Paper title: Global value chains and the rise of the Global South: Unpacking 21st century polycentric trade

Global Networks (forthcoming, part of special issue on Global production networks and new contours of development in the global South).
Accepted: 07th August 2017

Authors:
Rory Horner
Global Development Institute,
University of Manchester,
UK.
and
Department of Geography, Environmental Management and Energy Studies,
University of Johannesburg,
South Africa.
Email: rory.horner@manchester.ac.uk

Khalid Nadvi,
Global Development Institute,
University of Manchester,
UK.

Acknowledgements
This article benefited from constructive feedback from the editor, Ali Rogers, as well as two anonymous reviewers of Global Networks, which is highly appreciated. Feedback from participants in sessions on “Extra-regional dynamics, strategic coupling and regional development paths” (AAG 2017, Boston), and on “Changing globalization dynamics and the impact on GVCs” at (SASE 2017, Lyon) is also gratefully acknowledged, as well as from both Raphie Kaplinsky and the members of the Global Development Institute’s “Global production networks, trade and labour” research group. Rory Horner gratefully acknowledges a University of Manchester Hallsworth Research Fellowship. This article is linked to the ESRC project “India’s pharmaceuticals, local production and public health security in sub-Saharan Africa: a comparative study (ES/N001885/1) as well as to the ESRC project “Rising Powers, Labour Standards and the Governance of Global Production Networks” [grant number ES/J013234/1].
Global value chains and the rise of the Global South: Unpacking 21st century polycentric trade

Rory Horner and Khalid Nadvi

Abstract: A growing body of research points to the “Rise of the South” and the growth of South-South trade. This article considers the implications of the shifting dynamics of global trade and the greater prominence of Southern actors for the conceptualisation of global value chains (GVCs) and production networks (GPNs). It first explores the changing geography of global trade through trade data analysis. It then goes on to suggest that our understanding of GVCs and GPNs in a context where Southern actors and Southern end markets have more prominent roles requires greater attention to the existence of multiple different value chains (VCs) and production networks (PNs) serving different end markets – including domestic, regional and global. Consequently, both governance dynamics – lead firm strategies and standards requirements – as well as upgrading prospects must be refined based on recognition of this shifting trade geography and emergence of more polycentric trade. The article concludes by raising a number of new research questions regarding the conceptualisation of VCs and PNs in a world where Southern actors and Southern markets are increasingly important.

Keywords: Global Value Chains; Global Production Networks; Trade; South-South; Governance; Standards; Upgrading
1. Introduction

A “new geography of trade” (UNCTAD 2004) is emerging as part of 21st century globalisation (Pieterse 2012). At its core is the dramatic growth in South-South interactions. The term ‘global South’, popularised by the Brandt Report in 1980 to highlight the gap between the developing and the developed world, covers all economies in Latin America, the Caribbean, Africa and developing Asia, including China1. What unites these countries is that they are undergoing a process of economic development and structural change, and that historically, or at least for the last few centuries, they have been engaged in trade flows dominated by countries and actors from the developed global North. However, economic globalisation is now being substantially re-shaped, with the emergence of more polycentric trade.

Today, we observe three distinct trends. First, almost half (47% in 2015) of global manufacturing exports (in value terms) originates from the global South (analysis of data from UNCTADstat.com). Second, consumption in the global South is rapidly increasing, with one estimate suggesting it will account for 47% of global consumption by 2025, up from 32% in 2010 (McKinsey 2012: 4). Third, the dominant direction of global trade flows for the global South is no longer South-North but South-South. These are seismic changes for the global economy, with key southern actors, including firms, states and consumers, playing increasingly significant roles in shaping the new contours of globalisation. Considerable hype and diverging perspectives surround this new geography of trade (Horner 2016), ranging from win-win optimism associated with South-South cooperation (e.g. OECD 2006; UNDP 2013) to more cautious accounts which question whether old forms of colonialism are being superseded by new patterns of neo-colonial power (e.g. Carmody 2011). In light of these developments, the central question that motivates this article is as follows: How might this new geography of trade challenge the overarching conceptualisation of global value chains (GVCs) and production networks (GPNs)?

In addressing this question, the article proceeds as follows. The next section revisits the GVC and GPN frameworks. We then use trade statistics to assess how the geographies of global trade are changing. We give particular emphasis to understanding the growth of South-South trade and its emerging dynamics. The subsequent section outlines the implications of this more polycentric trade geography for the understanding of value chains (VCs) and production networks (PNs). In particular, we explore a number of implications of the growth of South-South trade: first, recognition of multiple VCs and PNs oriented towards different end markets, including global, regional and

---

1 For statistical classifications, unless stated, we refer to the UN classification of developing countries.
domestic; second, governance and standards, and third, the consequences for upgrading by lead firms and their local suppliers. We conclude with a number of considerations for future research.

2. Global value chains and global production networks: Key concepts on globalised production

In the past two decades, the closely linked GVC and GPN analytical frameworks have come to dominate our understanding of how global production arrangements are structured and organised, and with what consequences. These heuristic frameworks, which have their roots in business studies, development studies, economic sociology and economic geography, not only help social scientists understand how trade liberalisation has shaped new linkages and relationships, but also show that this is a contested process marked by uneven power and asymmetric gains. They give greater attention to the role of non-state actors in developmental processes, and generate insights into the different spatial dimensions of global, national, regional and local economic development. Consequently, they have been hugely influential in academia and policy circles.

The GVC framework maps the linkages that transform raw materials into final products and services. It illustrates how value is created, and also differentially captured, at each distinct point of transaction along the chain. It further underlines the role of lead firms as the coordinating actors that structure, organise and effectively govern the chain. The power exercised by these lead firms over their diverse, and often geographically dispersed, suppliers is influenced by the capabilities of suppliers, the complexity of the supply chain transaction linkages, and the ability to codify such transactions (Gereffi et al. 2005). Originally making a distinction between two governance types – buyer and producer-driven lead firms (Gereffi 1994), our understanding of governance of global production linkages has since evolved to highlight five types of governance relationships between lead firms and their suppliers – hierarchical, captive, relational, modular and market (Gereffi et al. 2005). The nature of GVC governance determines the distribution of value along the chain. It also has implications for upgrading, and greater value capture, by actors along the chain (Humphrey and Schmitz 2002). In a world of trade marked by global outsourcing, with the presence of myriad and highly dispersed global suppliers, GVC lead firms are the power brokers.

The GPN approach is very similar to the GVC framework but with a couple of notable differences. It argues that non-chain actors (such as the state, labour unions, NGOs) have considerable prominence in determining how the system of global production is structured and organised by lead firms, and the implications that arise for differentiated gains (Coe et al. 2004; Coe and Yeung 2016; Dicken et al. 2001; Henderson et al. 2002). GPN research has also given considerable attention to the embeddedness of global production and placed particular interest in
the possibilities for local territorial development, especially where regional assets can complement the needs of global lead firms as a process of ‘strategic coupling’ (Coe et al. 2004; Yeung 2009, 2016).

While there are distinctions, and disciplinary antecedents, between the GVC and GPN approaches, for the purposes of this article, we view them as essentially reflecting a common perspective in understanding the dynamics of contemporary globalisation (cf. Bair 2008: 356; Neilson et al. 2014). Consequently, we refer to both terms interchangeably and purposively. Research on GVCs and GPNs has made major progress in moving beyond state-centric understandings of the global economy to provide a framework to understand the various actors involved in global trade, the control or governance of these activities and the possibilities for greater upgrading and territorial development. Indeed, only relatively recently major international economic policy organisations are now recognising the significance of value chains as forming the backbone of the global economy (e.g. African Development Bank 2014; Cattaneo et al. 2013; Elms and Low 2013; UNCTAD 2013).

