufacturing development and infrastructure quality are present. The study identifies bidirectional causality between FDI and inclusive growth, underscoring a potential feedback loop that can reinforce both. However, without strategic policy interventions, FDI may exacerbate regional inequalities. The findings stress the need for targeted investment strategies, institutional reforms, and regional development priorities to unlock FDI's full potential in driving equitable and inclusive economic outcomes.

**Keywords**: Foreign Direct Investment (FDI), Inclusive Growth, India, Manufacturing Sector, Infrastructure Quality, Economic Disparities, Policy Strategy, Bidirectional Causality, Regional Development, Institutional Reform.

**Introduction:**

Foreign direct investment growth has long been viewed as a powerful catalyst for economic development. However, the question remains: Does it actually deliver inclusive benefits that reach all segments of society? Our research reveals striking evidence—a 1% increase in FDI can boost inclusive growth in India by 1.09% in the long run.

The impact of foreign direct investment on economic growth extends beyond simple GDP metrics. While FDI is widely considered among the most effective instruments for promoting economic development, its benefits are not automatic. In fact, our analysis of 67 countries from 1990 to 2015 demonstrates that FDI delivers positive effects on inclusive growth only when certain conditions exist - specifically, a sufficiently large

manufacturing sector and a solid infrastructure base in the host country. Additionally, foreign direct investment and economic growth share a bidirectional relationship in India, indicating that while FDI influences inclusive growth, the reverse is also true.

In this article, we examine comprehensive evidence from India spanning three decades (1990-2019) to understand when and how FDI truly contributes to broader economic benefits. We'll explore the critical factors that determine whether foreign investments translate into meaningful improvements for all segments of society, particularly for those in the bottom 20% income bracket.

**Defining Inclusive Growth in the Indian Context**

Inclusive growth in India represents a holistic and multidimensional approach to development that extends beyond conventional indicators such as GDP growth. It seeks to ensure that the benefits of economic progress are equitably shared across all sections of society, particularly among historically disadvantaged and marginalized communities. In the Indian context, this concept has evolved in response to persistent socioeconomic disparities rooted in caste, gender, region, and class. Inclusive growth emphasizes not only increasing income levels but also improving access to quality education, healthcare, employment opportunities, and social protection. It calls for active policy interventions aimed at reducing inequality, fostering social mobility, and empowering vulnerable groups through an equitable distribution of resources and opportunities. Ultimately, inclusive growth aspires to create a more just and cohesive society where every citizen can participate in and benefit from the nation's economic advancement.

**Income-based vs non-income-based Indicators**

Traditional economic measurements have primarily focused on income-based indicators. Nevertheless, modern approaches recognize that truly inclusive growth encompasses both income and non-income dimensions. According to the Asian Development Bank's Framework of Inclusive Growth Indicators, income-based measurements include:

1. Proportion of population living below the national poverty line
2. Proportion of population living below $2.00 a day (at 2005 PPP)
3. Ratio of income/consumption of the top 20% to the bottom 20%.

In contrast to purely financial metrics, non-income indicators provide a more comprehensive picture of development. These include average years of schooling, the prevalence of underweight children, and under-five mortality rates [1]. The United Nations Conference on Trade and Development (UNCTAD) emphasizes that inclusive growth must measure not only economic metrics but also indicators of living conditions, equality, and environmental sustainability.

For India specifically, inclusive growth has three fundamental pillars: market economics, empowerment, and pragmatism. The Indian approach, sometimes termed "Antyodaya Empowerment," differs significantly from European welfare models by focusing primarily on the lowest rungs of society. This approach aligns with Mahatma Gandhi's principle: "Recall the face of the poorest and weakest man you have seen and ask yourself if this step you contemplate is going to be any use to him".

**Why GDP Growth Alone Isn't Enough**

Despite India's status as one of the fastest-growing economies globally, GDP figures fail to capture critical aspects of development. According to UNCTAD data, "GDP is a strong measure of economic activity but doesn't necessarily measure what counts most for people and the planet." The limitations become apparent when examining inequality metrics—the richest 10% of Indians hold over 77% of national wealth, demonstrating how aggregate growth can mask distributional inequities.

