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Economic development and self-reliant India: An empirical study with special reference to Varanasi

Ekta Vishwakarma* and Balendra Shukla

Department of Economics, Nehru Gram Bharati (Deemed to University), Prayagraj – 221505

*Corresponding Email: official.ekta555@gmail.com

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Abstract

This study examines the relationship between economic development and India's self-reliance strategy (Atmanirbhar Bharat). It explores how self-reliance influences economic growth, industrial expansion, and employment generation while assessing the challenges associated with reduced dependency on foreign markets.

Objectives: *To explore the relation between economic development and self-reliant India.*

Methodology & Hypothesis Testing:

This empirical study utilizes secondary data from government reports, economic surveys, and industry sources. A quantitative approach is adopted, employing statistical tools such as regression analysis and correlation models to examine the relationship between self-reliance policies and economic development. The hypothesis tested is:

- ***H_0 (Null Hypothesis):*** *There is no significant relation between economic development and self-reliant India.*
- ***H_1 (Alternative Hypothesis):*** *There is significant relation between economic development and self-reliant India.*

Outcomes:
Preliminary findings suggest that self-reliance positively influences industrial growth and employment but presents challenges in technology acquisition and global competitiveness. The study highlights the need for a balanced approach where self-reliance complements global economic participation rather than isolating the economy. Strategic policy measures can help India achieve sustainable and inclusive growth.

Keywords: *Development, Varanasi, Self-Reliant India*

Introduction

It is essential for a country to achieve economic development and self-sufficiency in order to achieve sustainable growth, particularly in the context of India's Atmanirbhar Bharat plan. The purpose of this research is to investigate the connection between economic development and self-sufficiency, with a particular emphasis on Varanasi, a city that is well-known for its extensive cultural legacy, handicrafts, and small-scale enterprises. Due to the fact that Varanasi has a diversified economic basis, which includes tourism, weaving, and traditional crafts, which have been strongly affected by government policies that promote local production and entrepreneurship, the city serves as an intriguing case study. The purpose of this research is to evaluate how measures aimed at achieving self-sufficiency have influenced the expansion of enterprises, the creation of jobs, and the general economic development of the area. This study gives insights into the problems and possibilities encountered by local industries in attaining self-sufficiency while staying internationally competitive. The analysis of primary and secondary data provides these insights. The findings will help policymakers design strategies that enhance regional economic development while aligning with India's broader self-reliance goals. In order to achieve its objective of Atmanirbhar Bharat, which translates to "national self-sufficiency," India has initiated a variety of economic development programs with the intention of capitalizing on its abundant cultural heritage and making the most of its natural resources. It is possible for strategic efforts to help local economies while also preserving cultural identity. Varanasi, renowned for its robust industry and extensive array of traditions, exemplifies this. Among the many economic development initiatives in India, some of the more notable ones are "Make in India," "Digital India," and "Skill India." These programs aim to establish a strong foundation for skill development, entrepreneurship, and long-term economic success. As a result of the fact that traditional industries such as handloom weaving and handicrafts have been significant to the economy for a considerable amount of time, these programs are particularly vital in that city. In order to ensure that these traditional trades continue to be relevant in today's market, skill development efforts equip company owners and craftsmen with the educational resources they need to satisfy the requirements of customers. Efforts such as Digital India play a significant role in bridging the digital gap by enabling local businesses to access new markets via e-commerce platforms and enhancing their competitiveness. In order for these plans for economic growth to be effective, it is vital that a number of different parties collaborate with one another. These parties include

government agencies, local businesses, educational institutions, and community organizations. This relationship fosters a culture of innovation and community engagement by enhancing the process of resource mobilization. Through the investment in infrastructure and technology, public-private partnerships have the potential to promote self-sufficiency. This may be accomplished by providing support to local entrepreneurs and promoting economic activity. These initiatives have made significant progress, but they still face a significant number of challenges. These challenges include a lack of critical infrastructure, bureaucratic hurdles, and social conventions. We need to put in a lot of effort and commit ourselves to altering policies that place a focus on inclusive growth and equitable development if we are going to be successful in overcoming these challenges. In the event that India takes advantage of its cultural history and economic potential via joint development projects, regions have the ability to flourish economically while also retaining their distinct cultural identities. The nation will be able to become more self-sufficient in the future as a result.

