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Economic Reforms and Agricultural Diversification in Bihar since 1991: An Analytical Study

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Abstract

Following the economic reforms of 1991 (Liberalization, Privatization, and Globalization), the Indian economy underwent sweeping changes, the impact of which was clear in the agricultural sector as well. In an agrarian state like Bihar, these reforms influenced the agricultural structure, cropping patterns, and market orientation. The objective of the present study is to analyze the trends, causes, and impacts of agricultural diversification in Bihar in the post-1991 era. However, this diversification remains partial and uneven, as its pace is constrained by the predominance of small and marginal farmers, an underdeveloped market infrastructure, and natural calamities. In conclusion, the study suggests that agricultural diversification in Bihar can be further strengthened through effective policy interventions, market reforms, and technological innovations, thereby facilitating improvements in farmers' incomes and the state's overall economic condition.

Keywords- Agricultural Diversification Bihar Agriculture Liberalization 1991 Cropping Pattern Horticulture Growth

1. Introduction

The year 1991 is regarded as a pivotal economic turning point in India, marking the adoption of Liberalization, Privatization, and Globalization under the New Economic Policy. The objective of these economic reforms was to enable the Indian economy to compete globally, promote the efficient utilization of resources, and accelerate the pace of economic

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growth. The impact of these reforms was not confined solely to the industrial and service sectors; rather, it exerted a profound influence on the agricultural sector as well. Bihar, being a predominantly agrarian state, was not left untouched by these economic reforms. With over 70 percent of the state's population dependent on agriculture, it is evident that changes occurring within the agricultural sector directly impact the state's overall economy.

Prior to 1991, agriculture in Bihar was primarily traditional in nature, dominated by food grain crops such as paddy and wheat. Agricultural production was largely based on subsistence farming, with limited linkages to the market. Following the economic reforms, the agricultural sector witnessed a rise in market orientation, providing farmers with the opportunity to alter their crop choices.

Consequently, a gradual process of agricultural diversification commenced in Bihar. Agricultural diversification entails a shift away from traditional crops toward high-value crops—such as fruits, vegetables, oilseeds, pulses, and cash crops. This transition is considered a significant step toward enhancing farmers' incomes, mitigating risks, and rendering agriculture a more profitable enterprise. Several factors have been instrumental in driving agricultural diversification in Bihar. Prominent among these are rising market demand, urbanization, advancements in transport and communication infrastructure, government policies, and technological progress. The surge in the production of maize, vegetables, and fruits clearly illustrates this transformation. Furthermore, allied agricultural sectors—such as dairy farming, fisheries, and animal husbandry—have also witnessed expansion, thereby diversifying the sources of agricultural income.

However, the process of agricultural diversification in Bihar has not yet fully evolved. Issues such as the predominance of small and marginal farmers, land fragmentation, disparities in irrigation facilities, and a lack of market infrastructure limit this process within the state. Furthermore, natural disasters—such as floods and drought also impact agricultural production, thereby increasing the risks faced by farmers. Under these circumstances, it becomes imperative to undertake a comprehensive analysis of the agricultural diversification process in Bihar to understand its trends, underlying causes, and implications. The objective of the present study is to analyze the trends in agricultural diversification in Bihar in the context of the economic reforms initiated after 1991, to identify its key determinants, and to evaluate its socio-economic impacts.

Ultimately, this study will not only shed light on the trajectory of agricultural development in Bihar but will also offer useful recommendations for policymakers, researchers, and stakeholders associated with the agricultural sector, thereby facilitating the transformation of agriculture in the state into a more productive, profitable, and sustainable enterprise.

2. Literature Review

Since the economic reforms of 1991, extensive studies have been conducted by various scholars, institutions, and government agencies regarding the changes that have occurred in the agricultural sector and the subject of agricultural diversification. These studies clearly demonstrate that agricultural diversification is not merely a change in production structure, but

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rather a comprehensive economic process that influences income, employment, and market structure. Analyzing the trends of diversification in Indian agriculture, Ashok Gulati (2018) noted that a shift towards high-value crops (fruits, vegetables, and dairy products) is instrumental in enhancing farmers' income. He further observed that states like Bihar possess immense potential for agricultural diversification; however, realizing this potential necessitates the development of markets and infrastructure. A study conducted by the International Food Policy Research Institute (2012) revealed that, since the year 2000, the production of maize and horticultural crops in Bihar has witnessed rapid growth. This transformation was facilitated by market demand, improved pricing, and supportive government policies.