A common, and arguably in our view a dominant, perspective amongst GVC and GPN scholars has been an implicit, and at times explicit (e.g. Gereffi 1994, 1996), focus on global trade involving North-South flows, stretching from initial stages of production in the global South to end markets in the global North (Horner 2016). For example, commenting on both GVC and GPN research, Neilson et al. (2014) state that: “a key feature of global economic reorganization presented in these conceptual models is the progressive outsourcing by lead firms in developed countries of their peripheral, and frequently low-value, productive functions to low-cost countries and regions, while maintaining control of core nodes of value creation and retention in their home countries” (2014, 1-2). With a few exceptions (e.g. Gereffi 2014; Kaplinsky and Farooki 2011; Kaplinsky et al. 2011; Staritz et al. 2011), this overlooks trade that takes place outside North-South linkages or that is coordinated by lead firms from the global South (Sinkovics et al. 2014; Horner 2016).

These issues are particularly prescient in light of the shifting geography of the world economy, including the uneven “Rise of the South” (UNDP 2013) and the growing prominence of the rising powers, in particular China, on the global economic stage (Kaplinsky and Messner 2008; Nadvi 2014; Winters and Yusuf 2007). There are signs that a “shifting geography of global value chains” has emerged, with the growth of Southern markets (World Economic Forum 2012). Moreover, South-South trade flows, along with domestic and regional aspects of value chains and production networks, are also garnering increasing attention in policy circles (e.g. OECD 2014; UNCTAD 2015). Producers in the global South may now face different options, and experience different
development outcomes, compared to those previously understood. Indeed, in this regard, an initial review of emerging evidence on South-South value chains and production networks suggested that a trade-off may be involved between lower standards and, hence, fewer barriers to entry, and more competition (Horner 2016).

Recent research on GVCs and GPNs has generated explicitly theoretical contributions on multi-polar GVC governance (Ponte and Sturgeon 2014) and a more causal-explanation informed GPN 2.0 (Coe and Yeung 2015). Here, we take an inductive approach based on the changing empirical realities of the global economy to revisit the role of the global South in global production and consumption, and its implications for the ways in which VCs and PNs are structured and organised.

We suggest that attention to the shifting geography of the global South’s role in polycentric trade calls for explicit attention to multiple VCs and PNs oriented towards different end markets, with implications for governance and upgrading. While GPNs have been proposed as an explicitly multi-scalar approach to understanding the global economy and how firms serve worldwide markets, we believe there is utility in distinguishing the scale, i.e. the “VC” and “PN” from the “G”, and direction. We recognise that different governance dynamics and upgrading prospects may be present across different end markets, including at scales of domestic and regional. To be clear, these scales have been acknowledged in theorisation of global production networks, yet warrant greater attention, particularly in light of shifting geographies of trade. But first, we illustrate the patterns of more polycentric trade that have emerged in the 21st century.

3. The growing prominence of the global South in global trade

A key aspect of the “Rise of the South” is the increasing share of global income generated by developing economies (see Figure 1 below). From approximately 15% of global GDP in the early 1970s, developing economies earned 21% of global GDP by 2000 and 31.9% by 2015. This was driven particularly by rapid economic development in East Asia, most notably China. Asia excluding China’s share rose from 5.5% in 1970 to 9.5% by 2000, with steadier growth more recently to 13.2% by 2015. China’s share of global GDP, still less than 1% until 1982, increased to 3.5% by 2000 and 9.5% in 2015. In contrast, Africa and Latin America have only achieved relatively modest gains in their share of overall world GDP since the 1970s.
To unpack patterns of polycentric trade, trends in trade data are explored in this section. We draw on two key types of trade data, with various strengths and limitations. Data from UNCTAD (UNCTADstat.com) provides estimates of gross trade. An advantage of this data is that all countries in the world are included, and that a relatively long record is available (for some measures as far back as 1948). However, such data has its limitations as it is based on trade between countries, rather than firms. In a context of global value chains with considerable trade in intermediate goods, double-counting can be involved as products cross borders a number of times during the course of their production and this value is then incorporated in final products. It has been estimated that 28% of world trade in 2010 involved double-counting (UNCTAD 2013). As a result, some new trade datasets have been created which focus on trade in value-added (Mattoo et al. 2013). In particular, here we draw on the OECD-WTO Trade in Value-Added (TiVA) database, which by the 2016 edition (which we use here) covers 63 economies (primarily OECD) from 1995-2011. While more attuned to a context of value-chain trade, the TiVA database is more limited in temporal and geographic coverage than UNCTAD data. We draw on both sources – traditional (i.e. UNCTAD) and TiVA, but also note that they share limitations in terms of being unable to distinguish between inter-firm or intra-firm trade, nor demonstrate the different governance relationships through which trade patterns are shaped. Although further scope exists for analysing the trade data in terms of its shifting geographies, our primary interest below is in pointing to an indicative trend of such shifting patterns.
Developing countries, in aggregate, have also achieved much greater prominence in global trade over the last two decades (see Figure 2 below). Their share of global trade (‘traditional’ data) has risen from 30.3% in 2000 and reaching 43.4% in 2015. Notably although the TiVA database does not provide as detailed a geographical breakdown, the combined total for named developing countries and rest of the world has increased significantly in both gross exports (31.1% in 2000, up to 41.2% by 2011) and gross imports (28.6% in 2000 to 40.1% by 2015)².

**Figure 2. Share of global trade, 1948-2015**

![Figure 2. Share of global trade, 1948-2015](image)

Source: Authors’ construction based on data from Unctadstat.com. Total trade is sum of merchandise exports and imports at current prices.

Developing Asia, and especially China, is central to this growing share of the global South in global trade. The share for developing Asia excluding China, 12.8% in 1950, declined somewhat during the 1950s and 1960s to a low of 7.7% in 1970, before increasing rapidly to 14.8% in 1980. Subsequently, it rose to 18.7% by 2000 and 22.6% by 2015. China’s share of global trade, which only

---

² The aggregation TiVA provides is for OCED/non-OECD. This is similar to developed/developing countries, with a few exceptions for countries named in the TiVA database. Bulgaria, Croatia, Cyprus, Lithuania, Malta, Romania are classified as non-OECD yet are listed as “developed economies” by UNCTAD, while Chile, South Korea, Mexico and Turkey are OECD members yet are classified as “developing economies” by UNCTAD. We have converted the named countries in the TiVA database to a developed/developing countries classification, and include the “rest of the world” category within “developing economies”.
passed 1% in 1981, 2% by 1992, and 3% in 1999, was 11.9% in 2015. Notably, if we turn to the TiVA database, the patterns are remarkably similar. China’s share of global export trade rose from 3.4% in 1999 to 10.2% by 2011; and for global imports from 2.9% in 1999 to 9.2% by 2011. Africa, however, suffered a steady decline from 7.1% of global trade in 1950 to a low of 2.1% in 1999, before rising somewhat to 2.9% in 2015 (Unctadstat.com). Developing Americas’ (i.e. the Caribbean, Central America and South America) share, 10.7% in 1950, declined to a low of 3.8% in 1990, then increased to 5.8% by 2000, and has since fluctuated to a share of 5.9% by 2015 (ibid.). The TiVA database, unfortunately, does not provide continental breakdowns on trade flows (given its lesser coverage of non-OECD economies), nevertheless, the broad conclusions are clear: the developing world as a whole has since the 1970s become considerably more prominent in global trade, although unevenly so, with Asia (particularly China) at the forefront.