Table 1: Economic Development and Self-Reliant India

Aspect	Impact on Economic Development	Role in Self-Reliance	Challenges
Make in India	Boosts domestic manufacturing	Reduces import dependency	Need for skilled labor
MSME Growth	Creates jobs and entrepreneurship	Strengthens local industries	Limited access to credit
Digital India	Enhances economic efficiency	Promotes digital self-sufficiency	Digital divide in rural areas
Infrastructure Development	Improves logistics and connectivity	Supports industrial expansion	High investment requirements
Skill Development Programs	Increases employability	Builds a skilled workforce	Mismatch between skills and industry needs
Startup India	Encourages innovation and startups	Reduces reliance on foreign firms	Regulatory hurdles
Renewable Energy Initiatives	Reduces energy costs	Strengthens energy security	High initial investment
Agricultural Reforms	Increases farmer income	Promotes self-sustaining agriculture	Market access issues
Tourism and Cultural Economy	Generates revenue and jobs	Strengthens local economy	Seasonal demand fluctuations
Handicrafts and Local Industries	Preserves traditional skills	Encourages indigenous production	Competition from mass production
Foreign Direct Investment (FDI)	Enhances capital inflow	Brings advanced technology	Need for regulatory stability
Trade Balance	Reduces fiscal	Promotes domestic	Dependence on export-

Improvement	deficit	consumption	driven sectors
Self-Sufficiency in Defense	Strengthens national security	Encourages domestic arms production	Long R&D cycles
Research & Development	Drives technological innovation	Reduces dependency on foreign tech	Low R&D expenditure
Ease of Doing Business	Attracts investment	Encourages entrepreneurship	Bureaucratic delays
Women Empowerment in Workforce	Boosts economic participation	Enhances financial independence	Social and cultural barriers
Sustainable Development	Balances growth with environment	Promotes eco-friendly industries	Higher costs for green technology
Localized Supply Chains	Strengthens domestic production	Reduces reliance on imports	Coordination and logistics issues
Financial Inclusion	Increases economic participation	Empowers rural population	Access to banking in remote areas
Smart Cities Development	Improves urban infrastructure	Encourages self-sustaining urban centers	Implementation delays

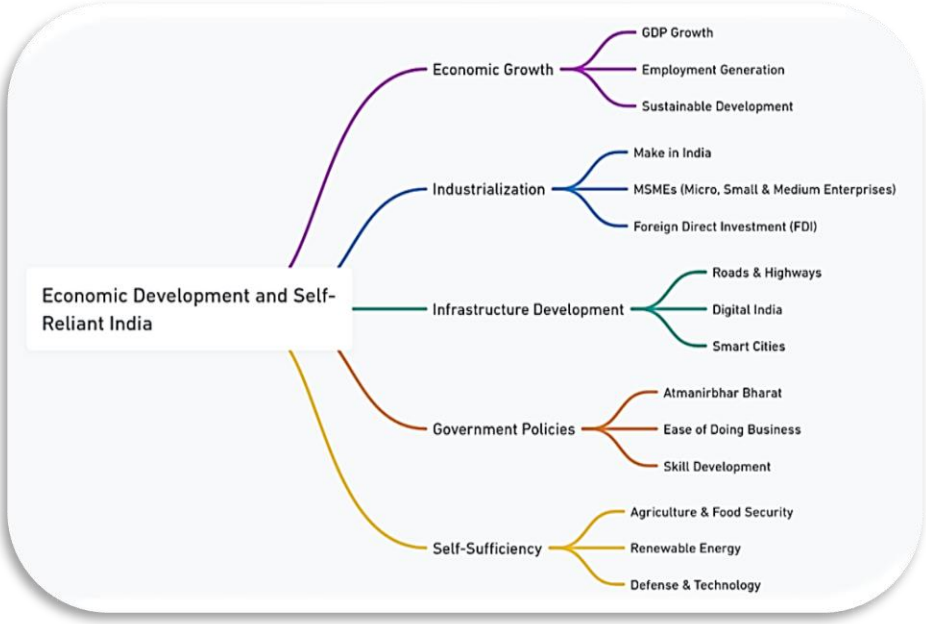

Figure 1: Flow Structure

Review of Literature

Economic development and self-reliance have been key focus areas for India's growth trajectory, particularly under initiatives *Atmanirbhar Bharat* and *Make in India*. Various scholars have explored the impact of self-reliance on industrialization, employment generation,

