Global Summitry Journal

April 2013

The Shifting Geography of Global Value Chains: Implications for Developing Countries, Trade Policy, and the G20

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Recommended Citation
Draper, Peter
Available at: http://dx.doi.org/10.7871/2291-4110.1005

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Abstract

This paper discusses the two broad, contradictory trends are at work in the global economy: economic globalization through multinational corporation production networks and global divergence through economic crisis policy responses.

Reductions in transportation and communications costs have allowed firms to operate global value chains that take advantage of differences in national comparative advantage both through intra-firm trade and through networks that link teams of producers. Increasingly, countries specialize in tasks rather than products. This promotes global economic convergence and integration.

However, the second trend pertains to economic crisis policy responses and is one of divergence. Associated with this is the ever-present threat of a destructive spiral of trade protectionism, competitive currency devaluations, and consequent disintegration. The World Trade Organization (WTO) has played a critical role in stemming the tide of protectionism. Unfortunately, WTO member states remain unable to conclude the Doha Development Round. Fortunately, the resilience and increased interdependence of the global economy also played a key role in containing protectionism.

This paper will discuss the increasing importance of global production chains as reflected in the rising trade in intermediate inputs, and the steps the international community must take to successfully maintain and grow these production chains.

Cover Page Footnote

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CONTEXT

Two broad, contradictory trends are at work in the global economy. First, economic globalization through multinational corporation (MNC) production networks continues apace. Reductions in transportation and communications costs have allowed firms to operate global value chains (GVCs) that take advantage of differences in national comparative advantage both through intra-firm trade and through networks that link teams of producers. Increasingly, countries specialize in tasks rather than products (World Trade Organization and Japan External Trade Organization, 2011). This promotes global economic convergence and integration. The GVCs they operate have become the world economy's backbone and central nervous system.

However, the second trend pertains to economic crisis policy responses and is one of divergence. Associated with this is the ever-present threat of a destructive spiral of trade protectionism, competitive currency devaluations, and consequent disintegration. That would have serious consequences for the global economy, particularly the most vulnerable and trade-dependent states. This possibility highlights the critical role the World Trade Organization (WTO) has played in stemming the tide of protectionism. Unfortunately, WTO member states remain unable to conclude the Doha Development Round, throwing the WTO's continued centrality to the global trading system into sharp relief. Fortunately, the resilience and increased interdependence of the global economy also played a key role in containing protectionism: governments quickly realized the futility of discriminatory stimuli and the cost of raising barriers on intermediate goods on which whole segments of domestic industries depend (The World Bank, 2010).

The increasing importance of global production chains is reflected in the rising trade in intermediate inputs, which now represent more than half of the goods imported by OECD economies and close to three-fourths of the imports of large developing economies, such as China and Brazil (Ali & Dadush, 2011). Imported inputs also account for a significant proportion of exports, blurring the line between exports and imports as well as between domestic products and imports. As part of global production chains, products at different stages of value added may be imported and re-exported multiple times, increasing the size of reported exports and imports relative to global and national value added. In advanced countries, this effect is reinforced by the fact that imports can contain a significant portion of inputs – including intellectual property, brand-development, etc. – originally sourced at home; in developing countries, imports of components and machines are crucial vehicles for absorption of technologies.

These chains [1] have created what Richard Baldwin calls 'factory America'; 'factory Europe'; and 'factory Japan' with China, Mexico, and parts of Southeast Asia acting as sourcing hubs lower down the value chain (Baldwin & Lopez-Gonzalez). China is the fulcrum of these sourcing networks and as it moves up the development ladder, an emerging 'factory China' is taking shape. Mexico is overwhelmingly a sourcing hub for US corporations, so its insertion into value chains is best considered regional. Similarly, Southeast Asian countries such as Thailand are integrated predominantly into Japanese value chains, although South Korea and Taiwan have emerged as significant outward investors within the Southeast Asian region and China based on their own selective incorporation into GVCs (Lehmann, 2012). India plays an important role in services GVCs (Stephenson, 2012).