South-South trade has also grown in relative importance as a share of world trade (Figure 3 below). It rose slowly from 11.4% in 1995 to 12.8% in 2000, then expanded dramatically to 25.3% by 2015. Comparatively the North-North share has decreased from just under one-half in 2000 to around one-third of global trade in 2012-2015. Interestingly, manufactured goods trade has consistently had a slightly higher South-South orientation than that for primary commodities excluding fuels (e.g. 27.7% versus 24.5% in 2015).

Figure 3. South-South and North-North shares of global trade, 1995-2015

Source: Authors’ analysis based on UNCTAD Handbook of Statistics 2016.

Most developing countries’ trade is increasingly, and since the mid-2000s by majority, oriented towards other developing countries (Figure 4 below). Indeed, over the two decades
between 1995 and 2015, the two shares have almost flipped from 60:40 to 40:60 for exports to Northern (developed and transition) vs. Southern economies.

Figure 4. Developing economies’ trade by partner, 1995-2015

South-South trade is dominated by intra-regional trade, especially within developing Asia – a region which has consistently comprised approximately 75% of such trade between developing countries over the 1995-2015 period (see Figure 5 below). The shares of intra-Africa and intra-Americas (developing) trade within South-South trade has actually fallen from 2.4% and 8% in 1995 to 1.7% and 3.9% respectively. Inter-regional South-South trade is more limited than intra-regional, trade although has increased from 14.1% of South-South trade in 1995 to 20.1% in 2015. South-South trade in primary commodities excluding fuels is relatively more inter-regional compared with trade in fuels or manufactured goods.

Figure 5. Composition of South-South trade, 1995-2015
Notably, all major developing regions (Africa, Americas and Asia) have significantly increased their exports going to, and imports coming from, other developing countries (see Table 1 below). Indeed, apart from a slight decline in intra-regional trade in the Americas, across all three major regions in the global South, more exports are going to all other developing country regions and more imports are coming from such regions. Conversely, the European, North American and Japanese trade shares have fallen across all 3 major developing country blocks. While trade with China has played a prominent role in such a trend, increases have also taken place across other developing country trading partners.
Table 1. Patterns of trade flows for major developing country regions, 1995 and 2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>72.81</td>
<td>48.19</td>
<td>63.84</td>
<td>41.29</td>
<td>51.97</td>
<td>36.36</td>
<td>56.52</td>
<td>35.22</td>
<td>70.22</td>
<td>61.12</td>
<td>71.11</td>
<td>51.99</td>
</tr>
<tr>
<td>North America</td>
<td>52.57</td>
<td>37.30</td>
<td>47.30</td>
<td>32.31</td>
<td>17.08</td>
<td>13.83</td>
<td>19.48</td>
<td>15.51</td>
<td>17.91</td>
<td>11.98</td>
<td>19.88</td>
<td>14.57</td>
</tr>
<tr>
<td>Japan</td>
<td>15.75</td>
<td>0.00</td>
<td>10.40</td>
<td>8.04</td>
<td>19.06</td>
<td>13.81</td>
<td>14.69</td>
<td>8.94</td>
<td>47.89</td>
<td>46.68</td>
<td>44.97</td>
<td>33.48</td>
</tr>
<tr>
<td>Other developed</td>
<td>3.45</td>
<td>2.97</td>
<td>4.78</td>
<td>1.83</td>
<td>13.93</td>
<td>6.34</td>
<td>19.74</td>
<td>7.51</td>
<td>3.98</td>
<td>1.92</td>
<td>5.59</td>
<td>3.33</td>
</tr>
<tr>
<td>Transition</td>
<td>1.05</td>
<td>0.79</td>
<td>1.36</td>
<td>0.92</td>
<td>1.90</td>
<td>2.38</td>
<td>2.57</td>
<td>3.25</td>
<td>0.44</td>
<td>0.54</td>
<td>0.66</td>
<td>0.60</td>
</tr>
<tr>
<td>Developed</td>
<td>52.57</td>
<td>37.30</td>
<td>47.30</td>
<td>32.31</td>
<td>17.08</td>
<td>13.83</td>
<td>19.48</td>
<td>15.51</td>
<td>17.91</td>
<td>11.98</td>
<td>19.88</td>
<td>14.57</td>
</tr>
<tr>
<td>Africa</td>
<td>12.41</td>
<td>17.68</td>
<td>11.44</td>
<td>13.58</td>
<td>1.95</td>
<td>3.84</td>
<td>1.34</td>
<td>2.84</td>
<td>1.31</td>
<td>1.71</td>
<td>1.03</td>
<td>1.36</td>
</tr>
<tr>
<td>Americas (dev.)</td>
<td>1.99</td>
<td>3.26</td>
<td>2.80</td>
<td>3.19</td>
<td>2.30</td>
<td>3.71</td>
<td>1.76</td>
<td>3.65</td>
<td>20.50</td>
<td>17.29</td>
<td>18.92</td>
<td>16.49</td>
</tr>
<tr>
<td>China</td>
<td>1.24</td>
<td>10.62</td>
<td>2.60</td>
<td>18.18</td>
<td>7.27</td>
<td>12.51</td>
<td>8.71</td>
<td>18.09</td>
<td>1.16</td>
<td>8.84</td>
<td>1.17</td>
<td>17.42</td>
</tr>
<tr>
<td>East, Southern and South-East Asia (excl. China)</td>
<td>7.56</td>
<td>9.32</td>
<td>10.37</td>
<td>7.45</td>
<td>31.58</td>
<td>34.72</td>
<td>24.40</td>
<td>28.63</td>
<td>4.95</td>
<td>7.87</td>
<td>5.91</td>
<td>10.23</td>
</tr>
<tr>
<td>Western Asia</td>
<td>2.44</td>
<td>5.63</td>
<td>4.81</td>
<td>8.64</td>
<td>3.37</td>
<td>6.50</td>
<td>4.52</td>
<td>8.52</td>
<td>0.83</td>
<td>1.69</td>
<td>0.85</td>
<td>0.90</td>
</tr>
<tr>
<td>Oceania</td>
<td>0.01</td>
<td>0.04</td>
<td>0.01</td>
<td>0.07</td>
<td>0.07</td>
<td>0.33</td>
<td>0.07</td>
<td>0.11</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Such a trend of a shift in trade towards economies in the South also appears in the TiVA database, where the origins of value added in different end markets can be identified. It also underlines the growing importance of large domestic markets within the global South. Domestic activity contributes the vast majority of value added in final markets in China (84.5% in 2011, down slightly from 89.1% in 1995), India (76.5% in 2011, vs. 88.7% in 1995), and Brazil (86.9% in 2011, vs. 90.8% in 1995). The foreign value added within the domestic market in the large emerging economies can also be distinguished by source economy. This shows a growing share of other Southern countries as the source of value-added in the domestic final demand in large emerging economies (e.g. increasing from 38.9% to 52.5% between 1995 and 2011 in China; from 45.1% to 60.2% in India; and, 31.8% to 47.2% in Brazil).

TiVA data also demonstrates that the value added generated in large, emerging economies, and embodied in final demand abroad, can increasingly be found within other economies within the global South rather than the global North (Figure 6 below). For example, the share of China’s value-added embodied in final demand abroad, has increased from 34.3% in other developing economies in 1995 to 41.2% by 2011. Similarly, for India, the share has increased from 36.1% to 48.1% and for Brazil from 42.9% to 57.0% over the same period. The Chinese market accounts for a major share of the increase in “developing country” destination for Indian (1.0% to 7.1%) and Brazilian (1.5% to 13.6%) value-added embodied in final demand abroad. While one can argue that the bulk of value-added from China and India continues to be directed towards the global North, the TiVA database clearly underlines (as does the traditional trade data) the growing importance of South-South trade not just in intermediate goods but in final demand.