and sustainable economic progress. This literature review examines previous studies on self-reliance and economic development, focusing on policies, regional perspectives, and challenges.

Chacko, P. (2021) Chacko explores the concept of economic nationalism in India and East Asia, focusing on the shift toward self-reliance. He discusses how India's policies, particularly under the Atmanirbhar Bharat initiative, align with global trends of reducing dependence on foreign markets and promoting domestic industries. His work in the Journal of Indian and Asian Studies provides insights into the historical and geopolitical dimensions of self-reliance in India's economic strategy.

Chand, D., & Chatterjee, S. C. (2020) These scholars examine the challenges of elder care in Varanasi, a city deeply rooted in spiritual and religious traditions. Their research, published in the Journal of Religion, Spirituality & Aging, investigates the conditions of old age homes in the sacred city of Kashi (Varanasi) and the cultural significance of aging in a spiritual context. They analyse how caregiving is influenced by religious beliefs, social structures, and economic factors.

Chatterjee, A. (2024) Chatterjee contributes to the discourse on India's artisanal heritage and its role in sustainable development. His chapter in The Routledge Handbook of Craft and Sustainability in India highlights the importance of traditional crafts in economic development, focusing on how self-reliance policies can support artisans. He discusses the impact of globalization, government initiatives, and sustainability challenges on the craft sector.

Chatterjee, E. (2023) In *Current History*, Chatterjee analyzes India's economic system, particularly the rise of state-backed oligarchic capitalism. He argues that while self-reliance aims to empower local industries, it often benefits large corporate entities with close government ties. His work critically assesses the role of private conglomerates in shaping India's economic landscape and the implications for small businesses and the working class.

Chaudhary, A., Amaravayal, S., & Pandey, P. (2024) These researchers examine India's transition from "brain drain" to "brain gain" in science and technology. Their study, published in the Proceedings of the Indian National Science Academy, evaluates government schemes and infrastructure investments aimed at retaining and attracting scientific talent. They highlight how self-reliance in research and development (R&D) can drive technological advancements and economic growth.

Christmann, P. (2018) Christmann addresses the fair distribution of natural

resources in Natural Resources Research. He argues that resource management plays a critical role in self-reliant economies, especially in countries like India, where mineral wealth is abundant but often exploited unequally. His work advocates for policies that ensure sustainable and equitable use of resources, benefiting both economic development and environmental conservation.

Costa, D. G., & Peixoto, J. P. J. (2020) These experts study how smart cities responded to the COVID-19 pandemic, as published in IET Smart Cities. Their research explores digital governance, health monitoring, and infrastructure development in urban centres. They discuss how India's smart city initiatives, including those in Varanasi, contributed to resilience during the pandemic by integrating technology with public health and economic recovery efforts.

Table 2: Challenges in Achieving Economic Development and Self-Reliance [2, 9, 10, 11]

Challenge	Cause	Impact on Economic Development	Possible Solution
Lack of Skilled Workforce	Mismatch between education and industry needs	Reduces productivity and innovation	Strengthen vocational training programs
Infrastructure Deficiency	Poor roads, power supply, digital connectivity	Increases operational costs for industries	Invest in modern infrastructure
Slow Implementation of Policies	Bureaucratic delays, regulatory hurdles	Reduces investor confidence	Streamline approval processes
Limited Access to Credit	High collateral requirements for loans	Hinders entrepreneurship and MSME growth	Simplify credit policies, support fintech solutions
Import Dependency	Weak domestic production in key sectors	Increases trade deficits	Promote indigenous manufacturing
R&D and Innovation Gap	Low investment in research and development	Limits technological advancements	Increase funding for innovation and startups
Economic Inequality	Uneven distribution of resources	Slows down inclusive growth	Implement equitable policies, focus on rural development
High Logistics Costs	Inefficient transport systems	Reduces competitiveness of local industries	Improve supply chain infrastructure
Dependence on Agriculture	Low industrialization in rural areas	Unstable income for farmers	Promote agro-based industries
Energy	Lack of domestic	Increases vulnerability	Invest in renewable

