The Role of Agricultural Sector and its Sustainability in the Indian Economy

Topic: Input-output Analysis for Policy Making (3)
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This study investigates the role of the agricultural and allied sectors in India as a driver of sustainable development by analyzing interâ€•sectoral linkages and multiple multiplier effects over the periods 2011, 2015, and 2019. The study employs the Leontief Input-Output (I-O) Model, a robust analytical tool for examining economic interdependencies. The I-O model, developed by Leontief (1951), captures the flow of goods and services between sectors, allowing for the identification of intersectoral linkages. The study has utilize two secondary data namely, Supply Use Tables and Employment Unemployment Survey from reliable sources such as Ministry of Statistics and Programme Implementation (MoSPI), government of India. Utilizing a comprehensive inputâ€“output framework, the research quantifies key metrics such as backward linkages (BL), forward linkages (FL), and their normalized counterparts (NBL and NFL) to assess how agricultural products function both as critical inputs for other sectors and as essential outputs within the economy. In addition, the study examines production-inducing, income-inducing, employment-inducing, and supply shortage effects across six sub-sectors: Cereals, Pulses, Oil Seeds, Commercial Crops, Horticulture, and Allied Activities. The empirical results reveal that primary crop sub-sectors maintain a stable dependence on agricultural inputs, as evidenced by consistently high BL values; however, a decline in FL values suggests a weakening role in supplying raw materials to downstream industries. In contrast, the horticulture sub-sector demonstrates increasing multipliers in both income and production effects, indicating enhanced value addition and processing intensity that have significant implications for rural income generation. Furthermore, while Allied Activities initially exhibit higher multipliers, both their income and employment effects decline over time, pointing to structural shifts and a reduction in inter-industry spillovers. Employment multipliers across primary crop groups also show a downward trend, likely reflecting the impacts of mechanization, technological advancements, and shifts towards higher productivity that reduce labor intensity. The analysis of supply shortage effects further underscores the vulnerability of certain sub-sectors to disruptions, with variations in both direct and indirect impacts highlighting differences in how each product group interacts with the broader economy. These findings underscore the central role of agriculture in sustainable development by linking production efficiency with income generation and employment creation in rural areas. The study offers critical insights for policymakers by identifying areas where strengthening supply chain integration, investing in technological adoption, and enhancing value chain linkages can bolster the sustainability and resilience of the agricultural sector. Ultimately, the research contributes to a deeper understanding of the multifaceted role of agriculture in promoting economic growth and sustainable rural development in India.

Keywords: Agriculture Sector, Sustainable Development, Input Output Model, Inter Sectoral Linkages, Multiplier