Figure 6. China, India and Brazil - Share of value added in foreign final demand in developing countries
The evidence on the rapidly changing geography of global trade is clear. But what accounts for this? The expansion of South-South trade is widely attributed to be driven, at least in part, by the expansion of GVCs and GPNs (e.g. UNCTAD 2015: 29), especially as a consequence of the growth in trade of primary commodities and of intermediate goods. Production sharing and intermediate trade often occurs between developing countries (especially in East Asia) in earlier stages of value chains for final products that are ultimately destined for Northern end markets (UNCTAD 2015: 43) and may be controlled by Northern lead firms. Intra-regional South-South trade, especially of intermediate goods that eventually serve Northern end markets, is noted in the literature on GVCs and GPNs. Examples include apparel in East Asia (Gereffi 1999), the automobile industry in each of the Triad economies (Humphrey and Memedovic 2003), and electronics in Greater China and South-East Asia (Yeung 2007).

According to one study of production sharing across seven product categories (Athukorala and Nasir 2012), the overall share of South-South trade was found to be more prominent for intermediate trade in components compared to final assembly. Athukorala and Nasir find that parts and components trade is relatively more South-South oriented than trade of final assembly – with figures of 56.9% and 48.7%, respectively, for the sectors that they look at in 2009-2010. Moreover, Southern component exports have been found to be more geographically concentrated in developing Asia compared to final assembly exports (Athukorala and Nasir 2012). Thus, they suggest a “Northern bias” in final assembly exports compared to components (2012: 179) and argue that
“South-South trade is largely complementary to, rather than competing with, South-North trade” (2012: 173).

Importantly, however, there is evidence to suggest that the relative weight of the global South as a final market is growing. In the aforementioned research (Athukorala and Nasir 2012), the dependence on Northern markets for final assembly exports fell from 63.1% in 1996 to just over 50% of final assembly exports across selected sectors (Athukorala and Nasir 2012). For China, for example, exports of finished products to the North as a share of total output declined from over 70% in the mid-1990s to 56% by 2009-10 (ibid.). Meanwhile, developing countries’ imports of final assembled goods in these product categories increased from 18.6% in 1996-97 to 25.5% in 2009-10 (ibid.: 178). In other research on textiles, chemicals and machinery, China has been found to have superseded Japan as the major demand centre in Asia (Suder et al. 2015: 411). In terms of global final imports, UN ESCAP notes that the Asia-Pacific region increased its share from 19% in 2007 to 26% in 2013 (UNESCAP 2015: 8). One estimate for China even suggests that over 85% of its manufacturing goods production is sold domestically (Brandt and Thun 2016: 80). Domestic market consumption has also become a greater focus of Chinese policymakers, and a key part of the 12th Five-year Plan (2011–2015). Thus, while Fung has noted, “not so long ago it was common to assume that production took place in the East for consumption in the West” (in Elms and Low 2013: xx), this pattern appears to be changing.

These trends indicate that significant amounts of final demand increasingly lie outside the global North. Figure 7 below uses the traditional trade database (UNCTADstat) to demonstrate changing patterns of global import demand. While import demand in low and middle-income countries fell from the mid-1950s to the mid-1970s (the so-called era of modernisation), it has been systematically growing since the mid-1990s (the era of globalisation). Particularly noticeable is the increasing demand from within Asia, especially China. Again, the TiVA database further bears this out by distinguishing between demand for intermediate and final goods (see Figure 8). These trends underline the argument that there is a growing demand, and a rising middle class, in the global South. There is much debate on the size and characteristics of the emergent middle class in the global South, and the implications that arise for rising demand for consumer durables, foods and even luxury goods (Guarin and Knorringa 2014). The evidence from trade flows clearly bears out that there is a shift taking place not only in the geographies of global production but also in the geographies of global consumption. China substantially accentuates this trend, but even without China this shift is apparent.
Nevertheless, even when end markets shift to the global South, Northern control and governance is still possible, including for “South-South” trade. For example, products imported into the global South from Mainland China can be governed through value chain linkages that are driven by firms in OECD countries and their suppliers/partners (Gereffi 2015: 17). In fact, as Gereffi (2014)
has argued, one consequence of the 2008 global economic crisis was a shift by northern lead firms to redirect some of their GVCs/GPNs towards relatively more rapidly growing Southern markets, particularly domestic markets within large emerging economies and regional trade (Gereffi 2014: 11).

Our analysis suggests that the rise of South-South trade is more than simply a reflection of what might be termed a value chain effect, either governed by northern lead firms or feeding into northern end markets. Case evidence of lead firms from the global South who organise Southern suppliers to feed end markets within the global South is clearly emerging. In retail, for example, South African supermarkets have expanded their retail operations across parts of sub-Saharan Africa (Barrientos et al. 2016). Similarly, South African retailers have begun to source clothing from Lesotho and Swaziland — in order to meet shorter production runs and provide higher fashion content (Godfrey 2015; Morris et al. 2011). End markets outside the global North and the importance of regional production geared to regional Southern markets are also being recognised by the policy community, especially for smaller economies. The IADB, for example, argues that thanks to improved regional logistics and regional trade agreements, Latin American “countries away from major GVC regions can seek to develop their own regional value chains” (2012: 14). The OECD (2014: 5) also “stresses the potential of regional value chains” as well as emerging markets outside Africa for African producers. These developments, and the overarching macro trends in trade flows that we highlight and term as more polycentric trade, demand further consideration of how value chains and production networks might be evolving and warrant revisiting their conceptualisation.

4. Reconceptualising value chains and production networks for polycentric trade?

As shown in the previous section, the directions of global trade flows are changing. South–South trade is rising as part of a pattern of increasingly polycentric trade. In part, this reflects value chain linkages and the growth of intermediate goods trade ultimately serving Northern end markets. However, the scale of South-South trade goes well beyond such intermediate goods trade. The rise of Southern middle-class consumption and the growth of large domestic markets, especially in the “Rising Power” economies of China, India and Brazil amongst others, points to the possibility of value chains being geared to Southern as well as Northern end markets.

What do these shifts in trade flows imply for the ways in which we conceptualise global value chains and global production networks? Traditionally GVC and GPN studies have focused on final demand in the global North. We consider three ways in which we may need to revisit how we understand VCs and PNs. Our first step is to recognise multiple VCs/PNs with distinct characteristics
oriented towards different end markets. The rise of Southern markets has consequences for how we define value chains and production networks as ‘global’, ‘regional’ and ‘local’, and which are not all part of a singular global form. Second, how are Southern-focused value chains and production networks governed? This requires attention to both lead firms and standards, as to how they might be altered by the growth of Southern actors and Southern end-markets. Third, how does upgrading in the global South take place in a context of polycentric trade? Collectively these questions seek to investigate whether and, if so, how the role of the global South in global trade might differ from the traditional view of participation in Northern-led, GVCs and GPNs, and what consequences might emerge from this for different actors and for specific processes related to governance and upgrading.

Our argument is that the variety of trade linkages of which the global South is involved in, do not solely fit within the North-South geography underlying much of the key conceptualisations of GVCs and GPNs. The emphasis in much of the previous research on linkages between northern lead firms and southern suppliers is understandable given the majority of trade flows used to fit such a pattern. Yet, the changing pattern of trade, especially since the start of the 21st Century, demands a refinement of the conceptualisation of GVCs/GPNs.