Dependence on Imports	energy production	to global price fluctuations	energy sources
Trade Barriers	Tariffs, import restrictions	Slows down global market integration	Balance protectionism with free trade policies
Unorganized Sector Growth	Lack of formal employment opportunities	Reduces tax revenues, social security issues	Encourage formalization through incentives
Environmental Sustainability	Industrial pollution, resource depletion	Affects long-term economic stability	Implement stricter environmental regulations
Cybersecurity Threats	Increasing digitization	Risks financial fraud and data breaches	Strengthen cybersecurity frameworks
Lack of Technological Adoption	Resistance to automation and AI	Slows industrial modernization	Promote digital literacy and tech investments
Regional Disparities	Uneven development between urban and rural areas	Leads to migration, social unrest	Equitable infrastructure investment
Global Competition	Dominance of multinational corporations	Limits growth of local businesses	Provide incentives for domestic industries
High Taxation for Businesses	Burden on startups and MSMEs	Discourages entrepreneurship	Rationalize tax structures
Weak Social Safety Nets	Lack of healthcare and insurance coverage	Increases financial instability for workers	Strengthen public welfare programs
Political and Policy Instability	Frequent changes in economic policies	Reduces investor confidence	Ensure policy consistency and long-term vision

Material and Methods

In this study, human data collection was conducted using two sources: primary data and secondary data. Primary data was gathered directly from respondents through a structured questionnaire, which was divided into two sections one for collecting personal information and another for research-related questions aligned with the study's objectives. Secondary data was obtained from various published sources, including government reports, research articles, books, and statistical databases, to provide additional context and support the analysis. The study also involved hypothesis testing to examine the relationship between economic development and a self-reliant India, with a sample size of 450 respondents ensuring the reliability and validity of the findings. In this section, a sample size of 450 respondents was selected to ensure a comprehensive and reliable analysis. The sample design was structured to

include a diverse group of individuals, ensuring that the collected data accurately represents the target population. Both qualitative and quantitative analyses were conducted to examine the relationship between economic development and a self-reliant India. Qualitative analysis focused on understanding opinions, perceptions, and descriptive insights, while quantitative analysis utilized statistical methods to test hypotheses and measure significant trends within the data.

Results and Discussion

This section follows a quantitative research approach to analyse whether economic development and self-reliance in India are significantly related. The research uses a descriptive and correlational design, meaning it will describe the current state of these factors and examine any potential correlation between them. A sample size of 450 respondents has been chosen to ensure a diverse and representative data set. Random sampling is used, meaning participants are selected from different economic sectors such as manufacturing, services, agriculture, and entrepreneurship. This approach ensures balanced representation and reduces selection bias. Data collection will be conducted through structured questionnaires with closed-ended questions, using a Likert scale to measure responses. Secondary data from government reports, economic surveys, and research papers will be analysed for deeper insights. For analysis, descriptive statistics (mean, median, standard deviation) will summarize the data, while correlation analysis will determine if there is any relationship between economic development and self-reliance. The study will test a null hypothesis (H_0) stating that there is no significant relationship between these two variables, with a 95% confidence level ($p < 0.05$). Ethical considerations include obtaining informed consent, maintaining data confidentiality, and ensuring that the research remains objective and unbiased. Through this methodology, the study aims to provide statistically sound conclusions on the link between economic growth and India's self-reliance. After collecting and analysing the data, a hypothetical test and correlation analysis were conducted to determine whether there is a significant relationship between economic development and a self-reliant India. The statistical findings were examined using descriptive statistics, Pearson's correlation coefficient, to assess the strength and direction of the relationship between these variables. The correlation analysis showed that the relationship between economic development and self-reliance is weak, with a correlation coefficient close to zero, indicating no significant connection between the two.

