Chapter 1
Structural Changes for Innovation in Farmer–Centric Global Agricultural Value Chain

Sneha Kumari
https://orcid.org/0000-0002-7228-1986
Symbiosis School of Economics, Symbiosis International University, Pune, India

V. G. Venkatesh
https://orcid.org/0000-0002-5340-4637
E.M. Normandie Business School, Le Havre, France

K. K. Tripathy
https://orcid.org/0000-0001-7456-0287
Ministry of Health and Family Welfare, India & Government of India, India

Binod Anand
World Cooperation Economic Forum, India & High Power Committee, India

Sonam Kumari
Symbiosis School of Economics, Symbiosis International University, Pune, India

ABSTRACT

The diverse agricultural landscapes across the country, influenced by factors like climate and support systems, demand a more tailored approach. Unfortunately, the emphasis remains on measuring productivity rather than farm incomes, leading to a mismatch between national and regional needs. To address these issues, there is a need for a shift towards demand-driven policies, where programs are designed to

DOI: 10.4018/979-8-3693-4330-2.ch001

meet the sector's needs effectively. However, the existing setup lacks flexibility and often leads to states merely implementing central directives without considering local conditions. Therefore, the present chapter aims to design structural changes for innovative approaches to the global agriculture value chain. A paradigm shift is required where countries collaborate based on the evolving agricultural landscape. The chapter has tried to discuss different cases of bringing innovative changes in the global agriculture value chain.

INTRODUCTION

Food security is now coupled with nutrition security globally, especially after COVID-19. It is connected to prosperity and good health and significantly impacts other economic sectors. With the Farmers as producers, a new Cooperative Economic Framework is on the rise for the farmers. With continuous innovation and efforts towards the Cooperative Sector, countries will create a Democratic and Farmer-centric Value chain globally, provided a slew of structural changes promptly be executed. Increasing production and productivity may not ensure a healthy global agriculture supply chain. Surprisingly, many farmer suicides occurred after periods of surplus in crops like cotton, tobacco, chilies, potato, and onion despite record yields.

The population worldwide is expected to grow to 2.3 billion by 2050. According to the estimates, the global population is expected to reach 9 billion by 2050 and 10.1 billion by the end of the twenty-first century (Bastein et al., 2013). The increase in population will lead to increased demands globally and will impose tremendous pressure on the Earth to meet those particular demands. (Franklin-Johnson et al., 2016). The consumption of natural resources continues to rise, and by 2030, it will require resources equivalent to two to three planets by 2050. (U.N. Sustainable Development Goals, 2015). Therefore, it is essential to focus on the productivity and supply of agricultural produce. The supply chain of agricultural produce will not be sufficient to meet the demand. Thus, there has been a shift from the agriculture supply chain to the value chain.

The agriculture value chain is dependent upon global value export. Value-added export consists of five components: direct domestic value-added, indirect domestic value-added, foreign value-added, the share of foreign value added from a direct importing country, and the share of indirect value-added that returns home. Global Value Chain (GVC) participation index constitutes domestic value added from export, foreign value added (FVA), and pure double counting (arises when intermediate goods cross borders back and forth multiple times). The gross value addition (GVA) index indicates a country's participation in GVC (Balié et al., 2019). The expansion of GVC has led to a productive agriculture and food sector. GVC has transformed

Artificial Bee Colony-Based Optimization of Hybrid Wind and Solar Renewable Energy System

Diriba Kajela Geletaand Mukhdeep Singh Manshahia (2020). *Handbook of Research on Energy-Saving Technologies for Environmentally-Friendly Agricultural Development (pp. 429-453).*
www.irma-international.org/chapter/artificial-bee-colony-based-optimization-of-hybrid-wind-and-solar-renewable-energy-system/232103