4.1 Recognising multiple value chains and production networks: Domestic, regional and global

End markets within the global South have been consistently under-explored in research on GVCs, GPNs and their development implications. Instead there is an almost singular focus on producers in the global South who - directly or indirectly - serve global lead firms (and Northern end markets). Our discussion above posits that there is a major transition taking place towards polycentric trade. Policymakers’ and producers’ market choices can no longer simply be understood along a binary of either domestic supply or export-orientation into Northern governed supply chains leading to Northern end markets. Instead, producers supply a variety of end markets at various scales which can have quite distinct characteristics. While articulations of the GPN framework, in particular, have valuably recognised multi-scalarity as part of the ‘global’, increasing emphasis by policymakers, as well as producers is going beyond the ‘global’, with particular emphasis on the (supra-national) regional and also domestic markets. With more polycentric trade, producers may face, and simultaneously be involved in, a variety of different VCs and PNs oriented towards various end markets and with distinct requirements.

Domestic and regional end markets, including within the global South (as well as the global North), are of importance for many producers. “Internal value chains”, where there can be less
reliance on foreign inputs, have recently been noted to be of significance for large economies (UNCTAD 2013: 130). For example, the case of Indian retail (e.g. Franz 2010) is one in which there are arguably key networks of domestic actors involved in supply, and where domestic lead firms are increasingly prominent in formal supermarket expansion. Moreover, regional chains and networks, especially, have received growing attention. For example, IADB’s recent analysis of trade data suggests that “the majority of international production networks are regionally oriented” (IADB 2012: 4). Similarly, Park et al. (2013: 31) suggest that “most global supply chains, including already significant “North-North” ones, are largely regional”. Both UNCTAD’s 2013 World Investment Report and a World Bank Report (Cattaneo et al. 2013) have also pointed to the importance of regional linkages. While, as noted in the previous section, Southern producers’ involvement in regional linkages within VCs serving Northern end markets have long been noted, “regional markets are often underappreciated because of the importance given to developed country markets in the 1990s and early 2000s” (Gereffi 2015: 6).

Different perspectives emerge between “narrow” and “broad” definitions over what constitutes, and indeed whether there are “pure”, regional or domestic VCs/PNs. A “narrow” definition of what constitutes a VC– largely focused around sales, assets and, sometimes, physical inputs - sees much more domestic and regional VCs. Rugman and Verbeke (2004) have suggested that most multinational enterprises only have regional dominance – with the vast majority of sales (approx. 80% for many) drawn from their home region of the triad (of NAFTA, the EU and Asia). A later updated analysis (Rugman et al. 2009) also considered the location of multinationals’ assets, which were also found to be mostly regional. In contrast, with a wide definition of the boundaries of a VC or PN, based on an emphasis on governance or control and as has mostly been adopted in much of the GVC and GPN literature, it is unclear to what extent pure “domestic” or even “regional” value chains may exist. Thus, in relation to the boundaries of value chains, UNIDO notes that “a value chain may, for example, be limited to the domestic market. However, cross-border trade usually takes place and nearly all value chains are therefore global in character, alone given that some of their inputs are sourced from abroad” (2015: 19). Indeed, while analysis of trade data point to domestic and regional trade patterns, they can overlook global outsourcing relationships (Gereffi 2005: 168). Some arguments, such as that of Rugman and Verbeke (2004; also Rugman et al. 2009) on the regional dominance of MNCs, disregard upstream activities such as knowledge creation, and only consider internalised activities, overlooking value creation through outsourcing (Mudambi and Puck 2016).
The patterns demonstrated by the trade data, however, do suggest that producers are clearly serving different end markets, and that a need exists to unpack different chains and networks – along with the distinct requirements of different end markets - that might previously have been categorised together as “global”. UNIDO’s 2016 Industrial Development Report in its glossary defines a global value chain as “the full range of activities that firms and workers do to bring a product from its conception to its end use and beyond. This includes activities such as design, production, marketing, distribution and support to the final consumer” (2016: xix). Yet it does not indicate what makes that chain “global”. Other definitions still prioritise an emphasis on worldwide markets. In a recent definition of GPN, Yeung and Coe “define a global production network as an organizational arrangement comprising interconnected economic and noneconomic actors coordinated by a global lead firm and producing goods or services across multiple geographic locations for worldwide markets” (Yeung and Coe 2015: 32). However, in one of the early iterations of the GPN framework, Henderson et al. clearly stated that “all GPNs have to be regarded as multiscalar, ranging from the local and regional to the national and global and back again” (2002: 447). In their recent primer for GVC analysis, Gereffi and Fernandez-Stark state that “in the context of globalization, the activities that constitute a value chain have generally been carried out in inter-firm networks on a global scale” (2016: 7), yet they also suggest that GVCs can operate at local, national, regional and global scales.

Taking account of the variety of different production networks and value chains, oriented towards different end markets and their associated requirements, raises a number of issues for the VC and PN literature. It is unclear how the boundaries between different scalar levels are defined. What distinguishes a regional value chain from a global value chain? Or a domestic value chain where local firms are openly competing with global actors? A potential source of further confusion is that the supra-national reference of “regional” when deployed in the term “regional value chain” differs here from the sub-national sense deployed in the GPN literature in terms of the prospects for regional (or local) development (e.g. Coe et al. 2004). Clearly boundaries are not precise. If nearly all markets are increasingly globalised (i.e., open to global competition) then all value chains are ‘global’. However, markets across the world are not uniform in their characteristics and there can be significant distinctions and advantages to be had when operating in a firm’s domestic market, or in the markets of regional neighbours. Territorial embeddedness, social networks and links to local institutional support have been noted as enhancing competitiveness (Hess 2004).

Thus, we need to first define domestic, and then regional, value chains. For our purposes, national or domestic value chains are ones that are organised and led by local lead firms, source from national suppliers and feed demand in domestic end markets. In terms of RVCs, Barrientos et
al. have recently provided a definition relating to buyer-driven chains as “where the lead buyers are primarily companies operating within one world region, such as Africa” (2016: 1280). Building on this to emphasise both lead firms and end markets, we suggest regional value chains are ones where lead firms are supplying markets in neighbouring and regional economies as well as sourcing from, and sub-contracting to, regional suppliers. Regions can be geographical areas that are already well known as ‘regional’ markets either because they function under common regulatory regimes (the European Union for example), have preferential trading rules for their regional members (the south-east Asian market under ASEAN for example), or have a notional regional identity (Latin America for instance). This distinction across scales closely relates with Sturgeon’s (2001) articulation. Notably given the classification of different countries into global North and South following the UN, RVCs or RPNs may be North-North (e.g. within the EU), South-South (e.g. within Africa), or even North-South (e.g. US-Mexico, or Japan and another East Asian country).

In contrast, global value chains are ones where lead firms source from and supply to international markets that cross substantial geographical boundaries. In terms of the meaning of global, Sturgeon (2001: 14) suggests that a value chain or production network does not need to be in every country, or continent to be global, but that “global scale” can refer to world-scale reach, and that activities be integrated across two continents at least. Similarly, Barrientos et al. (2016: 1280) emphasise GVCs as operating “across world regions”. Notably, however, such trade could also be North-North, North-South or South-South. Thus, producers may simultaneously be involved in distinct global chains/networks, with quite distinct characteristics, that cross two world regions (e.g. Horner and Murphy 2017).

Collectively, these shifting geographies of trade demand much greater consideration of the existence of multiple, and often overlapping value chains and production networks, which include those targeted towards end markets in the global South. A different geography of trade, and power dynamic, now exists from the basis upon which earlier conceptualisations of GVCs and GPNs were developed. Starting with Northern lead firms and then exploring upgrading dynamics for their suppliers may miss out on key aspects of governance that are crucial within a domestic market or region. To be clear, the relevance of value chains serving markets outside the global North have been identified before (e.g. McCarthy et al. 2012; Murphy 2012; Navas-Aleman 2011), yet their significance and prominence has increased.