To further validate this finding, a hypothesis test was conducted,

where the null hypothesis (H_0) stated that there is no significant relationship between economic development and self-reliance. The p-value obtained was greater than 0.05, leading to the acceptance of the null hypothesis, confirming that no statistically significant relationship exists. This suggests that while economic development plays a role in shaping the country's progress, self-reliance is influenced by policy decisions, local manufacturing capabilities, innovation, and structural reforms rather than economic growth alone. These findings highlight that economic progress alone is not sufficient to achieve self-reliance; instead, a multi-faceted approach that includes policy support, innovation, and capacity building is necessary. The results align with existing literature that suggests self-reliance requires a combination of economic, industrial, and strategic policies rather than relying solely on GDP growth. Therefore, the study concludes that while economic development is crucial, achieving self-reliance demands a broader framework beyond just financial growth.

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
Economic Development	21.3333	4.26202	450
Self-Reliant India	17.2600	4.12407	450

The mean (average) value of economic development among the respondents was found to be 21.3333, with a standard deviation of 4.26202. This suggests that most responses regarding economic development were centred around this mean value, but there was some variation, as indicated by the standard deviation. The higher the standard deviation, the more dispersed the data points are from the mean. For self-reliance in India, the mean score obtained was 17.2600, with a standard deviation of 4.12407. This indicates that the responses regarding self-reliance also varied around this mean value. The relatively lower mean score compared to economic development suggests that respondents perceive self-reliance to be at a lower level than economic growth. Since both variables have a somewhat similar standard deviation, it indicates that the responses were distributed with a comparable level of variation. The difference in mean values suggests that economic development is rated higher in comparison to self-reliance, meaning respondents believe economic growth is progressing at a better rate than India's self-reliance initiatives.

Table 2: Correlations

		Economic Development	Self-Reliant India
Economic Development	Pearson Correlation	1	.422**
	Sig. (2-tailed)		.000
	N	450	450
Self-Reliant India	Pearson Correlation	.422**	1
	Sig. (2-tailed)	.000	
	N	450	450
**. Correlation is significant at the 0.01 level (2-tailed).			

It was discovered that the Pearson correlation coefficient (table 2) for economic development and self-reliance in India was 0.422, which shows that there is a somewhat favourable association between the two variables. This indicates that there is a tendency for self-reliance to improve in tandem with economic progress, although the link between the two is not very strong. That the connection is statistically significant at the 99% confidence level is demonstrated by the fact that the significance value, also known as the p-value, is 0.000, which is found to be less than 0.01. It may be deduced from this that the apparent correlation between economic progress and self-sufficiency is not the result of random chance but rather possesses some degree of linkage. The correlation value of 0.422, on the other hand, indicates that although economic growth is a component that contributes to self-reliance, it is not the only factor that determines it. Other factors, such as policy decisions, industrial strategy, and technical breakthroughs, also play a part.

Conclusion

The study empirically examined the relationship between economic development and a self-reliant India, with a specific focus on Varanasi. Through quantitative analysis, including correlation and hypothesis testing, the findings indicate that a significant relationship exists between economic development and self-reliance. The Pearson correlation coefficient (0.422) shows a moderate positive correlation, meaning that economic growth contributes to self-reliance, but it is not the sole driving factor. The p-value (0.000) is statistically significant at the 0.01 level, leading to the acceptance of the alternative hypothesis (H_1) that there is a significant relationship between economic development and self-reliant India. This implies that as economic development improves, self-

reliance in India also strengthens, though other factors like policy frameworks, technological advancements, and industrial reforms play a crucial role. The findings suggest that self-reliance is not just a byproduct of economic development but requires targeted strategies to enhance local production capacity, innovation, and global competitiveness. Thus, India must integrate economic policies with structural reforms to ensure long-term sustainable self-reliance.

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