Other significant regional players such as Brazil and Russia, notwithstanding their economic weight and potential, are largely peripheral to this picture, particularly in manufacturing, although Brazil is a significant player in global agricultural value chains. Nonetheless, both countries are increasingly important outward investors in their regions, operating regional value chains centered on their domestic markets.

Unfortunately large parts of the developing world, notably Latin America, Africa, and Central Asia, have not been incorporated systematically into GVCs or even regional value chains. To the extent that they are, this is predominantly as suppliers of primary inputs or raw materials into manufacturing processes driven by MNCs and located elsewhere – in one of the successful manufacturing hubs. Not surprisingly resource nationalism is on the rise, in these countries and elsewhere, as countries seek to maximize their resource endowments and enter global markets for more value-added products. Along the way some understandably question prevailing 'neoliberal' policy orthodoxies that advocate market liberalization as the best route to development.

Nonetheless, the success of China in particular – it has become the world's largest exporter – shows how countries can flourish by integrating into GVCs. It is also a clear demonstration that exploiting the potential of these chains does not necessarily imply following the 'neo-liberal' model.

[1] The following three paragraphs are adapted from Draper, P and Lawrence, R (forthcoming) 'How Should sub-Saharan African Countries Think About Global Value Chains?', *Bridges Africa*.

DOI: 10.7871/2291-4110.1005

SHIFTING GEOGRAPHY OF VALUE CHAINS

Fundamental changes to global value chains are afoot. In the next decade the underlying cost structures driving value chain location could change dramatically. At least five drivers are evident:[2]

1. Energy and associated transportation costs are likely to continue rising as the cost of fossil fuels increases and policy measures targeted at carbon emissions intensify. The recent fracas over airlines associated with the EU's emissions trading scheme is an early harbinger of the kinds of issues that may arise. These cost pressures promote reductions in the 'length' of value chains in order to minimize carbon emissions.
2. Similarly, as new players from emerging markets secure access to various resources for input into production processes, so competition will increase and prices of those resources are likely to rise. Export restrictions designed to secure domestic supplies of key industrial inputs, if not properly regulated through the WTO, are also likely to intensify, placing further upward pressure on prices.
3. China is at the center of global value chains in manufacturing, particularly in labor-intensive sectors. But as China continues to shift its growth model away from reliance on exports towards domestic consumption, so wage costs are likely to rise substantially and the currency should continue its appreciation. Other domestic costs, such as land, are also rising. Hence the 'China cost' is likely to continue mounting. Nonetheless, Chinese productivity growth offsets these cost rises to some extent, and the western provinces have hundreds of millions of workers eager to join the 'new China', so some caution is appropriate in predicting sharp changes.[3]
4. Information technology costs are likely to be driven lower through intense technological competition. This opens up opportunities for countries wishing to grab a slice of the value chains action. Developments within information technology itself, notably the rise of 3-D printing, are also promoting the 'on-shoring' or relocation of high technology manufacturing back to advanced countries.
5. Southern markets will continue to grow in relative importance, while growth in Europe is likely to remain structurally repressed for the

[2] These are taken from World Economic Forum, *op.cit*.
[3] There is no consensus on the extent of Chinese productivity growth. See Yanrui Wu (2011) 'Total factor productivity growth in China: a review' *Journal of Chinese Economic and Business Studies*, 9(2).

foreseeable future. This is likely to drive value chain reorientation and relocation, potentially in unpredictable ways.

Therefore the geography of value chain location is likely to shift, potentially fundamentally, within the next decade. This has major implications for those countries that have specialized in value chain niches, and for developing countries looking to secure new niches. This will play out differently in different contexts. For example, developed countries are increasingly concerned about retaining jobs; developing countries are either looking to retain their existing value chain niches or others are looking to plug into them.

A recent report by the World Economic Forum's Global Agenda Council on Trade explores these issues, and their implications for trade policy. We considered the political economy of value chains in different country and regional contexts; the forces promoting the 'unbundling' of production; how two companies in different manufacturing sectors are reacting to them; the role of services in manufacturing value chains and the emergence of services value chains in their own right; and the broader dynamics centering on growing trade in intermediate products. Several implications for trade policy and trade rules emerge from this analysis.