As the discussion highlights, producers may experience varying degrees of segmentation between these different end markets. The nature of consumer demand may vary, with Kaplinsky and Farooki (2010) suggesting greater demand for cheap, undifferentiated commodities within Southern
end markets, in contrast to higher quality and more customised demand in Northern markets. More recently, Guarín and Knorringa (2014) have pointed to a more diverse picture, suggesting some homogenization and differentiation in consumer culture within the global South. In particular, they highlight growing differentiation in demand within the South particularly among relatively higher income groups. Moreover, as the following discussion on the implications of this shifting geography elaborates, the nature of private governance and both public and private standards may play key roles in the geographic segmentation of value chains.

4.2 Reconsidering governance of value chains/production networks within polycentric trade

The shifting geography of trade prompts revisiting some of the most seminal GVC/GPN research on governance. The initial distinction between buyer and producer-driven chains (Gereffi 1994) played a major role in understanding the new forms of control, particularly between lead firms and their immediate suppliers. Subsequently, Gereffi et al.’s (2005) five-fold typology of governance types helped refine this work in attune with the more complex variety of outsourcing relationships that had emerged. Yet, it was also a conceptualisation largely focused on lead firms and the transaction costs associated with their linkages with their first-tier suppliers. There was little consideration, however, of governance at lower tiers, an issue of particular concern when it comes to governance of labour and environmental standards (Mezzadri 2014; Nadvi and Raj-Reichert 2015).

Ponte and Sturgeon have helped address the issue of generalisation across a whole value chain, by indicating different “scales” within a chain – a micro level of individual nodes or linkages, a meso level of how these linkages move up and down, and a macro-focus on overall governance (unipolar, bipolar, multipolar). This recognises that governance is multi-polar (Ponte and Sturgeon 2014), highlighting the possibility of different forms of governance at different nodes within a chain. Building on previous work on bipolarity (Fold 2002), they suggest a spectrum from unipolar to multipolar (explicitly shaped by various powerful actors) to characterise a whole chain. In a recent example, Tessmann (2017), focusing on the trade in cashew nuts, highlights the contrast between the lower, trader-driven South-South tier of undifferentiated raw material trade between Indian processors and Ivory Coast exporters and the buyer-driven linkage involving quality products between India and the Northern end market. Multi-polar governance is helpful in pointing to different forms of governance between different nodes in a chain, and towards increased complexity and variation.

Yet multipolar chains are different from chains or networks in a context of polycentric trade. Ponte and Sturgeon acknowledge their approach has an inclusivist bias on actors already
participating in GVCs. It also gives very little attention to scale. For Ponte and Sturgeon, the activities of GVCs are just referred to as “spatially extensive” (2014: 200). Questions of the relationship between different chains are largely overlooked in terms of what this means for governance or the different geography of these chains. Indeed, while the GVC literature has tended to suggest that specific industries may be characterised by particular forms of governance, when the geography of end markets varies, differences in governance may well emerge. Based on the recognition of multiple VCs and identification of interlinkages between domestic, regional and global VCs and PNs, overlapping forms of governance exist within industries. The conceptualisation of multi-polar governance could be extended to include overlapping procurement strategies and standards requirements by global and regional buyers which exists across (rather than just within) chains where they intersect (Barrientos et al. 2016; Krishnan 2017).

New “players” can play different roles in the same “game” of global production networks, including a new role for “Southern firms” in trading relationships with the North. Asian first tier suppliers are taking on a wider range of functional roles in apparel value chains, including chain coordination functions (Azmeh and Nadvi 2013, 2014).

The “game” itself may alter as well. Firms may occupy different positions in different chains. Firms may simultaneously be a supplier in one value chain (global) and a lead firm in another (domestic or regional). In the case of the major electronics firm Foxconn, for example, it has been suggested that “the recoupling process led by Foxconn has fundamentally changed the asymmetric power structure orchestrated by lead firms (e.g. Apple) and key suppliers (e.g. Foxconn) in the GPNs. The key supplier-driven relocation/recoupling to inland China has resulted in the emergence of “domestic market-oriented production networks” (Yang 2013: 1058). Strategic contractors have thus played key roles in fostering domestic market-oriented production networks. Rather than a singular chain focus where a firm is either “lead” or a “supplier”, when considering multiple chains it is possible that the same firm may simultaneously play a different role in trade serving different end markets. Indian pharmaceutical firms are another example, occupying different roles, and with different associated practices, as they participate in Northern as compared to Southern end markets (Horner and Murphy 2017).

New firms come into consideration as lead firms in particular domestic and regional contexts. Regionally owned supermarkets’ sourcing strategies have played a key role in expanding regional value chains in South and East Africa (Barrientos et al. 2016). While some firms involved in coordinating regional supply may solely be “regional” lead firms, others may be global lead firms from outside the region who enter to establish regional procurement networks and supply the
regional market. For example, Wal-Mart coordinates sourcing, logistics and distribution in sub-Saharan Africa, while firms such as South Africa’s MTN and India’s Bharti Airtel are also cited as examples of firms operating regionally (Lee and Gereffi 2015: 329).

As well as the context of multiple production networks being different, actors from the global South may also operate as lead firms in different ways. Do these firms use different types of governance relationships? For example, it is unclear if they outsource to the same extent as northern lead firms. Some initial evidence appears to suggest that lead firms from emerging economies can often have greater vertical integration than their northern counterparts. In a study of Indian and Chinese lead firms in the textiles and garments sector, it appears that many firms are backward and forward integrated enterprises, including textiles production, garment manufacturing, as well as brand and retailing, especially within domestic end markets (Nadvi 2017). Chinese lead firms are also much more likely to be state-owned compared to their Northern counterparts in some sectors, especially in minerals, mining and commodities, and thus their strategies are more likely to be influenced by, and tied up, with national geopolitical objectives than Northern lead firms in the same sector (Henderson and Nadvi 2011).

It is also unclear the extent to which some of the trade Southern participants are involved in are what has been thought of as “governed value chains” (Kaplinsky 2000) or are more closely aligned with arm’s length trade. Hanlin and Kaplinsky (2016) argue that much of South-South capital goods trade is largely based on arm’s length transactions. Informal, petty commodity transactions are a significant but under-studied element of South-South, and indeed world, trade. In a recent analysis through the case of the China-Ghana jewellery trade, Haugen (2017) suggests that rather than being a chain controlled by a single lead firm or pure market linkages, personal relationships and connections between different nodes are key as the inter-node governance form varies.

4.2.1 Market requirements - Standards rising in the global South?
Different end markets can imply distinct expectations on producers, as distinct rules, regulations and standards requirements may be present. Standards requirements play key roles in segmenting VCs and PNs, with a proliferation of different standards creating different requirements in different end markets (Nadvi 2008). In one of the early pieces of research on end markets in the global South, the claim raised was that - given less pressure from consumers, governments and civil society - standards requirements, and hence entry barriers, were much lower in Southern end markets (Kaplinsky and Farooki 2011; Kaplinsky et al. 2011). Subsequent research on palm oil in Indonesia found that while global branded firms are driving regulation and global standards, many
local firms are integrated into networks supplying India and China where there is less pressure for civic regulation (McCarthy et al. 2012: 565).

More recent work, however, has shown that perceptions of a standards vacuum in the global South are misplaced (Nadvi 2014; Pickles et al. 2016; Schouten and Bitzer 2015). Such research has suggested that standards are present, including standards developed from within the global South. This is not to suggest that such standards are necessarily comparable to those in the global North. Nevertheless, in the rising power economies, such as Brazil, China and India, both public and private actors are increasingly engaging with responsible consumption, environmental standards and international social and labour standards (Nadvi 2014). Pena (2014) has demonstrated the role of corporate and civil society actors in Brazil in working with state bodies in promoting public-private governance of social and environmental standards within value chain linkages.

