

ABSTRACT

Global Value Chains involve complex networks of international trade, cross-border investments and global production. Rapid globalization and liberalization have encouraged companies to reorganize and relocate their operations so as to gain from the comparative advantage offered by different geographies. At a time when imports increasingly act as a key complement to local production and exports, such cross-border value chains, intra-firm or inter-firm, regional or global, account for around 80% of global trade.

Value chains assume importance as participation in GVCs has been associated with higher growth in GDP per capita. For developing countries, the trade, investment, and knowledge flows that underpin GVCs provide a means for rapid learning, innovation and industrial upgrading (Lall, 2000; Humphrey and Schmitz, 2002). GVCs are also viewed as potential dynamic instruments to enhance productive capacity, by facilitating the adoption of technology and skill development of the workforce, thus helping lay the foundation for long-term industrialization (Sturgeon, 2001; Oikawa, 2008; Shin et.al, 2009; Johnson and Noguera 2012; Kowalski et al. 2015). Several star performers like China, Korea and a few South East Asian nations have already evidenced this by accelerating their growth process and playing non-linear catch-up with the developed world, largely due to active participation in GVCs.

Against this backdrop, value addition through manufacturing (MVA) has been a key area of focus of both firms and policy makers as a strategic driver of overall growth and development in developing nations. India's share in global MVA has increased, but not as spectacularly as that of contemporary nations like China. Using forward and backward integration as measures of GVC participation¹, India has consistently shown high forward participation, especially in services sectors (particularly business services) and certain manufacturing products (like Textiles and Chemicals). However, India's backward integration in value terms, especially in manufacturing sectors, is much higher indicating a high dependence on imports for domestic value addition. In line with the country's goal to intensify its share of manufacturing output in both domestic as well as global production, this thesis aims to address certain fundamental questions regarding India's involvement in GVCs, in particular, why India's degree of participation in sectoral GVCs is so low and how its GVC participation rates can be enhanced.

With the unit of analysis being the firm, this thesis attempts to assess the performance of firms in India in GVCs and to better understand the major facilitators of and deterrents to GVC participation from the firms' perspective. This addresses a critical gap in the GVC literature as earlier studies have focused on the country or the industry as the unit of analysis. In this thesis, the unit of analysis is the firm which decides whether and to what extent to engage in trade and to participate in GVCs. In addition, the thesis focuses on two key manufacturing industries in the Indian economy – Automotives and Electronics –and outlines the sector-specific challenges and opportunities facing firms in these sectoral GVCs. It thus also addresses the paucity of sector-specific studies in India in the context of GVCs.

¹ From the Trade in Value Added (TiVA) Database, December 2016 for the year 2011

The thesis is organized in four parts as follows. Part I (comprising of Chapters 1 and 2) sets the context of the thesis – Chapter 1 (Introduction) presents the framework of the thesis, describing the definitions and concepts associated with value chains, providing a general overview of global value chains and outlining the motivation for the thesis. Chapter 2 (Comprehensive Literature Review) outlines central strands of the growing body of work on global value chains, cites relevant literature for this thesis and identifies the gaps therein.

Part II (comprising of Chapters 3-5) presents the primary study undertaken to understand what factors affect the GVC participation of a sample set of representative firms (in terms of scale, location, ownership type, sub-segment and listed (vs non-listed)) across the Automotives and Electronics industries in India – Chapter 3 details the firm-level GVC study (objective, methodology, criteria for selection of sectors and representativeness of firms, profile of respondents and summary firm perceptions on various factors). Chapters 4 and 5 report the findings of the study (both qualitative and econometric analysis) encompassing a wide range of potential explanatory variables (including institutional, economic, legal, and financial factors) that affect participation of firms in GVCs, which have not been analysed in detail by any prior study.. We find that *Trade-related factors* (like licenses, quotas, trade agreements, and criteria of trading partners (tariffs and standards compliance)), and *Market Barriers* (like market entry costs, capital costs, gestation time of projects and astute strategy) had the strongest influence on GVC participation for both sectors while additionally *Sectoral Structure* (consolidation within the Electronics sector, importance of brands, technology upgradation and ease of diversification of products) played a positive role in enhancing GVC participation for Electronics firms. These findings provide major suggestions for policy making that can enhance India's domestic value addition rates and presence in these sectoral GVCs.

Theorization of GVCs remains an unexplored area. Part III (Chapter 6) of the thesis attempts to address this gap in the GVC literature which till date is primarily empirical and case study based. We present a theoretical model of GVC participation that integrates features of trade (imports and exports) and characteristics of domestic buyer-supplier networks that firms are usually a part of in order to understand how network characteristics influence trade behaviour of firms through the innovation and productivity channels. It is an adapted version of the Schumpeterian Model of growth and incorporates the basic ideas of endogenous Total Factor Productivity (TFP) from Romer (1999) and the endogenous choice model of productivity and the decision to import inputs and export output in Kasahara and Lapham (2013). We show that direct GVC participation depends on firms' productivity which in turn is determined by their size and network characteristics. This has major implications for firms, especially for the small and medium firms, to make right alliances/ collaborations in the buyer-supplier network for enhancing their GVC participation. These theoretical propositions are corroborated by evidence and data from the Indian Automotive sector.

Part IV (Chapter 7) concludes the thesis by highlighting its contributions to the GVC literature. It outlines some of its limitations and possible future extensions as well.