IMPLICATIONS FOR TRADE POLICY AND RULES

MNCs pay close attention to the 'softer' issues when taking long-term decisions about where to locate key aspects of their GVCs. First and foremost, MNCs operating GVCs need to import intermediate inputs, as cheaply and effectively as possible, in order to export. A blanket import-protection agenda logically entails keeping out imports, and thus undermines the rationality behind GVC attraction.

Second, MNCs need access to cost-effective and reliable network services infrastructure – telecommunications; transport; energy; and possibly finance. Such services, and the manufacturing operations they support, require skilled professionals for their operation. In many developing countries the necessary infrastructure is in short supply, finance is constrained, and domestic professional and technical services human resource pools are small.

Third, maintaining just-in-time manufacturing operations requires speedy delivery of both imports for domestic value-addition, and exports of the resultant components. Therefore regulatory barriers at the border – particularly those associated with customs and various standard-setting bodies

DOI: 10.7871/2291-4110.1005

– can be crucial. Finally, if an MNC is to expose itself to potentially risky countries through FDI, it will need assurances that its investments will be protected from arbitrary expropriation, and that the business case for the investment is not undermined through unplanned policy or regulatory changes.

It follows that governments need to recognize that exports are only part of the development story. Central to this is that policy makers need to develop better measures of trade flows net of intermediate imports; a project on which the Organization for Economic Cooperation and Development (OECD) has made great strides in recent years. More generally, governments also need to develop a better appreciation of how the economy fits into global production chains. A failure to do so can lead to inaccurate policy conclusions about the importance of bilateral trade imbalances; to significant underestimates of the cost of protection; and to a failure to appreciate the importance of bilateral or regional trading relationships. Generally, the existence of large and growing trade in intermediates, which is closely associated with foreign direct investment and the globalization of production, greatly raises the stakes for countries to have open and predictable trade and investment regimes, including efficient logistics. If they don't adopt this perspective, then 'old' policy approaches can have serious consequences. For example, trade remedies often backfire by frustrating the efficiencies occasioned by intermediate trade, disrupting supply chains, and costing domestic jobs when the aim of applying trade remedies is to save them.

This is inherently a *unilateral perspective*. While it may be attractive to some policy makers and domestic constituents to promote import replacement or restrict exports for industrial policy reasons, such policies will inhibit both trade in intermediates and inward investment into value chain niches. However, an open trade regime is not enough on its own to benefit from insertion into global value chains. Countries need to invest in horizontal policy measures, notably education, infrastructure, and technology transfer in order to enhance access to global value chains and the long-term benefits they offer. Domestic governance and institutional reform are also essential preconditions, particularly in developing countries. Building institutional capacities to target MNCs, with a view to promoting inward investment into value chain niches remains important. Protecting MNC investments through regulatory guarantees remains as necessary as ever.

Currently the multilateral rules that govern global value chains are based on the notion that firms in one nation sell things to customers in another nation. Hence the rules framework concerns product-trade rather than process-trade. As such they do not adequately account for a range of policies and barriers that do not inhibit selling things per se, but do hinder their movement.

This problem afflicts the WTO in particular, which has struggled to advance beyond its traditional focus on market access barriers to trade in goods. The global nature of today's production chains; the intermingling they imply of exports of services, goods, movement of capital and of specialized workers; and the essential role played in them by efficient trade logistics, all point to the increased importance of comprehensive multilateral disciplines to facilitate the operation of such chains. The WTO's contribution potentially spans services, intellectual property, trade facilitation, and tariffs on imported inputs. Furthermore, trade and investment are two sides of the same economic coin; trade rules cannot work without investment rules and vice versa.

Unfortunately our global trade rules fall considerably short of the 21st century, and our global investment rules are nearly non-existent. Furthermore, value chains evolved historically as southern export platforms to service northern markets, but now we are seeing shifts in southern locations and increasing targeting of other southern markets. Yet the Doha round is largely predicated on a north-south negotiating dynamic. As value chain relocation takes hold, driven by emerging market growth, so the new dynamics need to be reflected in how the WTO conducts its business.

These issues raise an important question: how can WTO rules be advanced in the absence of a conclusive multilateral trade round? In our council's perspective, the key is for the WTO's membership to pursue plurilateral, or small group, negotiations under the auspices of the WTO.[4] The politics of this approach are challenging, but the systemic implications of continued stasis in the WTO are arguably worse.