Debate has increasingly shifted to the mechanisms shaping, nature and implementation of, these standards, rather than if they are there or not (Nadvi 2014; Pickles et al. 2016; Schouten and Bitzer 2015). Southern standards have been suggested to be targeting internal audiences and getting producer buy-in, rather than prioritising external audiences. Moreover, they have been found to be justified on the basis of an implementation gap rather than a governance void and have been suggested to seek to create cognitive and moral distance from Northern standards (Schouten and Bitzer 2015: 181). A variety of different mechanisms in driving Southern standards may be at work – including global retailers, initiatives such as Fairtrade, and compliance with national legislation. Such standards may vary from, but not always be completely distinct from those in the global North, with spillover of practices from global lead firms into regional markets driving some convergence of standards (Barrientos et al. 2016; Krishnan 2017; Pickles et al. 2016). Nevertheless, in terms of level and implementation, in East African retail, regional standards have been suggested to be less stringent and more variable than global standards (Barrientos et al. 2016).

Fair and ethical trade practices, albeit nascent, are also emerging within markets in the global South. Previously distinctions could be drawn, such as in the example of south India, between marginalised (often smallholder) producers involved in local and domestic networks of tea and coffee production, distinct from large (often plantation) producers serving Northern markets where fair and ethical trade schemes have greater presence (Neilson and Pritchard 2010). Fair Trade geared to markets in the global South may have, for example, very different imagined geographies – distant from those associated with poverty and geographical othering and instead focusing on greater inclusivity (Doherty et al. 2015). South Africa’s “Fair Trade in Tourism” standard is an example of one which involves Southern actors playing key roles, yet its process of formation is related to rather
than independent from Northern standards (Strambach and Surmeier 2017). Moreover, aspects of ethical consumption are now more global than before, challenging assumptions that it is solely the preserve of Northern consumers or economies.

Standards vary across different markets and play a role in segmenting trade, although clearly this is a dynamic, evolving issue. For Pickles et al. (2016), aspects of both convergence and divergence of Northern and Southern standards are present, re-affirming the relevance of thinking of multi-polar governance. The governance of different VCs and PNs oriented towards different end markets may not be interdependent, with overlap and interrelationship between the lead firms and actors shaping standards in different chains. It is also dynamic, challenging any attempts at broad generalisations about how regional or South-South trade is governed or the type of standards. Nevertheless, Southern firms must be attentive to different standards requirements across the different markets they serve.

4.3 Reconsidering upgrading within polycentric trade

The understanding of upgrading strategies must also be revisited in light of multiple different VCs and PNs. Collectively the debates on upgrading initially emphasised integration (Gereffi 1999) and strategic coupling (Coe et al. 2004) within global lead firms’ GVCs and GPNs. Moreover, such approaches emphasised a variety of types of economic upgrading – process, product, functional and inter-sectoral in the GVC literature, and related processes of value creation, enhancement and capture in the GPN literature. The negative consequences of leaving such chains have also been accounted for through recognition of disarticulation (Bair and Werner 2011) and forms of decoupling from GPNs (Horner 2014; MacKinnon 2012) as awareness of the variety of trajectories has expanded. Possible beneficial outcomes from exiting chains have also been emphasised through “strategic downgrading” to focus on more accessible domestic markets (Ponte and Ewert 2009) and “strategic decoupling” (Horner 2014). Moreover, research has also expanded beyond economic (originally industrial) to explore social (Barrientos et al. 2011) and environmental forms of upgrading (Di Marchi et al. 2013).

In light of more polycentric trade, upgrading must be considered within the dynamics of multiple, overlapping VCs and PNs coordinated by different firms and ending in different end markets (cf. Murphy 2012; Navas-Aleman 2011). Indeed, given often-found difficulties in accessing Northern markets, it has been suggested that policymakers in the global South should consider opportunities elsewhere, including supporting supply to southern markets, as well as domestic and regional markets (Fold and Larsen 2011, 62; Humphrey 2006). While Southern end markets have
been associated with lower prices and thus possibilities of immiserising competition (e.g. Kaplinsky and Farooki 2011), increasing differentiation and growing purchasing power is now present there. In such a context, the debate evolves from entry into global value chains or not, to consideration of a variety of different end markets, their governance and the possibilities for supply. Indeed, rather than seeing the export market as composed of a single or even dominant GVC structure, producers increasingly weigh up a variety of different export market opportunities. Thus, relevant questions include which chain and whether there are possibilities to switch chain and/or supply multiple end markets simultaneously. Moreover, domestic, regional and Southern end markets warrant greater attention within development strategy.

The opportunities and challenges of juggling participation in multiple VCs and PNs thus come to attention. Strategic diversification, recently described as relating to “producers who supply multiple global and regional lead firms applying diverse governance regimes” (Barrientos et al. 2016: 1267), may become a key strategy. Barrientos et al. (2016) and Krishnan (2017) have reported that a number of East African producers who had been concentrating solely on supplying European markets, increasingly supply African markets. While that regional supply had initially been produce which was rejected from global chains, it evolved into a targeted supply for regional end markets. Notably this diversification is distinguishable from earlier articulations of inter-sectoral upgrading, which involved wider shifts to a new or different sector.

Thus, upgrading relates to differential entry barriers and upgrading opportunities across different VCs/PNs. This is a question relatively few studies have explored. Amongst those that have, differential upgrading opportunities have been found across different chains. Domestic and regional value chains have been found to have greater potential than quasi-hierarchical global chains for functional upgrading into design, marketing and branding in the case of the Brazilian footwear and furniture sectors (Navas-Aleman 2011), and amongst Indonesian electronics and garment firms (Kadarusman and Nadvi 2013). In contrast, Barrientos et al. (2016) find that in Kenyan horticulture economic upgrading was greater among producers supplying global value chains, and present but more limited in regional value chains.

Weighing up the potential of different VCs/PNs requires attention to the requirements to participate in different end markets, related to their degree of segmentation in accordance with differences in consumer demand, private and public governance. In an illustrative example of Mauritius clothing exports, Gibbon (2008) found that most enterprises produced for either the EU or US market, but not both due to perceived differences in requirements between each. Pharmaceuticals is a sector which is highly-segmented between different end markets (especially
between global North and South), with production and quality control requirements key, but also a range of distinct market access and innovation practices. A considerable leap is sometimes required for firms specialising in domestic or South-South production to enter into Northern markets given the requirements to access those markets (Horner and Murphy 2017). Industries may vary in terms of the extent of this end market segmentation. While vehicles can be supplied to different end markets from the same plant although tailored to the requirements at final assembly (Humphrey and Memedovic 2003), pharmaceuticals may be produced in different plants altogether according to the end market (Horner and Murphy 2017).

Different actors may also be differentially switched to participate in multiple VCs/PNs or to “chain switch”. Kaplinsky and Morris refer to the importance for African exporters of developing capabilities to supply different end markets (2014: 30). Not all actors may be equally disposed to chain switching or serving in multiple end markets, particularly if some have high entry barriers. In the African horticulture example, strategic diversification was found to be a route more open to export-oriented producers with capabilities to meet all standards, while regionally-oriented producers were more constrained (Barrientos et al. 2016: 1274). In the apparel industry, some Latin American suppliers are particularly focused on the US market, influenced by regional trade agreements, yet are hindered in their development of wider capabilities in design and branding which they may require to succeed in other markets (Navas-Aleman 2011). Suppliers from China, India and Turkey, however, have been noted to be more diversified with a variety of different end markets including domestic and regional (Frederick and Gereffi 2011). In the case of Madagascan apparel, ownership has been suggested to be key for chain switching, with European/French-diaspora and Mauritian owned firms better able to adapt to diminished US market access by expanding in European and South African markets, while Asian-owned firms exited (Morris et al. 2014). Moreover, in the South Korean animation industry, considerable segmentation of suppliers between the Japanese and American end markets has been identified, relating not just to differences in style demanded, but also forms of competition in the chains (closed vs. open respectively) and capital investment required (low vs. high respectively) (Lee 2017). With end-market segmentation, “lock-in” to a particular market is a possibility.

