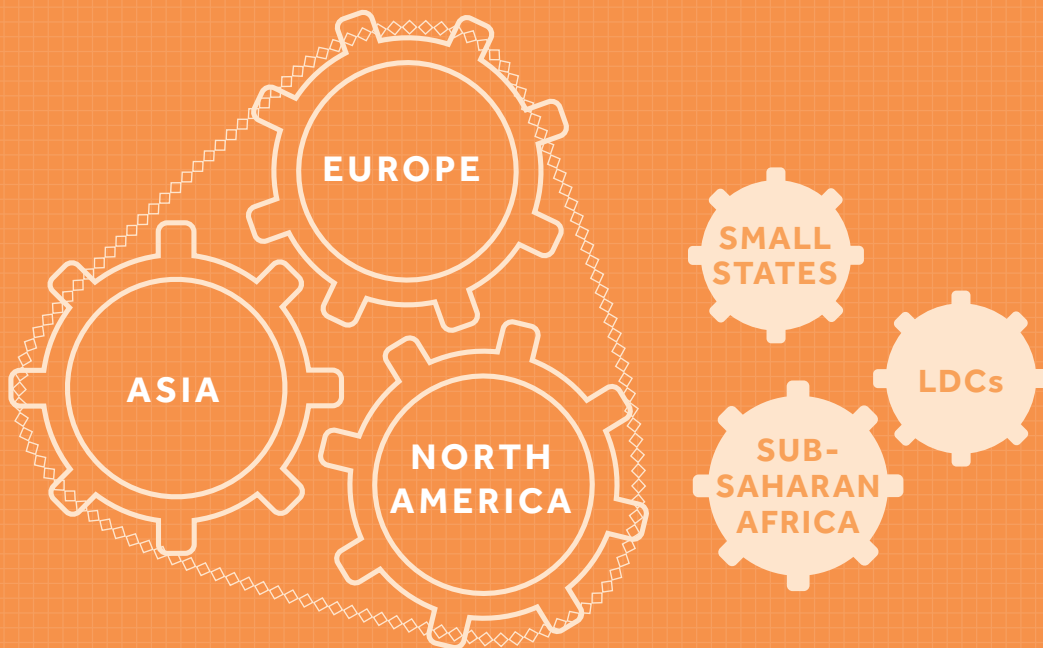
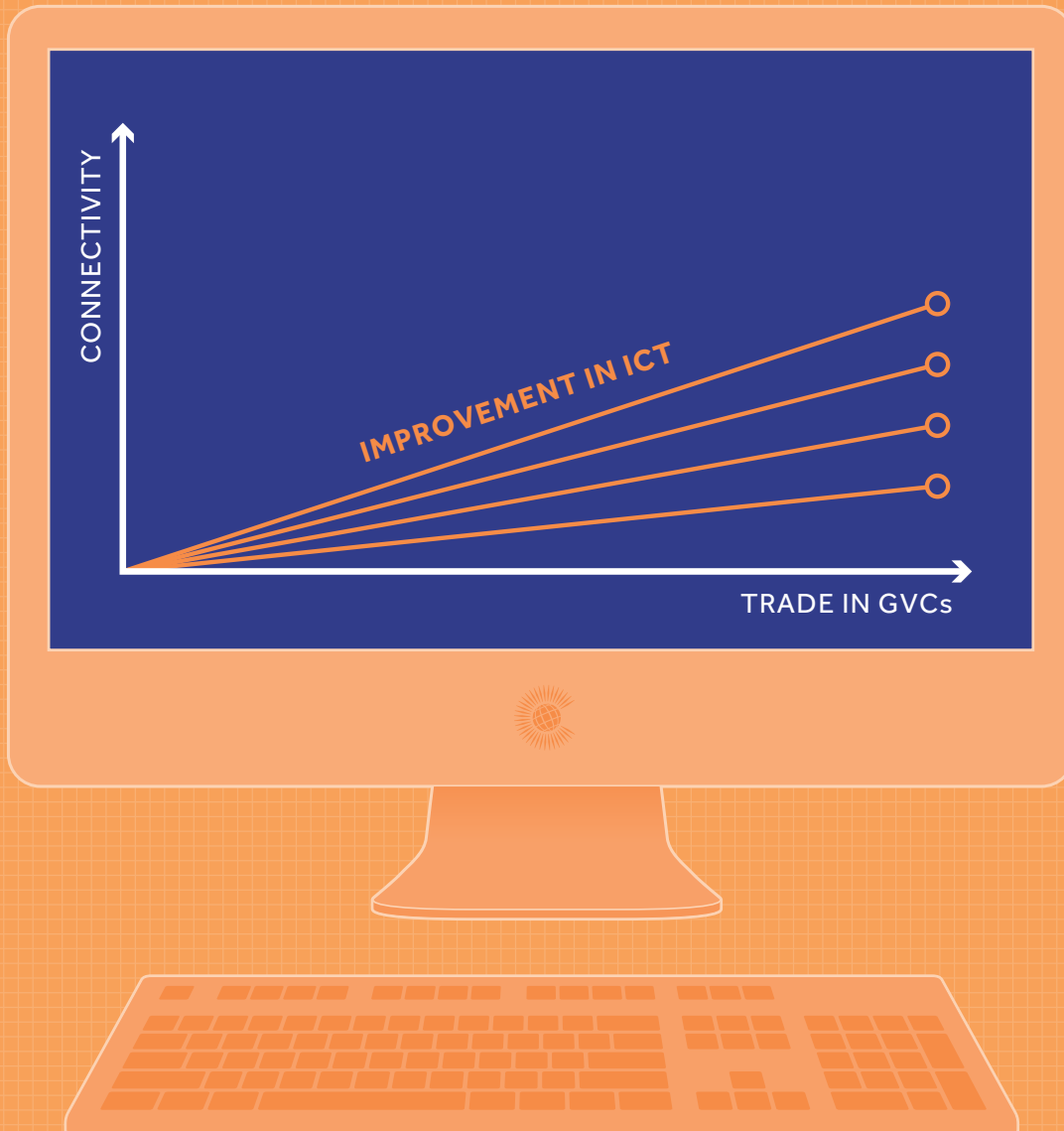