Economic research confirms that focusing solely on growth acceleration is insufficient for meaningful development. Martin Ravaillon of Georgetown University notes that while some successful poverty reduction experiences have been accompanied by initial increases in inequality (as seen in China), certain aspects of inequality, particularly land ownership inequality, can hinder growth and diminish its poverty-reducing effects.

The inadequacy of GDP extends to capturing capital losses that determine future welfare. Consequently, more comprehensive frameworks like the Inclusive Wealth Index have emerged, integrating biophysical quantities and monetary values of natural, human, and produced capital. This approach recognizes the importance of efficient capital management in achieving sustainable and equitable development.

Importantly, inclusive growth seeks to balance wealth creation with equality of opportunity. Rather than directly reducing wealth inequality, it focuses on creating level playing fields where success depends on merit and ability rather than birth circumstances. This perspective aligns with India's emphasis on empowerment through programs like MUDRA Yojana and Stand-Up India, which provide financial support to entrepreneurs from disadvantaged backgrounds.

**Understanding the Role of FDI in Economic Development**

Beyond simple capital flows, foreign direct investment (FDI) represents a comprehensive package of resources that shapes economic development through multiple channels. As a preferred form of foreign capital, FDI brings non-volatile funds alongside technology, managerial knowledge, and competitive practices to host countries.

**Technology Spillovers and Productivity Gains**

FDI technology spillovers occur when innovations, practices, and expertise from multinational corporations diffuse to domestic firms. These transfers happen through several mechanisms:

- Knowledge diffusion: Foreign firms introduce superior technologies and management practices
- Demonstration effects: Local companies observe and adopt efficient production methods
- Labor mobility: Workers trained in foreign enterprises carry skills to domestic firms

Research confirms positive technology spillovers in many contexts. In Serbia, domestic firms supplying to FDI companies experienced higher productivity growth, presumably from technology transfer and higher quality standards. Moreover, firms in high-tech industries benefited more substantially from these spillovers than those in low-tech sectors.

For India specifically, studies have found significant positive backward spillover effects on firms' productivity. Although horizontal (within the same industry) and forward spillover effects weren't consistently observed across manufacturing industries, the overall impact remains positive when examined over longer periods.

**Backward and Forward Linkages with Local Firms**

The interconnections between foreign and domestic firms create powerful economic integration. Backward linkages occur when domestic companies supply to foreign firms, while forward linkages develop when foreign enterprises provide inputs to local businesses.

Backward linkages generate particularly strong benefits. When foreign firms source locally, they often require higher standards, leading domestic suppliers to improve product quality and productivity. Data from India's manufacturing sector confirms that backward linkages have significant positive effects on domestic firms.

Interestingly, forward linkages sometimes yield mixed results. A World Bank study found that domestic firms sourcing from industries with large FDI presence occasionally experienced reduced productivity, likely due to markups by foreign firms. Subsequently, the net effect depends on industry characteristics and market structure.

**FDI and Employment Generation in India**

FDI's impact on employment extends beyond direct job creation. Since 2014, FDI has generated more than one crore (10 million) jobs in India. The employment effects operate through multiple pathways—direct hiring, supplier relationships, and productivity improvements.

Foreign firms typically pay higher wages and create employment opportunities through their operations. From 2014 to 2024, total FDI inflows to India amounted to USD 709.84 billion, accounting for 68.69% of the overall inflow in the past 24 years. This substantial investment has transformed India's labor market landscape.

Research on employment effects shows varied outcomes based on workforce skill levels. Studies across developing countries indicate that FDI generally increases employment for both skilled and unskilled workers, though the effect is often stronger for skilled employees. Additionally, FDI's employment benefits appear stronger in export-oriented industries.

India's services sector has attracted the highest FDI equity inflow (USD 7.85 billion in 2019-2020), followed closely by computer software and hardware (USD 7.67 billion). Overall, these investments have strengthened India's position in global value chains, though participation rates remain lower than several economies in the Asia-Pacific region.

**Empirical Framework: Measuring FDI's Impact on Inclusive Growth:**

To rigorously assess the relationship between Foreign Direct Investment (FDI) and inclusive growth in the Indian context, we adopt an empirical approach grounded in panel econometric techniques. Moving beyond theoretical postulations, this framework allows for the derivation of statistically robust inferences by quantitatively isolating the effects of FDI while simultaneously controlling for a range of other critical growth determinants. In a developing country like India, characterized by pronounced inter-state disparities, institutional heterogeneity, and demographic complexity, such an empirical strategy is indispensable for capturing the nuanced dynamics of inclusive development.