The study also indicated that while diversification has led to an increase in farmers' income, the benefits have not accrued equally across all sections of the farming community. In its report, NITI Aayog (2021) identified agricultural diversification as a pivotal instrument for agricultural development. According to the report, there is a need to reduce dependence on traditional crops in Bihar and instead promote high-value crops and agro-based activities, thereby ensuring a sustainable increase in farmers' income. According to a report by the National Sample Survey Office (2019), most farmers in Bihar are small and marginal landholders with limited access to resources. This situation poses a significant impediment to the adoption of agricultural diversification, as small-scale farmers often lack the capacity to absorb the associated risks.

The Food and Agriculture Organization (2022) has underscored the necessity of sustainable agriculture and diversification as means to mitigate the impacts of climate change. The report highlights that a diversified agricultural system serves to minimize risks and enhance the stability of agricultural production. Furthermore, agricultural diversification has been accorded special significance in the Agricultural Roadmaps (2008, 2012, 2017, 2023) presented by the Government of Bihar. As a result of these policies, the state has witnessed remarkable growth in the sectors of horticulture, dairy, and fisheries.

The studies clearly indicate that the process of agricultural diversification in Bihar has evolved gradually since 1991, with policy support, market demand, and technological advancements playing pivotal roles. However, several challenges persist in this sector, such as an underdeveloped market infrastructure, limited capital, and natural calamities.

3. **Research Gap-** A review of the literature reveals that while numerous studies have been conducted on agricultural diversification in Bihar, a comprehensive and comparative analysis of the long-term impacts of the economic reforms of 1991 remains limited. Specifically, an in-depth examination of changes in cropping patterns, the impact on farmers' income, and regional disparities is essential. Therefore, the present study endeavors to address this gap and offers a comprehensive and analytical perspective on the process of agricultural diversification in Bihar.
4. **Research Methodology** - The present study, titled "Economic Reforms and Agricultural Diversification in Bihar Since 1991: An Analytical Study," is descriptive and analytical in nature. This research primarily utilizes secondary data. The data has been compiled from various reliable sources, such as the Economic Survey Reports of

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the Government of Bihar, publications from the Ministry of Agriculture & Farmers Welfare, reports from the National Sample Survey Office (NSSO), as well as other research papers and institutional studies. The study covers the period from 1991 to 2023, thereby enabling an analysis of the long-term changes that have occurred in the agricultural sector following the economic reforms. To assess agricultural diversification, a comparative analysis has been conducted regarding changes in cropping patterns, production structures, and the share of horticulture and cash crops. For the analysis of data, statistical techniques such as percentages, trend analysis, and comparative methods have been employed. Through this approach, an attempt has been made to understand how, in the wake of economic reforms, agriculture in Bihar has transitioned away from traditional crops and moved towards a more diversified structure. Thus, this research methodology serves as a valuable tool for comprehensively understanding the trends and impacts of agricultural diversification in Bihar.

5. Conclusions and Suggestions

Since the economic reforms of 1991, a gradual transformation has been observed in the agricultural structure of Bihar. The present study clearly indicates that the state's agriculture has transitioned from a traditional food-grain-based system toward a partially diversified form. Notably, the increase in the production of maize, fruits, and vegetables serves as a key indicator of this transformation. According to available data, in 1991, the share of food grain crops in Bihar's agriculture stood at approximately 70–75%; in recent years, this share has declined to a range of approximately 55–60%. Conversely, the share of horticultural crops (fruits and vegetables) has risen from approximately 10–12% to reach 25–30%. This shift demonstrates that farmers are increasingly gravitating toward more profitable and market-oriented crops.