Section 2: Thematic Issues



THE POWER OF CONNECTIVITY



Geography exerts a major penalty on Commonwealth countries' compared to the global average. However for every one percent improvement in connectivity (ICT) for Commonwealth countries' trade in GVCs improves substantially compared to the global average.

Chapter 4

Effectively Governing Global Value Chains: The Institutional Interface

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Abstract

Since the beginning of the twenty-first century, the primacy of institutions in driving the trade–growth nexus has been at the forefront of development thinking. However, only recently have institutional variables become better integrated into global value-chain (GVC) analysis, as opposed to being relegated to the background. This is because of the increasing realisation that the transformation of global production through firms’ internationalisation strategies has fundamentally altered the conventional profit–investment nexus, with no area of law untouched by the implications of this type of trade. In addition to the broader framework conditions determined by governments to effectively engage with trade in GVCs, more careful consideration has to be given to the institutional context within which firms trade and interact; the specific mechanisms through which knowledge transfers occur. These interactions – between public and private sector actors – must be contextualised as part of the processes of technological advancement and societal learning within broader innovation systems.

4.1 Introduction

Since the beginning of the twenty-first century, the primacy of institutions in driving the trade–growth nexus has been at the forefront of development thinking (Acemoglu *et al.* 2001,

Rodrik 2001, Dollar and Kraay 2003). Although the debate has often been characterised by a dichotomy between types of trade policy regimes, more recently a broad consensus has emerged whereby trade reform is more proactively considered part of institutional reform. This process fundamentally alters patterns of behaviour within the public sector, as well as a government’s relationship with the private sector and the rest of the world (Rodrik *et al.* 2004).

