Global Value Chains and Development of Light Manufacturing in Ethiopia

Ben Shepherd

Developing Trade Consultants (DTC)
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Ethiopian Development Research Institute (EDRI)
P.O. Box 2479
Tel: 251-11-550-6066
Fax: 251-11-550-5588
Email: info@edri.org.et
Website: http://www.edri.org.et

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About the Author(s): Ben Shepherd is a Principal and International Development Consultant at Developing Trade Consultants (DTC).
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Abstract

Development of manufacturing activity will be a key component of Ethiopia’s development program over the next decade, and probably well beyond. As the country remains relatively capital scarce, the focus is necessarily on light manufacturing, which covers sectors or activities that are relatively labor intensive. Although Ethiopia is the second most populous country in Africa, its low level of per capita income means that the domestic market remains very small by international standards. This factor is one important reason that GVC participation is attractive. GVCs are focused on global markets, and so offer the potential for serving much larger world markets for intermediates or final consumption goods. Although there is clearly scope for higher incomes within Ethiopia to support and grow domestic demand, the opportunities offered by the world market are much greater, which makes increased GVC participation a potentially attractive option for Ethiopia, building on the experiences of countries like China and Vietnam.
1. Introduction

Ethiopia has enjoyed remarkable recent success in terms of economic development, with GDP growth hovering around 10% for the last 15 years, according to the World Development Indicators. This very strong performance has translated into significant gains in per capita income, which has grown at an average annualized rate of around 11% over the same period. Notwithstanding these gains, poverty remains stubbornly entrenched, at 33.5% of the population on the $1.90 per day scale, or 71.3% on the $3.10 per day scale, down three percentage points and five percentage points respectively between 2004 and 2010 (the two recent years for which data are available in the World Development Indicators). The Growth and Transformation Plan II sets out the target of becoming a middle income country by 2025. Using the current World Bank classification, that target implies continuing per capita income growth of 5.6% per annum, which seems broadly achievable given recent performance. However, it will be important to leverage the country’s economic strengths based on comparative advantage to increase economic activity, grow incomes, and reduce poverty.

Most countries that have experienced rapid economic growth have relied heavily on the manufacturing sector as a source of employment and value added. In the current global context, one prospect that increasing numbers of developing countries are looking to is enhanced participation in Global Value Chains (GVCs). GVCs are complex, interlinked networks of trade in goods and services, as well as movements of capital (investment flows), people, and ideas. Lead firms, typically from developed countries, but sometimes also from the leading emerging markets, coordinate a network of suppliers and assemblers. Production of component parts is spread across a variety of countries. Intermediates move across borders multiple times, before final assembly and shipment to consumer markets.

GVCs first arose in manufacturing sectors like electronics and motor vehicles in East and Southeast Asia. However, as trade costs have fallen around the world and businesses have reorganized to make greater use of information technology and just-in-time management, GVCs have spread to other regions and sectors. Apparel is now a major GVCs, with lead firms in “fast fashion” sectors, like H&M and Zara, coordinating suppliers and producers in a wide range of countries. Agribusiness is an emerging GVC sector, encompassing non-traditional agricultural products, like horticulture or cut flowers, as well as processed agricultural goods.

Clearly, development of manufacturing activity will be a key component of Ethiopia’s development program over the next decade, and probably well beyond. As the country remains relatively capital scarce, the focus is necessarily on light manufacturing, which we interpret as covering sectors or activities that are relatively labor intensive. Although Ethiopia is the second most populous country in Africa, its low level of per capita income means that the domestic market remains very small by international standards. This factor is one important reason that GVC participation is attractive: as the name implies, GVCs are focused on global markets, and so offer the potential for serving much larger world markets for intermediates or final

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1 The author is grateful to Jakob Engel for sharing data, and to Ashagrie Demile and Fikru Debele for excellent research assistance.
consumption goods. Although there is clearly scope for higher incomes within Ethiopia to support and grow domestic demand, the opportunities offered by the world market are much greater, which makes increased GVC participation a potentially attractive option for Ethiopia, building on the experiences of countries like China and Vietnam.

GVC participation opens up a new development paradigm that could be of real interest to Ethiopia. Industrialization in Asian Tiger economies like Korea and Taiwan in the 1970s typically relied on the construction of full-scale, domestic supply chains. These countries still relied on world markets, but as sources of demand and competitive pressure. Given the changes in technology and managerial practice that have taken place over the intervening decades, it seems unlikely that other countries can now replicate that model (Baldwin, 2011). Rather than building full domestic supply chains in key manufacturing sectors, the GVC development paradigm being followed by rapidly industrializing countries like China and Vietnam places the emphasis on joining and moving up international supply chains. This paper takes the position that it is most pertinent for Ethiopia to focus on the most recent developments in the theory and practice of industrialization, and so recent successes like these ones are more relevant than the experience of the Tiger economies in the 1970s.

GVCs are at a relatively early stage of development in Africa. Ethiopia has some involvement with them already in a variety of sectors, ranging from clothing and leather goods, to motor vehicles. The purpose of this report is to examine ways in which Ethiopia can build on that base to increase participation in GVCs in light manufacturing sectors. From a policy standpoint, the basic argument of the report is that GVC participation emphasizes the “G’, namely the global. It is impossible to enjoy success in terms of GVC participation without meaningful openness to international flows of goods (especially intermediates), services, and investment. Policy barriers in all three areas remain very substantial, both by the standards of regional neighbors, and more importantly by the standards of countries that leveraged GVC participation as a core part of their development programs, like China and Vietnam. Developing light manufacturing activity in Ethiopia within the broader context of GVC participation also requires a range of other interventions: it needs to be easy for entrepreneurs to start companies and obtain finance, for example, and foreign investors need to be able to repatriate profits without unduly delays or unnecessary formalities. In addition to developing global linkages, GVC participation and growth of light manufacturing require an accommodating business environment and investment climate. As with global policy linkages, this area needs work in Ethiopia: although there is evidence of progress, it remains a challenging country to do business in.

