

An Investigation on the sectoral Composition of India's Economy

**Manisha Bharti**

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University Department of Management

B.R.A Bihar University, Muzzaffarpur

Abstract

This study explores the causal link between India's economic growth and sectoral GDP contributions and vice versa during a ten-year period, both in the short- and long-term. The cointegration between the sectoral contributions to the Indian GDP and India's economic growth is studied using Johansen's cointegration approach. Additionally, the Vector Auto Regression (VAR) model is used to examine the direction of the relationship between economic growth and sectoral contribution. Using time-series data from 1960 to 2015, special focus was paid to examining the impulsive responses of economic development depending on the innovations in sectoral contribution. This study emphasised the dynamic link between the contributions of the industrial and agricultural sectors to economic growth. Long-term changes in industrial sector contributions result in increases in economic growth of 3.42 percent and primary sector contributions of 1.12 percent, while short-term changes in industrial and service sector contributions had a significant impact on the economy's growth and the agricultural sector. Where technology and sector integration play a substantial role in economic growth, officials will need to monitor and manage the changing mix of sector contributions.

Keywords: *Economic Growth; Economic Sectors; Econometrics Analysis; Co-integration; India*

Introduction

Even though India's economic liberalisation dates back to the late 1970s, economic changes didn't start in earnest until 1991. A balance of payments problem at the time paved the door for an IMF programme, which resulted in the passage of a significant reform package. India focused more on its services industry after the reforms than on its agriculture sector. From 1978 to 2007, the services sector made the largest contribution to India's GDP. After 1991, when economic restructuring started, the services sector had a significant growth. In the meanwhile, from 1978 to 2007, agriculture was the second-largest provider. Manufacturing, however, now makes up the smallest portion of the Indian economy compared to the other two sectors following the economic transition. The biggest portion of India's economic growth comes from the services sector. The fact that it is a commonwealth nation where people speak English more fluently than people in China has caused the services industry to expand stably in areas like tuition centres, accounting and law businesses, and other outsourced services. Additionally, due to the rapid growth of the Information Technology (IT) industry in India, many multinational corporations hire its IT professionals, some of whom are even sent as far as Malaysia, Singapore, and Australia. As a result, since the 1980s, the services sector has played a significant role in India's economic development. There are several ways to assess how economic sectors in India contribute to actual per capita GDP growth. From 1978 to 2007, China's industrial and service industries expanded in tandem with the country's rising real GDP per person. The proportion of the agricultural sector to the real GDP per capita did, however, change through time. While the agricultural sector exhibited a minor dip, both the manufacturing and services sectors showed improving tendencies. In addition, as compared to the other sectors, the services sector is the most developed. However, manufacturing is India's most lucrative industry since it has contributed the most to real GDP per capita over the last thirty years.

Literature Review

Researchers have attempted to identify the causal relationship between GDP sectoral contributions and economic development in both the short- and long-term for various nations. The findings of research by Sastry, Singh, Bhattacharya, and Unnikrishnan (2003), for instance, suggested that the agricultural sector continues to dominate and makes a significant contribution to total economic development. With the use of the structural transformation model, Gollin, Parente, and Rogerson (2002) claimed that agricultural production makes a considerable contribution to economic growth. That explanation for the sluggish industrialisation was also noted in the report. Turan Katircioglu (2006) found that over the long term, there is a bidirectional causal relationship between agricultural production and economic development. In a related research, Awokuse (2009) found that in 15 developing and transitioning nations in Africa, Asia, and Latin America, the primary sector has become a highly important factor for economic growth. An econometric model analysis was carried

out for the years 1952–2007 in another study conducted in China by Xuezhen, Shilei, and Feng (2010). The study revealed a positive relationship between the primary sector and economic growth as well as the primary sector's significant contribution to economic growth. Jatuporn, Chien, Sukprasert, and Thaipakdee (2011) conducted yet another empirical research utilising time series analysis to examine the long-term interactions between Thailand's primary sector development and economic growth and vice versa from 1961 to 2009.

However, other research in the literature disputes the connection between agricultural and economic expansion. For instance, Katircioglu (2004) showed that, while being the foundation of the North Cyprus economy, the agricultural sector does not substantially contribute to the growth of the economy. The outcome also shows that the service sector, industrial production, and real GDP are all co-integrated. In her study, Nemours looked at the causal relationships between the expansion of the secondary sector and economic development, the growth of the service sector and economic growth, and the growth of agriculture and the economy both in the short and long term. Due to its significant backward connections for South Africa, Tregenna (2008) found that the manufacturing sector was crucial for generating demand in both the service sector and the economy as a whole. In a similar vein, Szirmai (2012) demonstrated that although the secondary sector has made a major contribution to economic growth, it cannot be regarded as a growth engine. The research included 67 developing markets and 21 mature markets between 1950 and 2005. For the time period from 1970 to 2009 in Malaysia, Matahir (2012) demonstrated that the primary and secondary sectors are cointegrated over the long term as well as the one-way causation direction from the industrial sector to the agriculture sector. Other researchers have also noted the importance of different sectors in the growth of the economy. For instance, Bhattacharya and Mitra (1989) concluded that the nature of the relationship between agriculture and industry was significantly impacted by the relative growth of income and employment in both secondary and tertiary sectors.

Conclusion

The unequal development patterns in the sectoral composition caused by the structural change of the Indian economy under various policy regimes resulted in significant variances in economic growth. Following independence, Indian officials made deliberate attempts to expand the agricultural industry with the aid of the green revolution and following advancements in farming techniques. The structural transition from the primary sector to the secondary sector increased steadily throughout the liberalization regime (1980–2004), but somewhat more slowly than under the previous substitution regime. Following the economic reforms, the functions of the service and agricultural industries were merged. The service sector now contributes the most to the Indian economy, followed by industry and agriculture, which is the least important sector. There is a two-way causal chain connecting economic growth to

sector contribution and vice versa. The system to explain economic growth, which has a long-run equilibrium link with the sector value addition to GDP, has also been discovered to have two co-integrating equations. It has been shown that a 1% change in the contribution of the industrial sector causes a short-term boost in economic growth of roughly 3.42% and a long-term increase in primary sector contribution of 1.12%. Economic growth and the agricultural sector have a major short-term impact on the contribution of the industrial and service sectors. Whereas technology and sector integration will undoubtedly play a significant part in the economic development in the future, the composition of sectoral contribution will be a key activity to monitor and regulate. As was previously discussed, the three economic sectors are so closely related to one another. As a result, if the government made a strategic choice in any one of these areas, it would have a substantial impact on both the income of the general populace and the health of the economy. Additionally, it would be important to examine changing equations between sectorial contribution to GDP and its influence on economic growth if and when the government designs new tactics to call for larger FDI into agricultural, industrial, and service sectors, as indicated in this research.

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