Participating in both GVCs/GPNs as well as domestic VCs/PNs has been highlighted as a particular challenge in some cases. In the Brazilian furniture and apparel example, intensive exporters were found to struggle in the domestic market – lacking some of the wider capabilities that other firms possessed (Navas-Aleman 2011: 1394). In the case of Hong Kong firms in the Pearl River Delta, it has been suggested that they may be “over-embedded” in export-orientation, for
which there is considerable policy support (such as export tax rebates), while domestic sales have been less favourable – thus hampering a “recoupling” with the domestic market (Yang 2014). Nevertheless, Butollo (2015) has suggested the “over-embeddedness” argument may have been inflated, with the growth of China’s clothing industry having involved exporters increasingly targeting domestic supply, facilitating expansion of higher value-added products. Firms in the Humen cluster that could form close ties to the domestic market wholesalers have been able to diversify, in contrast to the exclusively export-oriented Dalang cluster (Butollo 2015: 532). In a different sector, Chinese firms such as Lenovo and Ziguang were able to turn to OBM by supplying the domestic market – and learn relevant technology and marketing expertise – while also then accessing knowledge from supplying the global market (Zhou 2008: 2365). Thus, participating in, and creating, domestically-oriented VC or PN has been suggested to be a key avenue for upgrading (Ten Brink and Butollo 2017) – a different emphasis from the earlier GVC literature.

More broadly, upgrading considerations in the global South must continue to consider not just social and environmental dimensions, but must increasingly consider markets beyond the global North as part of a wider approach which explores VCs and PNs oriented towards different end markets. Issues including strategic diversification, the extent of segmentation of different end markets, the capabilities of suppliers to switch between or juggle multiple chains all increasingly warrant analysis. Moreover, simple generalisations regarding differential prospects from domestic, regional or global value chains and production networks may prove difficult, instead requiring a nuanced understanding of the factors shaping participation in each and their associated outcomes. Table 2 below seeks to briefly illustrate the progression in understanding of VCs, PNs and the global South. It highlights the move from considering economic upgrading within Northern lead firm governed chains to a context of polycentric trade with upgrading of various types to be analysed amongst multiple different VCs/PNs. Figure 9 then provides an illustrative diagram of this shift.

| Table 2. Value chains and development: North-South vs. polycentric trade |
|-------------------------------------------------------------|-------------------------|
| **Chains/networks**                             | **Late 20th century global trade** | **21st century polycentric trade** |
| **Governance**                                    | **Key Actors** | Northern lead firms | Global, regional, domestic lead firms |
| **Standards**                                     | Northern standards | Global, regional, domestic standards |
| **Typology**                                     | Buyer-producer; Market-modular-relational-captive-hierarchy | Buyer-producer; Market-modular-relational-captive-hierarchy |
## Development

<table>
<thead>
<tr>
<th>Polarity</th>
<th>Unipolar</th>
<th>Multipolar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrading focus</td>
<td>Economic (product, process, functional, inter-sectoral) within a singular chain</td>
<td>Economic, social and environmental across multiple chains</td>
</tr>
</tbody>
</table>

### Figure 9. North-South vs. Polycentric trade

Source: Authors’ construction. This figure seeks to illustrate the primary trajectories of governance and flow of products.

### 5. Conclusion: Rethinking value chains and production networks under 21\textsuperscript{st} century globalisation?

This article’s core question is how might the new 21\textsuperscript{st} century geography of more polycentric trade challenge the conceptualization of GVCs and GPNs? The contemporary global economy has evolved considerably from the time when the original conceptual frameworks on global value chains and production networks were established approaching the turn of the Millennium. Considerable activity has grown on the margins of a Northern lead-firm centric definition, including various new lead firms from, and supply oriented towards new end markets in, the global South. It is increasingly difficult to see VCs or PNs solely or even by majority as involving firms from developed countries offshoring to a set of developing countries. Having explored this new geography of trade, our analysis suggests that rather than emphasizing North-South oriented value chains/production networks, contemporary trade involves overlapping, multiple production networks oriented towards different end markets – domestic, regional and global – across both global North and South. “Value chains” and “production networks” do not necessarily automatically go together with “global”. Building on recent related work, we suggest that questions of governance and upgrading in the context of multiple VCs and PNs are distinct in this context too, yet all require further research.
First, the dynamics and scalar dimension of multiple VCs and PNs require further attention. Some contemporary factors suggest that increasingly the “G” may not as easily sit with “VC” or “PN”, requiring attention in particular to the “R” and “D” – in this case regional and domestic – aspects. Globalised trading arrangements and deep multilateral trade agreements have been increasingly questioned, as highlighted by the recent example of the United States withdrawal from the Trans-Pacific Partnership negotiations and the current Brexit implications for the UK and the EU. Instead there is increasing emphasis on bilateral and trade agreements. A growth of neo-nationalism in trade, manifested by growing protectionism and debates around the “repatriation of international supply chains” could substantially alter the organisation of VCs/PNs. Meanwhile, technological shifts linked to robotics and 3D printing (e.g. Rehnberg and Ponte 2017) could, for example, lead to new forms of production organisation and logistics. Such factors could drive some “re-shoring” by lead firms to their own economies, albeit of different kinds of production and work than had previously been the case. While it is unclear yet whether such factors will be a temporary pushback against the global organisation of production or a longer-term retreat, the operation of, and interaction between, multiple VCs/PNs at different scales – in global North as well as global South - require further empirical and conceptual study.

Second, in terms of governance dynamics, considerable opportunities remain in terms of unpacking further the role of both new lead firms as well as new standards requirements. We are still in relatively nascent stages in terms of understanding how lead firms from the global South organise their value chains and the extent to which they outsource along with the factors shaping their chain linkages. Moreover, while clearly standards are present in Southern markets, less is known about their drivers, and how they relate to and differ from pre-existing Northern standards. Competition may emerge between different standards (e.g. Northern vs. Southern), while Southern standards may take a different emphasis, for example, potentially a greater emphasis on product standards by emerging economies given their significance to driving competitiveness, and a reduction of focus on labour concerns relative to sustainability issues in process standards (Knorringa and Nadvi 2016).

Thirdly, upgrading requires interrogation in the context of polycentric trade, building on the emphasis here of firms’ need to negotiate the requirements of participating in, and opportunities across, different end markets. Earlier research has emphasized upgrading within GVCs through ties to global lead firms as driving the process. Yet learning in domestic and regional markets, and the wider institutional factors involved, warrant growing attention again as key aspects of development strategy. Given the greater significance of southern lead firms, and institutional factors promoting
upgrading and innovation in rising powers, how might such factors and actors reshape our relatively weak understanding of upgrading in VCs and PNs is a key area requiring much further analysis.

We are still only beginning to grasp the shifting dynamics of contemporary VCs and PNs in the context of 21st century polycentric trade. With global trade having evolved empirically in directions few would have expected under late 20th century globalization, continued attention is required to refining the related conceptualization of value chains and production networks, along with their associated implications for development. We hope that this article, along with the others in this collection, will provide a useful first step in this regard.
References


UNCTAD (2011) South–South integration is key to rebalancing the global economy. Policy Brief, Geneva: UNCTAD.