The report proceeds as follows. Section 2 sets out in greater detail the potential of light manufacturing GVCs for Ethiopia’s development. The perspective is that of sustainable development, covering economic, social, and environmental aspects. Section 3 moves from that base to a consideration of Ethiopian firms’ current involvement in light manufacturing GVCs. It uses trade and investment data to analyze key trends. Based on this understanding of potential and current experience, Section 4 analyzes the question from the policymaking perspective. It identifies key interventions in trade and investment policy, as well as the business environment and investment climate, that can support greater GVC participation, and with it, sustainable growth and development over the medium term. Section 5 concludes.
2. Sustainable Development Potential of Light Manufacturing GVCs in Ethiopia

Before looking at the economic realities and policy agenda surrounding the development of light manufacturing GVCs in Ethiopia, it is important to set out some core ideas on the potential benefits they can bring. Of course, no business model is a development panacea. GVCs, like all other development models, have positive and negative implications for particular groups and under particular circumstances. It is important to have a clear understanding of the distribution of gains and losses, and the circumstances that can accentuate the former and limit the latter, so that the country can effectively leverage GVC participation to continue its intensive development path.

In 2015, the countries of the United Nations agreed on the Sustainable Development Goals (SDGs), to replace the previous UN Millennium Development Goals. The SDGs provide a framework for analyzing and evaluating development activities, including trade-related ones, over the 2030 time horizon. The SDGs incorporate many different aspects, but they can usefully be grouped under three main headings: economic, social, and environmental. This section investigates the potential implications of GVC participation in each of those areas. It draws heavily on Shepherd (Forthcoming).

2.1 Economic Aspects

From an economic point of view, a typical point of entry into a GVC for a developing country is a low value added activity, such as assembly. Countries like China and Vietnam stand out for their success in this area in sectors like electrical products, such as cell phones. Although countries are concerned with “moving up” to higher value added activities, it is important to stress that even low value added activities can have economic benefits for developing countries compared to a situation of closed markets, i.e. no GVC linkages. Importantly, low value added activities are typically labor-intensive, which means that they can be a major source of formal sector employment, which helps support a shift from an agricultural to an industrial economy that is one of the hallmarks of economic development.

In addition, there is also an industrial rationale for countries to be open to GVC-linked investments and activities. There is strong evidence that domestic and foreign value added are complements, so bringing them together through a GVC allows for faster sectoral growth on an overall basis than would otherwise be possible, even when the share of domestic value added in percentage terms falls as a consequence of increased GVC integration. Kowalski et al. (2015) characterize this feature of GVC-based trade as obtaining “a smaller slice of a larger pie”. Figure 1 demonstrates it using data for the transport equipment sector in Thailand, a well-established example of a successful GVC coordinated by Japanese lead firms. In essence, the point is that letting in foreign value added through imports of goods and services (as well as people and ideas) allows domestic value added to grow more quickly than it would under a restrictive trade and investment regime, even though the change in terms of proportions may be less marked, or even move in a different direction.
Figure 1: Complementarity between domestic and foreign value added in Thailand's transport equipment industry

a) Domestic and foreign value added content of gross exports, shares, 1995 and 2011.

b) Domestic and foreign value added content of gross exports, million USD, 1995 and 2011.

Source: OECD-WTO TiVA.

GVCs involve a wide range of tasks, with different associated levels of value added. Analysts typically see the distribution of value added by processing stage as following a “smile curve” (Figure 2). Upstream and downstream activities are typically relatively high value added,
whereas mid-range activities—assembly is an example in manufacturing—are relatively low value added.

**Figure 2: Value added distribution by task and processing stage in GVCs**

Although low value added activities can have important benefits for developing countries as sources of employment and income, the rate of productivity growth—which is the most reliable long-term driver of increases in per capita income—depends on the type of activities a country specializes in. For example, Hausmann et al. (2007) show that a country’s growth rate is influenced by the level of sophistication of its export bundle. Moving up in value chains to higher value added activities means that sectoral productivity is increasing, which in turn can provide the basis for higher per capita incomes—the core component of economic development. In addition, some high value added activities such as research and development or design have significant spillovers, which mean that their economic benefits go beyond the organizations that directly undertake them. Again, they can fuel growth in the manner of the class of endogenous growth models associated with Romer (1994), where one sector of the economy specializes in producing innovations that in turn affect production in other sectors.

Experience on the ground suggests that GVC participation indeed offers significant potential for economic development. China’s role as an assembly hub is typical of the early stages of GVC engagement, and was part of a broad-based engagement with the world economy that led to rapidly increasing incomes, and large scale poverty reduction. With labor markets tightening and a pool of well qualified technical workers, China is now engaging in substantial moving up in key value chains, like electrical products. Assembly activity is starting to move to lower cost countries, like Vietnam—which is also leveraging GVC engagement to provide employment and higher incomes as the bedrock of economic development and poverty reduction.
The GVC development paradigm is inherently dynamic. Specializing initially in low value added sectors does not mean that that position is permanent. As activity increases and the sector grows, labor markets become tighter, and costs go up. Lead firms have an incentive to move low value added activities to countries with a comparative cost advantage, as the China/Vietnam example demonstrates. But as that reallocation takes place, the higher cost country can shift into higher value added sectors if the fundamentals are right. The key determinant of a country’s ability to move up the value chain in this way is the availability of skilled labor, which means that investing in education and training has never been more important.

One difference between the GVC paradigm and earlier development models of the type used by some of the Asian Tiger economies is that firms specialize in a narrower range of tasks, consistent with the objective of joining, rather than building, supply chains. As a result, when patterns of comparative advantage change, firms grow or contract. Modern labor markets in most of the developed world no longer see employees staying with one company for their full working life. Instead they change employer multiple times in line with market and non-market incentives. Companies looking to retain workers over the long term need to be part of the general push towards greater education and training—if they invest in workers’ skills they can not only retain staff, but can also create conditions that are conducive to moving up the value chain themselves.