Table 1: Changes in Crop Structure in Bihar (1991–2023)

Year	Food Grains (%)	Horticulture (%)	Cash Crops (%)
1991	72	12	16
2005	68	18	14
2015	62	24	14
2023	58	28	14

Source: Ministry of Agriculture & Farmers Welfare; Government of Bihar Economic Survey (2022–23); Author's Compilation

It is evident from the table above that the process of agricultural diversification in Bihar is steadily advancing. Factors such as market demand, government policies, the expansion of irrigation facilities, and technological advancements have played a significant role in driving this trend. However, this diversification remains uneven and partial. Approximately 85% of the farmers in the state are small and marginal, possessing limited risk-bearing capacity. Furthermore, natural calamities—such as floods and droughts—along with a weak marketing infrastructure, hinder this process.

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Table 2: Agricultural Diversification – Impacts and Challenges

Indicators	Positive Impact	Major Challenges
Income	Increase in Farmers' Income	Market Volatility
Production	Increase in High-Value Crops	Lack of Technical Knowledge
Employment	Increase in Agriculture-Based Employment	Marginal Landholdings
Risk	Reduction in Crop Risk	Climate Change

Source: NITI Aayog (2021); Food and Agriculture Organization (2022); Author's Analysis

6. Key Findings

Since 1991, the process of agricultural diversification has clearly emerged in Bihar. The dominance of traditional crops has declined, while there has been an increase in horticulture and maize production. Diversification has led to an increase in farmers' income; however, the benefits have not reached all sections of society equally. Structural issues (such as small landholdings and a lack of market access) remain major impediments.

7. Suggestions

Irrigation and Water Management: Micro-irrigation techniques (drip and sprinkler systems) and rainwater harvesting should be promoted. **Promotion of Agricultural Diversification:** The cultivation of fruits and vegetables, as well as dairy farming and fisheries, should be encouraged. **Market Reforms:** Expansion of the e-NAM platform. **Development of cold storage facilities and supply chains.** **Empowerment of Farmer Organizations:** Farmer Producer Organizations (FPOs) should be promoted. **Technical Training:** Farmers should be trained in modern agricultural techniques and digital farming practices. **Promotion of Sustainable Agriculture:** Organic farming and climate-smart agriculture practices should be adopted.

8. Conclusion

In conclusion, it can be stated that the process of agricultural diversification in Bihar is moving in the right direction; however, to enhance its effectiveness, a coordinated approach involving policy, technology, and market mechanisms is essential. If the suggestions are implemented effectively, Bihar's agricultural sector will not only become more productive but will also strengthen farmers' incomes and the state's economy.

References

- Government of Bihar. (2023). Economic Survey 2022–23. Finance Department, Government of Bihar, Patna.
- Government of Bihar. (2021). Agriculture Road Map (2017–2022). Department of Agriculture, Bihar.
- Ministry of Agriculture & Farmers Welfare. (2022). Agricultural Statistics at a Glance. New Delhi.
- National Sample Survey Office. (2019). Situation Assessment Survey of Agricultural Households in India. NSSO Report No. 587.

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- NITI Aayog. (2021). Strategy for New India @75. New Delhi.
- Food and Agriculture Organization. (2022). The State of Food and Agriculture. Rome.
- International Food Policy Research Institute. (2012). Agricultural Growth and Productivity in Bihar. Washington, D.C.
- Ashok Gulati. (2018). Transforming Indian Agriculture. New Delhi: Rupa Publications.
- C. H. Hanumantha Rao. (1994). Agricultural Growth, Rural Poverty and Environmental Degradation. Oxford University Press.
- Reserve Bank of India. (2022). Handbook of Statistics on Indian Economy. Mumbai.
- Indian Council of Agricultural Research. (2020). Agricultural Research Data Book. New Delhi.
- World Bank. (2020). Transforming Agriculture for Better Jobs in South Asia. Washington, D.C.
- Directorate of Economics and Statistics. (2021). Statistical Abstract of Bihar.
- United Nations Development Programme. (2021). Human Development Report.
- Ashok Rudra. (1982). Indian Agricultural Economics: Myths and Realities. Allied Publishers.