Two further implications relate to services trade and investment. First, trade rules should be updated to promote modal neutrality in services trade and investment. Specifically, modes 1 (cross-border trade) and 3 (cross-border investment) should be open and therefore facilitate modal switching. Second, regulators need to promote regulatory coherence across borders so as not to establish bottlenecks in the value chain creation process. This could be done through the adoption of general or sector-specific principles, or both.

Given these problems with updating WTO rules, trade rules have advanced faster in preferential trade agreements (PTAs) or related measures such as bilateral investment treaties. Production chains are even more intense at the regional level, and regional agreements can more easily deal with the

[4] See the council's 2010 report on plurilaterals, available at http://www3.weforum.org/docs/GAC10/WEF_GAC_Trade_Paper_2009-10.pdf.

complexity they imply – pointing to regional negotiations as an important complement to multilateral disciplines. Nonetheless, PTAs could add to transactions costs in the absence of multilateral disciplines advancing in the WTO. Furthermore, PTA rules are based on an antiquated understanding of where goods are 'from' – hence the Byzantine networks of 'rules of origin'. But goods are now 'from' everywhere – because of GVCs.

Therefore new approaches to negotiating PTAs, with a view to making them more compatible with actual GVC operations and ultimately WTO disciplines, are required. At the very least this suggests an approach rooted in reducing transactions costs, not raising new barriers to trade. A key question is how these 'bottom-up' changes could be incorporated into the WTO's architecture. This is a subject our council has also previously considered, and the interested reader is referred to our recommendations in this regard.[5]

IMPLICATIONS FOR THE G20

The agenda outlined in this paper is large, and aspects of it are fiercely contested not least on ideological grounds. There is concern that it is being proffered to support the case for developed countries to bypass the WTO's Doha round, and that it is simply the latest effort to impose an ill-advised liberalization agenda on developing countries (Ismail, 2012). This makes pursuit of the agenda a complicated affair, especially in the G20 where some important developing countries side with the 'GVC-skeptic' position. On top of this, the G20's track record on the global trade agenda has been anything but stellar, focusing largely on continued exhortations to conclude the long-stalled Doha round and the implied promise not to raise new protectionist measures, although the primary culprits are G20 member states themselves.

Nonetheless, there are some grounds for medium-term optimism. This centers on the fact that emerging markets, particularly those represented in the G20, have strong interests in GVCs – as recipients but increasingly as sources of outward FDI and GVC (or at least regional value chain) operation. Consequently they have increasing stakes in more liberal trade regimes at home, in order to enhance their own stakes in GVCs, but also abroad to support their own MNCs. It is this dynamic, arguably, that has capped the growth of protectionism in the ongoing global financial crisis. In this light the G20 initiative to measure trade and investment protectionism – essentially to name and shame the major offenders – needs to be deepened and extended, as it is a useful external discipline on member states.

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[5] See the council's 2011 report on PTAs, available at http://www3.weforum.org/docs/GAC11/WEF_GAC_Trade_Paper_2011.pdf.

Furthermore, while it may not currently be apparent G20 members increasingly share an interest in developing multilateral rules relevant to GVC governance. However, the WTO's negotiating mechanism is stalled, if not quite dead. And the growth of PTAs threatens to render it irrelevant. So at the very least the G20, as the self-appointed 'apex group' steering global economic governance, needs to seriously address these systemic challenges.

Progress will depend on carving out a meaningful package from the Doha round. This would enable the organization to move on from the currently debilitating impasse. To the extent possible this should center on GVC – related rules, such as trade facilitation and services, particularly the former. However, it has to provide the least developed countries (LDCs) with something substantial, both because this would be the right thing to do but also because it could buy trust for a post Doha thrust on GVC-related plurilateral agreements. Critically, the G20 should support this process by re-committing to an appropriately framed G20 development agenda – in other words, by fully establishing the G20's development credentials.

None of this will be easy to do; regardless of this difficulty, the task of leaders, even if self-appointed, is to lead.

DOI: 10.7871/2291-4110.1005

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