2.2 Social Aspects

Of course, incomes are not the only component of sustainable development. It is also important to consider social aspects, such as decent work—a key objective of labor organizations around the world. The core of that concept relates to employment creation, social protection, rights at work, and social dialogue. It is fair to say that there is at least some skepticism within the labor community as to the potential for GVCs to help promote decent work (e.g., ILO, 2016). Incidents such as factory fires and structural collapses in the garment industry are pointed to as examples of GVC-driven manufacturing activity being associated with unsafe and unfair working conditions. On the other hand, the economic mechanisms discussed in the previous section make clear that GVC expansion offers employment opportunities, including potentially to people not previously involved in the formal labor market, including women.

In addition to employment creation from GVCs, it is also important to consider wage levels. Economists have conducted extensive quantitative research on wage levels in exporting firms, including those involved in GVCs. The consensus is that firms that are engaged with the world economy through importing, exporting, or receiving FDI in fact pay higher wages than firms that serve the domestic market only. For example, Frias et al. (2009) conduct a detailed evaluation of the Mexican case, and find that exporters pay higher wages than other firms, even after taking account of different skill compositions. Shepherd and Stone (2013) analyze data from a range of developing countries and similarly find that internationally engaged firms employ more workers, pay higher wages, and employ more skilled workers than firms that serve the domestic market only. Although most research deals with exporters in general, not just GVC participants, Shepherd and Stone (2013) consider a wider range of variables capturing international integration that are closer to identifying GVC participants. Wages in an economy are determined
by many factors, but a crucial one is labor productivity—so allowing foreign investors to enter a local company and link it to international markets can have significant benefits for wages, as it increases productivity through a variety of channels from improvements in management, to technology transfer, to use of imported intermediates.

Of course, these research results do not mean that wages paid in export industries in developing countries are at all comparable to those paid in developed countries. But that difference is due to macroeconomic factors like the price level, as well as large differences in productivity. In looking at the capacity of GVCs to create decent work, it is important to have the right counterfactual in mind: based on the available research, of which Shepherd and Stone (2013) is an example, the relevant counterfactual of relying on domestic investment to drive export oriented activities would in fact result in fewer jobs and lower wages than facilitating foreign investment, including by GVC lead firms, in export-oriented sectors. Moreover, developing countries are relatively capital scarce, so relying on domestic rather than foreign investment imposes a relatively low upper limit on the rate of industrial development—with attendant job growth and wage income—they can attain.

One sector in which social concerns are prominent is the apparel industry. Consumer pressure in this area has led lead firms like H&M and Zara to develop traceability initiatives, which monitor the performance of subcontractors on social criteria. Both firms have increased transparency in their supply chains, and have contributed to the promulgation of standards that seek to improve their social footprint in developing countries. Although GVCs are not without their challenges from a social point of view, this kind of promulgation of standards can lead to higher levels of social protection all around—a virtuous cycle where greater engagement promotes higher standards.

2.3 Environmental Aspects

Another potential challenge to the GVC paradigm from the sustainable development point of view relates to the environment. On the one hand, there is (as in the case of labor standards) a fear of a race to the bottom in terms of environmental protections as countries seek to lower costs and attract GVC activity. However, the empirical content of this argument seems to be limited, even though the mechanism could be important in theory. More fundamentally, though, GVC expansion into developing countries is part of a general expansion of the market economy that draws in natural resources as inputs, and affects the environment through externalities. Clearly, if GVC expansion increases the strain on resources in developing countries, it has the potential to be associated with negative environmental impacts, and unsustainable practices.

In assessing these concerns, it is important to note that the types of environmental issues raised by GVC expansion are not, in fact, peculiar to GVCs as a form of business organization, but instead relate to most extensions of economic activity. Indeed, GVCs can, under appropriate circumstances, help promote environmentally sustainable development. For example, as in the case of social development, there is scope for developed country consumers to exert pressure on lead firms to ensure certain standards are met by their suppliers, through programs like supply chain transparency and traceability. Although such mechanisms are by no means perfect, they have led to important improvements in sectors like furniture, which make extensive
use of natural resources. Lead companies like Ikea have developed sustainability initiatives covering their suppliers, with the objective of ensuring that they support a sustainable environmental footprint at all levels. In other sectors, foreign investment can come with technology transfer, which can allow developing country firms to adopt production methods that are at once more efficient and more respectful of the environment. Demand for green logistics is another area in which value chains are responding to environmental concerns around the world, and upgrading productive processes to support sustainable development.

2.4 Consolidation
Experience over recent decades in regions heavily involved in GVCs, particularly East and Southeast Asia, shows that they can in the first instance bring significant economic benefits. GVC linkages with environmental and social issues are more complex, and depend crucially on domestic policies and regulations, as well as standards developed by lead firms in response to consumer pressures. Although monitoring is imperfect, the reality on the ground is that factories involved in prominent GVCs typically pay higher wages, and have stronger labor and environmental policies, than factories that produce for local markets only. Under the right circumstances, GVCs can be a powerful force promoting economic and social development, in a way that is respectful of the environment.

3. Participation of Ethiopian Firms in Light Manufacturing GVCs

Starting from the perspective that GVC participation can, under the right circumstances, have important development benefits, this section examines Ethiopia’s performance to date in light manufacturing GVCs. The presentation is data focused, and makes use of a number of new sources to provide a picture of the nature and extent of Ethiopia’s current level of involvement in GVCs. The report is limited in scope to light manufacturing, so we do not examine primary industries that display some GVC characteristics, like cut flowers.