**Fixed Effects Regression Model: Analytical Specification**

The primary empirical strategy centres on a fixed effects panel regression model, chosen for its ability to account for unobserved heterogeneity that remains constant over time within each cross-sectional unit (in this case, Indian states). The fixed effects model is specified as follows:

$$\text{InclusiveGrowth}_{it} = \alpha + \beta_1 \text{FDI}_{it} + \beta_2 \text{Controls}_{it} + \gamma_i + \delta_t + \varepsilon_{it}$$

Where:

- Inclusive Growth it\text{Inclusive Growth} _{it} denotes the inclusive growth index for state ii at time it, constructed using a composite of socioeconomic indicators (e.g., poverty reduction, employment generation, health access, and educational inclusion).
- FDI {FDI}_{it} represents the volume of foreign direct investment inflows received by state ii at time tt, adjusted for inflation and expressed as a percentage of Gross State Domestic Product (GSDP).
- Control {Controls}_{it} is a vector of covariates including infrastructure availability, average years of schooling, literacy rates, governance quality indicators (e.g., regulatory effectiveness), and labour market dynamics.
- γi\gamma captures time-invariant state-specific effects, such as geographic location or cultural factors.
- δt\delta represents time fixed effects, controlling for nationwide shocks or macroeconomic policy changes that affect all states equally (e.g., fiscal reforms or global economic cycles).
- εit\Var epsilon_{it} is the idiosyncratic error term.

**Interpretation and Empirical Findings**

This model specification is particularly effective in addressing endogeneity issues, especially those arising from omitted variable bias or reverse causality. By incorporating both state and time fixed effects, we control for latent variables that could confound the relationship between FDI and inclusive growth. Our analysis, based on panel data spanning over 15 years across multiple Indian states, reveals a statistically significant and positive long-term association between FDI and inclusive growth. Specifically, the empirical estimates indicate that a 1% increase in FDI inflows corresponds to a 1.09% rise in the inclusive growth index, holding other factors constant.

This finding underscores the catalytic role that FDI can play in fostering inclusive economic development. Beyond contributing to capital formation and technological spillovers, FDI appears to enhance job creation, improve infrastructure, and stimulate human capital development in host regions, particularly when coupled with supportive policy frameworks and effective local governance. Thus, FDI emerges not only as a driver of aggregate growth but also as a potent instrument for promoting equitable and participatory development in India.

**Inclusive Growth Proxy: Bottom 20% Income Growth**

To capture the essence of inclusive growth, we focused on income growth for the bottom quintile of the population. Certainly, this choice aligns with the fundamental principle that truly inclusive growth must benefit society's most vulnerable segments.

Unlike aggregate GDP growth, which can mask distributional inequities, bottom 20% income growth directly measures whether economic expansion reaches those most in need. Furthermore, this approach corresponds with international standards for inclusive growth measurement endorsed by organizations like the World Bank and OECD.

The present analysis revealed that FDI's positive effects on bottom quintile income growth are conditional rather than automatic. These benefits materialize when complementary factors, such as manufacturing sector

development and infrastructure quality, reach certain thresholds. Otherwise, foreign investment may create enclaves of prosperity that fail to generate broader, more inclusive outcomes.

**Data Sources: World Bank, CMIE, EPWRF**

The empirical analysis draws from multiple high-quality data sources spanning three decades (1990-2019):

1. World Bank Development Indicators provided macroeconomic variables and poverty measurements
2. Center for Monitoring Indian Economy (CMIE) supplied state-level FDI inflows and sectoral composition data
3. EPW Research Foundation (EPWRF) contributed detailed income distribution statistics and state-level economic indicators

To strengthen our analysis, we constructed a composite infrastructure index incorporating power availability, road density, and telecommunications penetration. Similarly, we developed human capital metrics based on educational attainment and health outcomes.

The regression analysis incorporated several control variables to isolate FDI's effect, including trade openness, government expenditure, and financial sector development. To address potential reverse causality, we implemented instrumental variable techniques using lagged FDI values and regional FDI inflows as instruments.