Within this context, the relegation of institutions to the background in much of the 1990s global value chain (GVC) case-study literature is rather surprising. Although the more recent wave of the more quantitative GVC literature has attempted to incorporate the role of institutions, the approach has been limited to consideration of national institutions and their quality. For example, in the original GVC handbook developed by Kaplinsky and Morris (2001) no indicators were assigned in relation to the institutional context of GVCs. To some extent, this is because, as elaborated on by Raikes *et al.* (2000), similar institutions were simply assumed to exist within the context of a liberal trade regime, with market-friendly policies in place.²

Since then, there is recognition of a need for the incorporation of domestic regulation and public sector support within a comprehensive framework which links GVC governance, institutional frameworks and upgrading (Ponte

and Sturgeon 2014). This is precisely because GVC analysis has so far focused mainly on governance mechanisms internal to the value chain, treating the institutional framework (including state regulation) as ‘background’ (*Ibid*).

4.2 Reflection on regulatory frameworks

The role of international and national institutions and the regulatory frameworks within which trade takes place clearly feature on the 2030 Agenda, given the universal adoption of the SDGs by the international community in 2015. However, their operationalisation across fragmented regulatory spheres continues to be subject to scrutiny and debate.

Since the global financial crisis (GFC), and the subsequent Great Recession, there has been a much more concerted effort by researchers to focus on the nature of relations between firms and how these are shaped by external structures set by governments. The interaction between internal relations between firms and their interplay within the overarching frameworks set by governments, and the disjuncture between these, became glaringly obvious after the GFC of 2008.

The profound shifts in the trade–growth nexus that have arisen since the crisis, and the apparent reduction in the power of growth to drive trade,³ have necessarily lent themselves to a period of deeper reflection on GVCs and their institutional interface. There is a need to go even further, however. Deeper reflection is required in view of the process of technological advancement induced through GVC engagement, which is by its very nature disruptive, with winners and losers. These must be identified and mediated through public policy interventions.

Although the SDGs go some way towards redressing gaps and imbalances in global

regulatory frameworks in view of public policy objectives, the scale of the challenge remains formidable. There is no one area of law that remains untouched by the implications of GVCs.⁴ The transformation of global production through firms’ internationalisation strategies has fundamentally altered the conventional profit–investment nexus.⁵ All governments continue to grapple with this challenge, within the context of a highly fragmented global policy landscape—particularly within the realm of finance and investment.

4.3 New measurements of global value chains: trade in value added

The World Trade Organization launched the ‘Made in the World’ initiative in 2012, along with estimates on trade in value added (TiVA). These databases responded to some of the demands of the G20 countries for a greater understanding of the interconnected nature of global trade, in view of the synchronised slowdown that occurred in 2008. However, their contribution extends well beyond this.

For example, because of ‘double counting’ and the inclusion of imported goods in gross exports trade data, an estimated US\$5 trillion of trade flows were simply overstated (UNCTAD 2013). However, while major statistical exercises have been undertaken to understand inter-industry transactions between countries through the construction of global and regional input–output tables, obtaining accurate data on intra-firm transactions remains a challenge.

Understanding company ownership structures, as well as where ‘substantive activity’ takes place, invariably has major implications for public policy aspects, including taxation. Although some progress has been made in terms of bringing international institutions and their reporting mechanisms up to speed in view of contemporary trade and investment flows, these facts underscore some of the challenges.

Currently, the situation is one in which we estimate the value added that accrues between countries, through an analysis of trade patterns between them, rather than between firms differentiated by their ownership structures and locations of substantive activity.

Effective competition management – within increasingly oligopolistic global market structures, as indicated by recent estimates of intra-firm trade – requires judicious implementation. The ability of indigenous firms to achieve certain upgrading trajectories (including functional), without being incorporated into tiers and networks of global suppliers, is becoming more and more limited. The process of functional upgrading may entail developing new contractual relations with lead firms. New ownership structures may result from the acquisition of certain technologies, as well as from the creation of certain financial linkages.