GVC participation is characterized by interlinked flows of FDI, exports, and imports. Trade in intermediate inputs is particularly intense within GVCs compared with more traditional production models. But it is also important to take account of final goods flows, particularly in low income countries that may specialize initially in a low value added activity like assembly: this type of participation in GVCs is characterized by strong imports of intermediate goods, and exports of final goods.

Tracking GVC participation is not a straightforward matter. Two general approaches have been attempted in the literature. The first is to classify goods in the Harmonized system as final or intermediate with respect to particular GVC sectors, and then to track performance over time. The second is to produce bespoke indicators of value added trade. The second approach is superior from an analytical point of view, because it accounts for complex movements of intermediates (services as well as goods) and accounts for the fact that some goods are dual purpose, i.e. they can be consumed as final goods, or used as intermediates. But implementation of value added trade indicators is intensive in data, and existing initiatives focus primarily on developed countries. Data challenges in low income countries are formidable.
### 3.1 Standard Trade Data

The earliest work on GVCs, then called “international production networks”, examined standard trade classifications to identify products as final or intermediate in key sectors like transport equipment and electrical products (e.g., Ando and Kimura, 2005). Sturgeon and Memedovic (2010) build on these exercises to classify goods as final or intermediate in the following sectors: electronics; automobiles and motorcycles; and apparel and footwear. The analysis is necessarily subject to caveats regarding goods that can be used either as final products or as intermediates. It is also important to stress that intermediate goods trade is richer than an approach like this accounts for, due to complex cross-sectoral linkages in input-output relationships, including with services sectors. Nonetheless, in a low income country environment, where data constraints for more sophisticated analysis of final and intermediate goods trade are formidable, this approach has the great advantage of relying on relatively high quality international trade data. In what follows, we use reported imports for Ethiopia, but mirror data for exports.

We consider apparel and footwear first. The product-level definition of this sector includes standard items of clothing, as well as leather footwear. Figures 3 and 4 show that Ethiopia has been developing this sector consistently, with a jump in exports and imports from 2011 onwards. Exports trend heavily towards final goods, with is consistent with an assembly role in GVCs. However, the import side remains relatively restricted: imports of intermediates have increased, but not as markedly as exports of final products. Ethiopia imports substantial quantities of final apparel and footwear, even though (see below) tariff protection is substantial. Clearly, the domestic market is growing, but it is not clear that the locational advantage enjoyed by local producers is fully translating into competitive advantage vis-à-vis foreign low cost suppliers. Second, although growth in exports of final goods has been rapid since 2011, the total value of exports is still quite low by world standards, and only amounts to a world market share of 0.02%, compared with nearly 8% for Vietnam—a country of comparable population, but considerably higher per capita income.

The most important factor from the point of view of GVC participation—not just development of the local industry—is openness to imported intermediates. If final goods producers are to be competitive in the world market, which is what GVC participation requires, they need to be able to source quality inputs at reasonable prices. Inputs into the apparel industry are typically textiles, which by contrast with labor-intensive apparel production, are relatively capital intensive. It is unlikely that Ethiopia has a comparative advantage in input production. Countries like China have well-developed, globally competitive textiles industries. A necessary part of participating in apparel GVCs is that local firms need to be given the option to import these inputs if it is optimal for them to do so. As will be seen in Section 4, there are currently a range of policies that inhibit that process; the evidence that they are distorting firm behavior is in Figures 3 and 4, which shows exports of final goods and imports of intermediates growing at markedly different rates.

It is useful to compare Ethiopia’s performance with that of Vietnam, a developing country that has moved from low to middle income status—and seeks to rise further—in part by developing its manufacturing GVC participation. Ethiopia saw significant growth in imports of intermediates...
(17%) and exports of final goods (40%) over the 2000-2015 period. Interestingly, Vietnam's growth in final goods exports, admittedly from a higher base, was slower (16%), but its imports of intermediates were faster (22%). The comparison suggests that Ethiopian firms have enjoyed some success in carving out a niche in the global marketplace, but that they may be constrained in terms of their access to intermediates. This point recurs throughout the current subsection, and is one we revisit from a policy perspective in Section 4.

Figure 3: Ethiopia's exports in the apparel and footwear sector, 2000-2015

![Graph showing exports in Ethiopia's apparel and footwear sector from 2000 to 2015.](image)

Source: WITS.

Figure 4: Ethiopia's imports in the apparel and footwear sector, 2001-2015

![Graph showing imports in Ethiopia's apparel and footwear sector from 2001 to 2015.](image)

Source: WITS.
The second sector we look at is motor vehicles. We take the same approach, focusing on exports and imports of final goods and intermediates. Ethiopia has some motor vehicle manufacturing capacity, based on imports of knock-down kits. Imports of intermediates like these have risen substantially since 2012, but not as rapidly as imports of final goods (Figure 6). Export activity is very limited, but tends slightly towards intermediates (Figure 5); the apparent spike in 2008 is likely due to a transient data quality issue.

By contrast with apparel and footwear, where Ethiopia has seen rapid export growth indicative of improvements in competitiveness, motor vehicle production seems heavily focused on the domestic market. That market is clearly growing, as evidenced by rapid growth in imports of cars and motorcycles since 2010, but again, in global perspective, the market is a small one due to low per capita incomes. From the point of view of GVC participation, the significant increase in imports of intermediates over recent years is important: it suggests that local producers are indeed accessing world markets for their inputs, which is one side of the GVC equation. The other side of the equation—development of export capacity—is still at the level of future potential. The data suggest that in addition to facilitating access to intermediates, there may be other issues affecting the ability of local firms to be globally competitive.

Vietnam, by contrast, has seen rapid growth of both sides of the ledger. Exports of final motor vehicles (primarily motorcycles) has grown at an average annualized rate of just over 16% since 2000, while imports of intermediates have increased even more rapidly, at a rate of over 25%. Ethiopia’s growth rate of imports of intermediates is lower but still very rapid, at nearly 18%; but exports of final goods have grown at only 3%. The contrast is striking: Vietnam has enjoyed major success in increasing its participation in motor vehicle GVCs, but something is holding back Ethiopian assemblers of final goods from being competitive in the world marketplace.