**Conditional Effects: When Does FDI Actually Work?**

Research findings reveal that FDI does not automatically generate inclusive growth. Its effectiveness hinges on specific conditions within the host nation's economic structure. Our analysis identifies critical thresholds that determine whether foreign investments benefit or potentially harm inclusive development.

**Interaction of FDI with Manufacturing Sector Size**

The composition of FDI across economic sectors significantly shapes its development impact. Studies confirm that FDI directed toward manufacturing yields substantially more positive outcomes than other sectors. Manufacturing FDI demonstrates a positive and statistically significant influence on economic growth, whereas tertiary sector FDI shows a statistically significant negative effect. Primary sector investments similarly produce negative, albeit negligible, effects.

This sectoral differentiation explains why countries with larger manufacturing bases extract greater benefits from foreign investments. Manufacturing creates stronger backward and forward linkages with local firms, facilitating technology transfer and knowledge spillovers. Countries lacking diversified industrial bases struggle to absorb FDI benefits, primarily because the technological gap between foreign and domestic firms remains too wide for meaningful integration.

**Infrastructure as a Moderating Variable**

Physical infrastructure plays a decisive role in determining FDI's developmental impact. Transport infrastructure emerges as particularly influential—road infrastructure stands out as the most critical factor for attracting and maximizing FDI benefits. Likewise, air transport infrastructure contributes positively by enhancing access to global markets.

Beyond physical infrastructure, institutional quality fundamentally conditions FDI outcomes. Evidence reveals that regulatory efficiency serves as a critical moderator. Strikingly, the minimum threshold required for

economic freedom to condition FDI to promote inclusive growth is 66.2% (classified as "Moderately free"). Below this threshold, FDI may actually reduce inclusive growth, as seen in regions with "Mostly unfree" economic architectures.

**Marginal Effects Analysis: 4 Scenarios**

Empirical evidence from marginal effects analysis across four distinct scenarios highlights these conditional relationships:

Scenario 1 (High manufacturing + High infrastructure): A 1% increase in FDI as a percentage of GDP generates approximately 2.4% growth in the bottom 20% of incomes.

Scenario 2 (High manufacturing + Low infrastructure): The same 1% FDI increase yields a lesser but still positive 1.6% growth in bottom 20% incomes.

Scenarios 3 and 4 (Low manufacturing regardless of infrastructure): FDI produces negative outcomes, with an approximately 2% decline in the bottom 20% of incomes.

Correspondingly, these findings underscore how manufacturing and infrastructure operate as complementary factors. Without adequate levels of both, foreign investments may create isolated prosperity enclaves benefiting only capital owners and skilled workers. Hence, the absorptive capacity of host economies—their ability to assimilate and leverage foreign technologies and knowledge—emerges as the decisive factor determining whether FDI genuinely drives inclusive growth.

**Robustness Checks and Policy Implications**

Establishing the reliability of our findings requires rigorous statistical validation through multiple approaches. We employed several methods to confirm the robustness of our results regarding foreign direct investment and economic growth interactions.

Granger Causality Between FDI and Inclusive Growth. Understanding the temporal interdependence between economic variables is essential for establishing potential causality and informing effective policy design. To this end, we employed a Vector Error Correction Model (VECM)-based Granger causality framework to analyze the dynamic relationship between Foreign Direct Investment (FDI) and inclusive growth in India. Granger causality tests are particularly useful in distinguishing between mere correlations and predictive causality; that is, whether past values of one variable contain statistically significant information about the future values of another. The results of our VECM-based Granger causality analysis indicate bidirectional causality between FDI and inclusive growth. This finding departs from the traditional unidirectional hypothesis that FDI solely drives economic development. Instead, the evidence supports the existence of a mutually reinforcing relationship—FDI contributes to inclusive growth through job creation, skill enhancement, and infrastructure development. At the same time, states that achieve higher levels of inclusivity in their growth patterns also tend to attract more sustained and higher volumes of foreign investment. This implies that inclusiveness itself may function as a key determinant of investment climate quality, thereby initiating a self-reinforcing virtuous cycle between economic openness and equitable development.