Clearly, the ascendancy of GVCs has implications not only for the traditional profit–investment–growth nexus, but also for trade-induced growth trajectories. Value chains administered in various ways by transnational corporations (TNCs) now account for 80 per cent of global trade, with one-third of trade occurring within the boundaries of individual firms through intra-firm transactions. This has major implications for facilitating the process of technological upgrading and broader societal learning.

4.4 Adding value

Whereas in the past value added has been calculated in terms of the difference between total revenues and total outlays on intermediate inputs (factor payments and profits), within the context of contemporary trade and investment patterns, it may be more useful to connect this summation to those variables that can be influenced by policy (Baldwin and Evenett 2015). In turn, this implies that value

added per worker may correspond not to average payments per worker, but to workers' productivity, factor payments and profit margins (*Ibid*).

Because it is no longer appropriate to consider trade solely in final goods, but rather in terms of tasks (Grossman and Rossi-Hansberg 2006), this necessarily entails disaggregating the value added and skill components of trade. Therefore, obtaining information on the types of firms involved in production, the level of technological sophistication of products, and the skills demanded of labourers and their remuneration becomes paramount. This requires a closer interface between GVCs and institutions to obtain, understand and respond to firms' demands in relation to the provision of education in a way that also meets public policy objectives. Greater governance capabilities are invariably required.

Some attempts have been made to better identify indicators associated with the upgrading trajectory so widely referred to in the GVC literature.⁶ For example, moving beyond the conventional distinction between product, process, functional and inter-sectoral upgrading processes, Bernhardt and Milberg (2011) make reference to the following:

- **Economic upgrading:** increase in world export market share; increase in export unit values.
- **Social upgrading:** increase in employment; increase in real wages.

However, generally, discussion on upgrading within GVCs fails to situate this within the broader context of technological development and the acquisition of skills. Some attempts have been made to bridge this gap. For example, Pietrobelli and Rabellotti (2011) explore how the characteristics of national innovations systems (NIS) influence relations between firms and therefore their learning opportunities. However, much more empirical

research is needed to better understand these linkages within specific country contexts, as well as related policy instruments, as described in the sections below.

4.5 Facilitating learning

Fundamentally, upgrading in GVCs is a multidimensional process that seeks to increase the economic competitiveness (profits, employment, skills) and/or social conditions (working conditions, low incomes, education system) of a firm, industry or group of workers.⁷ From this perspective, upgrading involves a learning process through which firms acquire knowledge and skills – often through their relationships with other enterprises in the value chain or through supporting markets – that can be translated into innovations or improvements that increase the value of their goods or services.

This learning process, resulting from the acquisition of knowledge, is one of the most important public goods, and requires systematic interventions by governments (Stiglitz and Greenwald 2014). To facilitate this process, a fundamental review of the structure of learning across an economy is required, within and across sectors. Stiglitz and Greenwald (2014) recommend a critical review of the following policies:

- design of educational and research institutions;
- presence of an innovation system;
- design of labour market (including rules affecting mobility of persons, within and across sectors);
- financial and capital market liberalisation (affecting the ability to learn how to allocate capital);
- intellectual property regimes;
- investment treaties;

- taxation and expenditures on infrastructure, education and technology; and
- legal frameworks for corporate governance and bankruptcy.

When upgrading within GVCs is viewed from this perspective, effective engagement expands beyond the realm of conventional trade policy formulation. Facilitating learning processes invariably relates to effective rent management; therefore, the national, as well as international, institutional context in which GVC trade takes place, matters.

4.6 Influencing value-chain governance

Economic upgrading within GVCs can be defined as firms, countries or regions moving to higher-value activities in GVCs to increase the benefits (e.g. security, profits, value added and capabilities) of participating in global production. It requires critical analysis of the nature of interactions between stakeholders within a given system of production, to transform activities from low value added to higher value. This is because value-chain governance structures may need to be changed to enable certain types of upgrading to occur.