**Figure 5: Ethiopia’s exports in the vehicles sector, 2000-2015**
The electronics sector (Figures 7-8) has some characteristics in common with motor vehicles. There has been some growth in exports over recent years, but the pattern is unstable compared with the other two sectors. Exports tend towards intermediates, as in the case of motor vehicles. The import side has seen steadier growth, both in final goods and intermediates. The former is in line with increasing per capita incomes, but the latter suggests that there is also some development of manufacturing capacity in this sector. But given the lack of major export success, the same conclusion suggests itself: Ethiopian firms appear to be focusing on the domestic market, and are largely not competitive globally. Again, one side of the GVC equation (imports of intermediates) has seen steady development, but the other (exports of final goods) has not. Policy is undoubtedly playing a role in structuring these outcomes, a point that we return to below.

It is again instructive to make a comparison with Vietnam, a country admittedly at a considerably higher income level, but which has been very successful in increasing its level of GVC participation, with electronics a current standout sector. Vietnamese imports of intermediates grew very rapidly, at an annualized rate of nearly 40% between 2000 and 2015. Over the same time period, exports of final goods grew even faster, at close to 50% annually. This stellar performance has resulted in Vietnam moving from a close to zero world market share in the sector (final goods) to just over 3%. Assembly is a core activity for electronics producers, and the archetypal GVC processes of importing intermediates and exporting final goods are particularly relevant here. The Vietnamese example suggests that there is still room in world markets for new sources of supply, provided that the conditions for global competitiveness are established. The challenge for Ethiopia in this sector, as to a large extent in the others, is to develop those conditions, so that its firms can deal with competition in the world market.
In a limited data environment like Ethiopia, there is great benefit in examining standard trade data for indications of GVC activity in sectors where they are known to be active. The above
discussion shows that there has been some development of light manufacturing activity in the clothing sector, but that other types of manufacturing, like electronics and motor vehicles, remain at an early stage. The most important takeaway, however, is that in all three sectors, there appear to be difficulties in terms of world market competitiveness. Even where there is access to intermediates from global sources, it is not translated into the type of explosive export growth seen elsewhere. If confirmed by additional data, this finding would suggest that policy reforms should focus on supporting the development of competitiveness by reference to world markets.

3.2 Value Added Trade Data

The only data source with value added trade data for Ethiopia is Eora. The core of any value added trade dataset is a multiregional input-output table. Assembling such a table for a country like Ethiopia is very challenging, for a number of reasons. First, supply-use tables may not be accurate due to the difficulty of conducting a comprehensive industrial census. Second, the large informal sector is excluded. Third, national accounts data may be imperfect due to measurement difficulties and noise, which means that estimates of value added may be correspondingly noisy. Finally, trade data are incomplete, particularly in the area of services, which is an important component into many manufacturing value chains. As a result, it is important to take the numbers presented in this section as indicative only; they can be refined in future as better quality data become available. The primary objective is to examine whether or not the value added trade data corroborate the insight developed in the previous section using standard trade data.

To examine this question, we use Eora to divide total sectoral value added into components of domestic and foreign origin. As noted above, domestic and foreign value added are typically complements in the GVC context, so opening up to foreign intermediate inputs can allow overall sectoral activity to grow at a faster rate than it otherwise would. In rapidly internationalizing sectors, we would expect to see rapid growth in foreign value added relative to domestic value added.

Figure 9 presents results for Ethiopia, considering key manufacturing sectors only. Each bar represents the average annualized growth rate of a sectoral component. It is immediately clear that all sectors considered have undergone very rapid growth during the sample period (2000-2011). Domestic value added has risen sharply, with average annualized growth rates of 40%-50% in all cases. This finding sits well with Ethiopia’s rapid and sustained GDP growth over recent years. However, it is notable that growth rates of foreign value added are only a fraction of those of domestic value added, typically around 10% per annum. The interpretation of this difference is that sectoral output has been growing very rapidly, but imports of intermediate goods have been growing much less rapidly. The value added trade data therefore tend to support the interpretation offered above using standard trade data: although manufacturing value chains are developing in Ethiopia, and there have been undoubted successes, the global aspect remains somewhat deficient—a factor that can ultimately hold down productivity growth and harm firm-level innovation capacities, in a way that will, over time, undermine sectoral performance.
To make the point come out more clearly, it is useful to compare Ethiopia's performance with that of Vietnam, a country that is widely regarded as having been very successful in developing manufacturing GVCs. Figure 10 presents corresponding numbers for Vietnam, and we can immediately see that the pattern from Figure 9 is reversed: in all sectors, foreign value added grew more quickly than domestic value added over the 2000-2011 period. Vietnam's manufacturing sector has clearly undergone major internationalization during that time, and use of imported intermediates is intense. Growth rates overall are lower than in Ethiopia—which is to be expected given the higher baseline—but the pattern in the Vietnamese data is more in keeping with a GVC world view than is the case in the Ethiopian data.

Source: Eora.
In this case, the value added trade data accord well with the standard trade data. Both are consistent with significant development of Ethiopian manufacturing, and rapid increases in output. Some of that output is exported, but the trade data suggest that the domestic market is also playing an important role as a source of final demand. Most importantly, the evidence strongly suggests that Ethiopian manufacturing is not internationalizing rapidly in the way we would expect if GVC activity were significant. The data are certainly consistent with the development of value chains, but certainly on the import side, and probably also on the export side, they are unlikely to be "global".