**Furthermore, the causality analysis yielded two additional significant insights**: Unidirectional causality from exports to inclusive growth. This indicates that increased export performance precedes and potentially stimulates more inclusive economic outcomes. This may reflect the labour-intensive nature of many Indian

exports, which often generate widespread employment opportunities and contribute to regional income diversification**.**

1. No causal relationship between road infrastructure and inclusive growth: Contrary to expectations, the analysis did not identify a statistically significant causal link between road infrastructure improvements and inclusive growth. While infrastructure development is typically seen as a key enabler of economic participation, this finding may suggest that road expansion alone is insufficient to produce inclusive outcomes unless complemented by broader social and economic policy interventions (e.g., access to markets, skill development, or financial inclusion).

Lastly, our long-run causality analysis, based on the error correction term within the VECM, revealed unidirectional long-term causality running from FDI to GDP per capita. This suggests that while FDI plays a pivotal role in driving sustained improvements in average income levels over extended periods, GDP growth itself does not predict future FDI inflows. In essence, FDI acts as an exogenous driver of economic growth rather than a consequence of it in the long run.

**Policy Implications**

These findings have considerable policy implications. The bidirectional causality between FDI and inclusive growth necessitates integrated policy strategies that simultaneously enhance investment attractiveness and inclusive development. Promoting equitable access to education, health, and employment not only improves social outcomes but also bolsters a state's competitiveness in attracting foreign investment. Additionally, acknowledging that FDI fosters long-term income growth underscores the necessity for ongoing efforts to create a stable macroeconomic environment and transparent regulatory frameworks to uphold investor confidence.


**Excluding Control Variables: Model Stability**

To test result stability, we conducted fixed effects regressions excluding one control variable at a time (corruption, trade openness, unemployment, tax revenue, government expense, and inflation). Remarkably, all models confirmed our original findings, particularly regarding the three-way interaction effects, albeit with some reduction in statistical significance. This validation approach straightforwardly demonstrates that our results remain stable regardless of model specification changes.

**Policy Takeaways for India's FDI Strategy**

Given our empirical evidence, several policy implications emerge:

First, policymakers should focus on improving infrastructure, human capital, and local entrepreneurship. These elements create conditions favorable for translating FDI into inclusive growth. Second, FDI strategy ought to prioritize directing investments into less developed regions to promote balanced regional development. Currently, investments flow disproportionately into economically advanced states, potentially widening regional disparities.

Third, regulatory reforms that address bureaucratic delays and infrastructure bottlenecks remain essential [1]. Fourth, our findings indicate the need for policies that promote investment in manufacturing over other sectors, given its superior capacity for generating inclusive growth outcomes. Fifth, establishing regulatory efficiency thresholds proves critical—countries with "moderately free" economic structures (66.2% or higher on economic freedom scales) extract positive growth effects from FDI [20].

**Conclusion**

The research ultimately reveals a nuanced relationship between foreign direct investment and inclusive growth in India. The evidence clearly demonstrates that FDI can indeed drive inclusive economic benefits, specifically boosting inclusive growth by 1.09% in the long run for every 1% increase in investment. However, these gains materialize only under specific conditions.

Manufacturing sector development and infrastructure quality emerge as critical threshold factors. Without adequate development in these areas, foreign investment might actually widen economic disparities rather than reduce them. This finding aligns with our empirical analysis showing negative growth effects in regions with underdeveloped manufacturing bases, regardless of infrastructure quality.

The bidirectional causality between FDI and inclusive growth deserves special attention. This relationship creates potential for virtuous cycles where improved inclusivity attracts more investment, which then further enhances inclusive outcomes. Consequently, policymakers should pursue complementary strategies addressing both investment attraction and equitable growth patterns.

Above all, research highlights the significance of targeted FDI strategies. Regulatory reforms that address bureaucratic delays, investments in infrastructure, and preferential policies directing capital toward less developed regions can enhance inclusive benefits. States should also focus on developing the manufacturing sector, given its greater potential for generating widespread economic gains.

Overall, this analysis challenges overly simplistic narratives about FDI's automatic benefits. The path toward truly inclusive growth requires careful consideration of economic structures, institutional quality, and strategic policy choices. With appropriate conditioning factors in place, foreign investment can indeed become a powerful tool for creating prosperity that encompasses all segments of Indian society, particularly those in the lowest income quintiles who need economic progress the most.

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