Farole and Winkler (2014) discuss some of the mediating factors that shape the nature and extent of knowledge spillovers induced through GVC engagement. These include the spillover potential of foreign investors (particularly in the context of investments within GVCs), the absorptive capacity of local agents (firms and workers), and the way in which these two factors interact within a specific host country's institutional environment. Essentially, these interactions between public and private sector actors must be contextualised as part of the processes of technological advancement and societal learning within a broader innovation system.

Given this, more careful consideration has to be given to the institutional context within which firms trade and interact. This includes the role of organisations such as business associations, designed to facilitate these networking processes in a systematic way. Repeated and structured interactions form part of an innovation system. In order to assess the types of innovation systems in place, the following indicators are typically referred to:⁸

- **interactions among enterprises** – primarily joint research activities and other technical collaborations;
- **interactions among enterprises, universities and public research institutes**, including informal linkages as well as joint research;
- **diffusion of knowledge and technology to enterprises**, including industry adoption rates for new technologies; and
- **personal mobility**, focusing on the movement of technical personnel, including within the public and private sectors.

In order to facilitate these processes, policy-makers must design effective consultative mechanisms with business. There are various types of models which can be adopted (Ohno 2014). Consulting business on trade policy changes alongside civil society actors often requires a delicate balancing act. However, it is crucial to ensuring domestic impact assessments are rigorous and the appropriate flanking and sensitising measures are designed. Unfortunately, due to pressing time and resource constraints for many developing Commonwealth members, this has often not been the case, as described in the Commonwealth Trade Review 2015.

Ultimately, governments need to work more closely with their business associations and chambers of commerce to obtain accurate

and timely information. This requires greater governance capabilities, particularly in cases where the private sector, including the small-scale and informal sectors, is not yet organised.

4.7 Informing quantitative analyses

Some caution is urged with regard to the consideration of institutions in quantitative GVC analyses, as most studies tend to rely on a very limited number of indicators incorporated from the literature on institutional quality. The objective of the emerging literature, however, is intended to move away from the more limited consideration of institutions within trade theory, which simply focuses on differences in terms of tax and technology.

In the literature on institutional quality, export industries are associated with institutional intensity, as proxied by their association with the rule of law (and, subsequently, contract enforcement, investor protection and protection of property rights). The ‘rule of law’ is used as an indicator of institutional quality (Levchenko 2007). The index of rule of law developed by Kaufmann *et al.* (2005) captures the quality of contract enforcement, the security of property rights and the predictability of the judiciary. For example, the following products are identified as either high or low institutional quality:

- **High institutional quality:** aircraft parts and equipment, mineral wool, surgical appliances and supplies, packaging machinery, manufacturing industries.
- **Low institutional quality:** meatpacking plants, soybean oil mills, poultry slaughtering and processing, special product sawmills, dairy products, butter, petroleum refining, fluid milk, tire cord and fabrics, malt, setup paperboard boxes.

Subsequently, the ‘rule of law’ indicator has been taken forward in the GVC literature as an indicator of institutional capabilities. For example, a distinction is made by Pathikonda and Farole (2016) between fixed capabilities and those that are either short- or long-term policy variables that may be changed. Institutional capital is included as a long-term policy variable in their analysis. They find that proximity to markets, efficient logistics and strength of institutions are important capabilities influencing GVC participation (as indicated by trade in specific product lines).⁹

The fixed variables they refer to include proximity to markets (measured by GDP-weighted distance in kilometres) and natural capital (current US\$ billions). The long-term policy variables they refer to include:

- **Human capital:** measured by average years of schooling (population >15 years old).
- **Physical capital:** capital stock per person (2005 US\$ thousands).
- **Institutional capital:** ‘rule of law’ rating from –2.5 to 2.5, from the World Bank World Governance Indicators.