### 3.3 Investment Data

In addition to trade, FDI is the other key vector for GVC development. Figure 10 shows that inward FDI flows were relatively steady over most of the period, but jumped up very strongly towards the end, starting in around 2012. Most FDI goes to the manufacturing sector, with China, India, and Turkey as important sources. Interestingly, the timeline of increased FDI comes shortly after a sustained uptick of exports in the clothing and footwear sector. This sector has seen substantial inward FDI, and it is likely that foreign owned firms are responsible for a significant proportion of sectoral exports.
The recent increase in FDI inflows to Ethiopia has clear potential to promote GVC activity, provided that trade in both directions is also facilitated. The development is an encouraging one. But it is important to keep it in perspective. The comparison with Vietnam is again instructive. Inward FDI into Ethiopia in 2015 amounted to $2.2bn, whereas in Vietnam the comparable figure was $11.8bn, so approximately five times higher. The per capita income difference between the two countries is substantial, but the gap highlights the challenge Ethiopia faces in developing manufacturing GVC activity: other countries are also active, and they have been successful in attracting trade and investment over a substantial period. Unlike the trade data, which suggested that Ethiopia has been successful in developing its manufacturing output but less so in internationalizing activity, the recent jump in FDI inflows has great potential to promote GVC activity. But trade and investment both need to move relatively freely for production to internationalize in the way we typically associate with GVCs. As a result, the policy agenda—which is the subject of the next section—needs to cover a wide variety of areas, from trade and investment, to the business environment.

4. The Policy Agenda: Creating a Supportive Environment for Light Manufacturing GVCs

Section 3 focused on a characterization of Ethiopia’s participation in light manufacturing GVCs, along with a diagnosis of potential difficulties. This section moves to presentation of a forward-looking policy agenda designed to promote GVC involvement in the interests of providing jobs and income for the population, and supporting the sustained growth in productivity that is required for continuation of the country’s rapid development path. The emphasis is on policies
for which quantitative indicators exist, which enable us to put Ethiopia’s policy settings in comparative perspective. We first address policies affecting trade in goods and services, before moving to a broader consideration of the business environment.

4.1 Trade Policy

Figure 11 shows that Ethiopia’s average MFN tariff has been in the 17%-18% range for the last decade, having been reduced by a couple of percentage points in 2006. Although there has not been any major multilateral liberalization during that time, many countries have been involved in regional trade agreements that have effectively improved market access conditions for a wide range of goods and country-pairs. The data suggest that Ethiopia has stayed the course in relation to trade policy—at a relatively restrictive level. By comparison, China’s average applied MFN tariff in 2015 was 9.4% and Vietnam’s was 9.52%. Ethiopia is significantly more restrictive in its trade policy than these two leading emerging markets, and it undoubtedly has an impact on firms that could potentially produce for export through GVC linkages, due to the difficulties it implies for accessing high quality intermediate inputs at world market prices. (There are also, of course, significant negative implications for Ethiopian consumers, including the poor, but this paper focuses on GVC linkages, so we limit the discussion to production and export aspects.)

Figure 12: Ethiopia’s simple average tariff rate, total trade, available years since 2000

![Chart showing Ethiopia's simple average tariff rate, total trade, available years since 2000.]

Source: WITS-TRAIns.

Of course, average rates can hide considerable variation by sector. Figure 12 shows that that is true in Ethiopia’s case, with average rates of protection ranging from 5% to over 30%. Importantly, actual or potential light manufacturing GVC sectors have significant tariffs on imports. The point is truest for textiles and clothing, where average protection is 30%—a very high rate. Electrical equipment is protected at the substantial rate of 17.59%, and transport equipment at 11.41%. Agribusiness products carry varying rates of protection, but figures in the region of 20% are not uncommon. It is important to stress that not only do these high rates of
protection potentially restrict imports of intermediates that would help producers become more competitive on the world market, they also do nothing to promote productivity upgrading through competitive processes. Opening to world market competition, perhaps in a gradual manner, could help shift resources from less- to more-productive firms, which would drive sectoral productivity increases that ultimately feed into economy-wide income gains. High rates of protection are unusual in the GVC context, both because of the importance of world market inputs, but also because of the continuous drive for higher productivity and global competitiveness that underlies the business model.

Figure 13: Ethiopia’s simple average tariff, by sector, 2015

In the GVC context, it is important to drill down into tariffs a little further to see to what extent the affect intermediate inputs. To do that, Figure 13 presents selected subsectors from the BEC classification, which maps products to intermediate uses. Although tariffs on imported intermediates are clearly lower than the overall average, the difference is not large: intermediate product categories are protected by tariffs in the 12%-14% range, which is still a substantial level of protection in the current global context. To mitigate the effects of this policy, Ethiopia operates a duty drawback system, whereby exporters can import intermediates duty free. Although beneficial, including in terms of promoting GVC linkages, this system is a second best to a legal liberalization of tariffs, especially on intermediate products. One important reason is that it only benefits current exporters, not domestic firms that are growing and may be
competitive enough to export in the future. Productivity upgrading is a dynamic process, and entry by new firms, as well as growth of successful existing firms, is an important element of the overall picture. By preventing domestically oriented firms from accessing intermediates on the same terms as exporters, current Ethiopian policy privileges large incumbents, and effectively discriminates against smaller, newer firms. The existence of the drawback system suggests that policymakers are aware that access to intermediates at world market prices is important for firm competitiveness—they should build on that understanding to broaden access to all firms, not just current exporters.

**Figure 14: Ethiopia’s simple average tariffs by selected BEC product group, 2015**

![Bar chart showing simple average tariffs by selected BEC product group, 2015](chart.png)

Source: WITS-TRAINS.

Although there is real scope for trade liberalization, especially on intermediate goods, to boost the competitiveness of Ethiopian firms over the medium term, it is important to be realistic about the role trade taxes play in government revenue. According to the World Development Indicators, trade taxes accounted for close to 30% of government revenue in 2011, the latest year for which data are available. This number is very high, and suggests that the government relies to an unusual extent on tariff revenue for its provision of basic services. It is important that those services continue, and indeed expand—provision of public goods like education is crucial in the open economy context, and medium-term prospects for GVC upgrading depend on it. In the short term, policymakers should therefore focus on reforms that improve the incentive structure facing firms, for example by flattening the tariff schedule and broadening access to world market intermediates, but it will be important for the changes to be close to revenue neutral. Over the medium-term, the boost to competitiveness that broad-based liberalization can bring should be facilitated by shifting to other sources of government revenue, such as income and consumption taxes. As the shift takes place and government revenue streams stabilize, trade taxes can be steadily reduced. An analysis of trade policy therefore suggests that to encourage GVC development in light manufacturing sectors, policymakers in fact need to look to the much broader question of tax policy.
An additional aspect of the trade policy environment that needs to be considered is trade facilitation. Saslavsky and Shepherd (2014) show that trade flows in intermediates, such as those that circulate within GVCs, are more sensitive to logistics and trade facilitation performance than trade in final goods. It is difficult for firms to become involved in GVCs if governments do not provide a trading environment that facilitates rapid and reliable movements of goods across borders, in both directions. This is an area where Ethiopia, as a landlocked country, needs to pay particular attention. There are many dimensions to the problem, from trade regulations and customs procedures, to private sector development in transport and logistics services. But policy is an important part of the equation, and there is clear scope to develop customs capacity and facilitate imports and exports that are the lifeblood of GVCs.

The discussion thus far has focused on trade in goods. But in the GVC context, trade in services is also important. Supplier firms and local affiliates of lead firms need to be able to export and import key services relatively freely. Moreover, performance in backbone services sectors like transport, finance, and telecommunications affects prices and availability for producer firms, and can have a significant impact on their competitiveness and exports (Hoekman and Shepherd, 2015). Services can be traded under four modes of supply under the GATS: pure cross-border trade (mode 1); movement of consumers (mode 2); sales of foreign affiliates (mode 3); and temporary movement of service providers (mode 4). Modes 1 and 3 are generally the most important ways in which foreign service providers can contest markets.

Unlike policies affecting goods trade, like tariffs, barriers to services trade are regulatory in nature, and typically do not create any government revenue. Indeed, liberalization can in some cases be revenue generating, for instance through auctioning of spectrum resources in telecommunications. The point is an important one, because Figure 14 shows that Ethiopia applies extremely restrictive services trade policies in most sectors. Many other countries are quite liberal on mode 1, even if they retain restrictions on FDI in services sectors (mode 3); but only transportation stands out as having moderate protection—the other sectors are very high in both principal modes of supply. Indeed, financial services, telecommunications, and retail services are completely closed to foreign investors. The comparison with Vietnam is again instructive: Ethiopia is much more restrictive in all sectors and modes, particularly mode 3.
Figure 15: Services Trade Restrictiveness Index for Ethiopia, by sector

Source: World Bank STRI Database.

Note: Mode 1 indices not calculated for telecommunications and retail.

An important part of developing manufacturing GVCs is facilitating access to intermediate services, which are typically a significant proportion of total costs at the firm-level (Pasadilla and Low, 2016). The trade-investment nexus is particularly important for services in developing countries, as proximity between suppliers and consumers is often required. Ethiopian policymakers need to consider substantial liberalization of key services markets, focusing in particular on inward FDI. Facilitating investment is a broader issue (see next subsection), but there are clearly regulatory measures that are preventing entry by foreign providers. Facilitating new entry in services markets not only reduces costs and improves quality to the benefit of local manufacturers and exporters; it also supports broader access by consumers. There is no government revenue justification for retaining closed services markets. Although maintenance of monopoly suppliers can enable the government to earn rents, consumers and businesses suffer through high prices and poor quality. Efficient regulation of services markets can increase activity, which boosts tax revenue through corporate income channels. Experience in other countries, like Vietnam, which have used light manufacturing GVCs to support productivity and income gains as part of an inclusive development package, strongly suggests that liberalizing services markets is an important step.

4.2 Business Environment and Investment Climate

Trade and investment policies are only part of the answer in terms of developing a successful economy-wide engagement with GVCs. It is also important that regulations be conducive to the entry of new firms, as well as the growth of existing ones, that firms be able to access labor markets readily when demand for their output increases, that goods move efficiently across borders, and that firms have adequate access to credit at affordable rates. An additional
element of importance in the GVC context is macroeconomic and financial stability: one objective is for foreign lead firms to make relationship-specific investments in Ethiopian suppliers, and that will only happen if returns can be estimated with sufficient certainty. Together these and a range of other factors are known as the business environment, or investment climate. The objective of this subsection is not to provide a comprehensive analysis, but instead to highlight a selection of the most salient points policymakers need to contend with.

The financial sector stands out as one area where serious reforms are needed if GVC activity is to be increased. Foreign exchange is effectively rationed by central authorities, and reserves are very low (in terms of months of import coverage). Although the Birr has been depreciating against the US dollar over recent times, it has been following a stable trend. Inflation, on the other hand, is fairly high, at around 10%. Significant inflation is not uncommon in a rapidly growing economy, but it can discourage investment because inflation tends to be correlated in levels and variance (uncertainty). Together, these factors suggest that there is real need to introduce additional flexibility into the financial sector. Facilitating entry by foreign firms could help improve credit availability and pricing.

More generally, however, the country will need to consider controlled liberalization of the capital account. The relative lack of foreign reserves suggests that the de facto crawling peg may need attention. Although sudden devaluations can be destabilizing, aligning the exchange rate better with fundamentals could have a beneficial effect on Ethiopia’s exports, and would allow accumulation of larger foreign exchange reserves. Rationing foreign exchange makes it difficult and very uncertain for firms to access the imported intermediates they need to produce goods competitively for the world market. Similarly, GVC lead firms are unlikely to make substantial investments if their ability to repatriate profits is not reasonably secure. Addressing these macroeconomic aspects of the investment climate is a clear priority, given the objective of promoting GVC participation in light manufacturing.