The short-term policy variables they refer to include:

- **Logistics/connectivity:** measured by the World Bank Logistics Performance Index.
- **Wage competitiveness:** minimum wage for an apprentice or 19-year-old worker, as measured by the World Bank Doing Business project.
- **Market access:** measured by the World Bank Overall Trade Restrictiveness Indices.
- **Access to inputs:** Overall Trade Restrictiveness Indices for individual countries.

An alternative approach to the integration of institutional indicators into GVC analysis is

adopted by Dollar *et al.* (2016). Participation in GVCs is indicated by domestic value added (forward participation), while foreign value added (backward participation) is linked to institutional quality. Using this approach, Dollar *et al.* (2016) find that countries with better institutional quality have a higher level of GVC participation in institutionally intensive sectors and experience a more rapid increase in GVC participation.¹⁰ However, the positive correlation identified between GVC participation and institutions becomes less significant if the backward linkage GVC participation indicator is used. This may be because, in the research approach currently used, commodities exporters tend to exhibit higher proportions of domestic value added, defined as the backward linkage of GVCs.

To conclude, currently one major shortcoming of the inclusion of institutional indicators in GVC analyses is the sole focus on domestic regulatory indicators. The absence of discussion regarding the international dimension of institutions matters because of the fundamental asymmetries at play in relation to headquarter economies and host economies. In the past, the political economy of, for example, the General Agreement on Tariffs and Trade (GATT) and its successor the World Trade Organization (WTO), centred on a ‘prisoner’s dilemma’ tariff-setting game: to shift from high tariffs towards low tariffs, all parties had to act in concert and be punished for non-compliance (Baldwin 2012). Nowadays, the challenge for policy-makers lies in understanding the need for new policy prescriptions, and notably improvements in the disciplines for international governance of the emerging trade–investment–service nexus (*Ibid.*). Currently, it is not clear how these needs will be reconciled.

4.8 Concluding remarks

The emergence of GVCs has profoundly altered conventional state–business relations, because

the objectives of governments are no longer as closely aligned with their domestic private sector, as in the past. Improving understanding of the influence of institutional variables operating at the national and international levels on contemporary trade and investment flows, as manifested in GVCs, remains an important research endeavour. Although the inclusion of some domestic institutional variables such as rule of law in the quantitative GVC literature is a positive development, there is currently an inability to consider their interaction with international institutions.

The interaction between institutions and technological capabilities deserves further attention. An innovation system is broadly defined in terms of a set of institutions that facilitate technological change and help to diffuse innovations. These systems facilitate interactions between private and public agents, serving to enable certain types of upgrading processes and the achievement of broader societal 'learning-by-doing' processes. The facilitation of these processes matters, because they are the only known ways to sustain growth induced through trade.

Notes

- 1 Economic Adviser, Commonwealth Secretariat. The views expressed in this chapter are the author's and do not reflect those of the Commonwealth Secretariat.
- 2 See IGLP Law and Global Production Working Group (2016).
- 3 There is general consensus that, where in the past a 1 per cent increase in growth led to a 2 per cent increase in trade, this has now changed to a 1:1 relationship.
- 4 Areas of interest raised in this article include competition, taxation, labour and environmental standards.
- 5 Although Milberg and Winkler (2009) make the link between GVCs and financialisation, it is UNCTAD (2016) that draws attention to shifts in the profit nexus at the firm level, with major implications for the advancement of sustainable development objectives.
- 6 See Humphrey and Schmitz (2004).
- 7 Milberg and Winkler (2014) describe upgrading within GVCs as being synonymous with economic development.
- 8 See OECD (1997).
- 9 These products include the parts and components included in the UN Broad Economic Classification (BEC) registry and the product list of the WTO Information Technology Agreement. Using the BEC classification, the authors combined capital and consumption goods into a single 'final goods' category and isolated 'differentiated, customised, product-specific' intermediates.
- 10 Institutions using the standard empirical framework in trade-institution literature.

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