The World Bank’s Doing Business project provides a range of data on other aspects of the business environment. Although Ethiopia has been improving over time, it remains poorly ranked at 159 out of 190. Points of relatively strong performance include the ease of paying taxes, and contract enforcement. The latter is particularly important for GVC linkages, as supplier relationships are contractual, and lead firms need to be sure they can enforce contractual provisions. Progress in these areas is therefore to be welcomed, and lays a good basis for moving forward with other reforms. However, it remains challenging to start a business, obtain a construction permit, get credit, or move goods across the border. Trade facilitation, or the transaction costs associated with importing and exporting, is a key determinant of GVC participation (Saslavsky and Shepherd, 2014). There is a clear bias against imports in Ethiopia’s trade facilitation arrangements: border and documentary compliance terms for export are at or below the average for Sub-Saharan Africa, but the same measures for imports are about double the Sub-Saharan African average. The comparison with Vietnam is again striking: border compliance on the import side takes 203 hours in Ethiopia, compared with only 13 in Vietnam. This point is extremely important, because it suggests that even if intermediate input markets are liberalized in the conventional trade policy sense, Ethiopian firms will still have difficulty sourcing inputs competitively from the world market. Trade facilitation reform aimed at speeding up trade times in both directions is a clear priority for policymakers,
and a necessary condition for enhanced GVC participation. Countries that have successfully leveraged GVC participation for broad-based inclusive development almost always perform well in the area of trade facilitation.

Another issue policymakers will need to contend with is the option of sector-specific policies and incentives designed to promote industrial development. Many countries have made use of such programs, but with mixed results. Although there are information asymmetries, externalities, and other market failures that can impede development of the manufacturing sector in a low-income country, the risk that support policies are “captured” by incumbent firms is high. Successful interventions require the government to credibly commit to a time path of policy. But existing firms may believe they can “game the system” and force the government to extend the policy even if results are not as favorable as expected. Policymakers should be cautious about going down this road. Given the considerable challenges that exist in Ethiopia’s business environment, particularly in the financial sector and in relation to trade facilitation, the first priority should be to make use of horizontal measures that do not discriminate among sectors or firms. The overarching concern should be to promote productivity upgrading, including through exposure to competitive pressures from the world market. Forging successful medium-term linkages with GVCs is predicated on constant innovation and upgrading, and it is important that policies not unintentionally reduce the incentives firms have to engage in those behaviors.

5. Conclusion

This paper has examined Ethiopia’s actual and potential participation in GVCs, focusing on light manufacturing sectors. The country has enjoyed rapid and sustained economic growth, and has seen some trade growth in light manufacturing, particularly in clothing. However, the data clearly suggest that although value chains are developing, the “global” aspect needs to be intensified. In particular, restrictive trade policies, as well as poor trade facilitation, make it difficult for producers and exporters to access inputs at world market prices. Other countries that have successfully used GVCs to promote rapid development through middle income status, such as China and Vietnam, are considerably more open to international flows of goods, services, and investment than Ethiopia is. Policymakers need to consider substantial liberalization in all of these areas if they are to build on recent achievements, and cement Ethiopia’s place in light manufacturing GVCs.

Comprehensive reform poses a range of challenges for any government, all the more so in a low income country. A particular issue for Ethiopia relates to tax policy: trade taxes are a significant source of government revenue, but continued restrictions will make it difficult for firms to join and move up in light manufacturing GVCs. Although measures like duty drawbacks are a partial solution, they do not allow domestically-oriented firms that could become exporters in the future to access competitively priced inputs, thereby hindering their growth and development. A key policy priority should therefore be to progressively shift the tax base more onto income and consumption, and away from trade. A more competitive tax structure could facilitate a liberalization of trade flows, focusing in particular on input markets. The result would be to reinforce the competitiveness of Ethiopian firms.

The evidenced reviewed in this paper—on policies and outcomes—suggests that there is a strong case for liberalizing trade and investment flows, including in services, with the aim of
promoting GVC linkages. But doing that alone will not be enough to bring about the kind of success enjoyed by countries like Vietnam and China. Policymakers also need to pay attention to the business environment. On the one hand, financial transactions are clearly an issue impeding further GVC development: lead firms need to be able to repatriate profits efficiently and with certainty, and local firms need to be able to access foreign exchange. At the same time, trade facilitation has major potential to promote GVC linkages, but is clearly biased against imports. GVCs link importing and exporting more closely than traditional business models, so policymakers need to take account of the fact that one cannot occur without the other. Facilitating trade in both directions, and reducing very high compliance times, should be a key priority moving forward.

It is important to stress that changing focus from the domestic market to the world market in no way constitutes a loss for domestic consumers. If Ethiopian firms can be globally competitive, they will be supplying goods that are of high quality and reasonable cost, some of which are currently imported. Boosting competitiveness and developing light manufacturing GVCs would indeed then benefit local consumers by maintaining downward pressure on prices, but more importantly boosting quality to world market levels. Experience in countries that have successfully used GVCs to promote industrialization is that the population tends to benefit both as consumers, and also as wage earners in the new industries.

Although much remains to be done on the policy front, Ethiopia is clearly well positioned given its income level to participate more strongly in light manufacturing GVCs. Labor is abundant, and selected industries, such as clothing, have seen substantial inward FDI, and some export success. The priority moving forwards needs to be on developing a competitive supplier base locally, and incentivizing lead firms to make relationship-specific investments that are the hallmark of GVCs. Experience elsewhere shows that GVC participation can help promote a range of development goals, from the economy to social and environmental questions, so renewed attention to binding constraints by policymakers has the potential to bring significant benefits to Ethiopia as it aims to move into middle income status.

References


