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Value chain directionality, upgrading, and industrial policy in the Tanzanian textile and apparel sectors

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Abstract: With recent changes in the global economy, policy makers are increasingly turning from global value chains to regional and national value chains as drivers of structural transformation in the global South. This paper examines economic and social upgrading in the Tanzanian textile and apparel sectors, with a particular focus on how outcomes vary across value chains, i.e. with value chain directionality. We also analyse industrial and trade policies at the national, regional, and global levels to see the extent to which they allocate rents that enable firms to capitalize strategically on the benefits offered by different value chain types. Data are drawn from fieldwork comprising a firm survey and semi-structured interviews with policy makers, as well as from official sources. We find that national, regional, and global value chains each offer distinct opportunities in terms of functional, product, process, and end-market upgrading as well as other economic and social outcomes and that while policy rents have been critical to the outcomes observed, there is scope to improve multi-scalar industrial policy design to achieve rapid structural transformation.

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1   Introduction

Successful industrialization in front runner and latecomer countries in Europe and Asia involved the development of various strategic manufacturing sectors in turn, among them textiles and apparel (T&A) (Reinert 2007). Changes in the global production system in recent decades, particularly its increased organization into global value chains (GVCs) and the co-evolution of international trade policy regimes, have raised questions about the potential of T&A to drive structural transformation in low-income countries (LICs) today (Staritz 2011). With heightened uncertainty in global markets and a renewed push towards regional integration in Africa, there is hope that regional value chains (RVCs) within the continent and national value chains (NVCs) can more successfully support inclusive industrialization (Pickles et al. 2015; Morris et al. 2016). This paper investigates how *value chain directionality*—orientation to NVCs, RVCs, or GVCs—and accompanying industrial policies at the national, regional, and global levels affect productive upgrading and development outcomes, with reference to T&A in Tanzania. The concept of 'value chain directionality' introduced here builds on seminal contributions emphasizing the different 'learning effects' of exports to different directions (Amsden 1986) as well as more recent work on the significance of input origin for productive outcomes (Amighini and Sanfilippo 2014).

After independence, Tanzanian policy makers prioritized an 'NVC approach' to developing a domestic T&A industry, emulating the industrialization strategies of front runners by using import substitution to create mass employment and backward linkages to agriculture, where cotton had been introduced under colonial rule (Kabissa 2014). Liberalization and privatization followed from the late 1980s, but overall the industry has failed to act as an engine of growth and underperformed relative to regional competitors like Kenya and Ethiopia, despite Tanzania's preferential access to high-income markets and favourable foreign direct investment (FDI) incentives promoting integration into GVCs (Msami and Wangwe 2016; URT 2016; Andreoni 2017a, 2017b). Nevertheless, following Tanzania's active participation in regional integration efforts, its T&A exports to the region have grown substantially, allowing for a comparison of outcomes across NVCs, RVCs, and GVCs. The following two research questions guide our data generation and analysis:

1. In which ways do NVCs and RVCs offer different opportunities for upgrading and competitiveness than GVCs, and how do Tanzanian T&A firms seize these opportunities?

2. How do policies at the national, regional, and global levels promote value chain participation and upgrading by Tanzanian T&A firms, and how can policies be adapted to improve outcomes?

The paper is organized as follows. The next section reviews literature on upgrading in different T&A value chains and the role of industrial and trade policies, identifying several gaps. Section 3 presents the empirical strategy and data sources used. Section 4 gives an overview of economic and social upgrading outcomes in the Tanzanian T&A sector, drawing on publicly available data. Section 5 combines firm-level and policy analysis, based on fieldwork comprising a survey of large Tanzanian T&A firms and semi-structured interviews with policy makers, complemented by access to transaction-level trade data and official documents. A final section draws out implications for

ongoing industrial policy development in Tanzania,[1] advancing a multi-scalar approach for improving industrial competitiveness, which may have relevance for other LICs.

2   Literature review

The paper builds on and contributes to two main areas of literature, the first on firm performance in different value chains and the second on industrial policy rents in the contemporary multi-scalar context. The direction of trade or 'trade directionality', mainly concerning the destination of exports, has been identified as an important factor underlying processes of structural transformation in late industrializers, with greater 'learning effects' expected from South-South trade (Amsden 1986). Seen through the contemporary analytical lens of value chains, the growing regionalization of trade can be viewed as a change of 'value chain directionality', i.e. a shift from GVCs to RVCs. Studies of apparel GVCs have found different end markets in the global North to offer distinct upgrading opportunities (Palpacuer et al. 2005), and this paper contributes to the emerging literature on the implications for structural transformation of value chain regionalization in the South (Morris et al. 2016).

The interconnected capital-intensive textile and labour-intensive apparel sectors have long been favourites for GVC studies, serving as testing grounds for organizing concepts like models of value chain governance and trajectories of upgrading (Gereffi 1999). This literature views firm performance in terms of upgrading, particularly functional upgrading from basic apparel assembly operations, to providing a full package service to high-value activities like design and branding, with the possibility of vertical integration to textile manufacture along the way (Staritz et al. 2017). We highlight several major criticisms levelled at this framework that guide the present research. First, studies tend to assume that firms operate in a single value chain serving a single end market, neglecting the potential for firms to engage *simultaneously* with multiple value chains and serve different end markets across regions (Navas-Alemán 2011). Second, the study of GVCs has resulted in an overriding preoccupation with exporting firms, yet there is evidence that firms carry out higher-value functions in NVCs serving domestic markets (Bazan and Navas-Alemán 2004: 110–39). Third, the use of upgrading to appraise firm performance is criticized because upgrading need not be accompanied by greater surplus generation or capture, with strategic downgrading sometimes preferred (Tokatli 2013). Finally, there is increased recognition that a myopic focus on economic upgrading neglects important societal outcomes, with recent studies giving more attention to indicators of 'social upgrading' such as working conditions and wages (Milberg and Winkler 2011).

Recent research on T&A value chains in the global South has addressed some but not all elements of these critiques. Staritz and Whitfield (2018) go beyond upgrading as a measure of economic performance to develop a matrix of sector-specific technological capabilities, yet they focus exclusively on GVC exporters despite acknowledging the numerous Ethiopian firms integrated into NVCs serving the lucrative domestic market. Likewise, Phelps et al. (2009) focus on the FDI-driven, GVC-oriented segment of the Kenyan apparel industry, neglecting the domestically owned firms in NVCs serving local markets. Morris et al. (2011, 2016) examine the different upgrading potential for firms in sub-Saharan Africa (SSA) of value chains governed by regional and global investors but with ownership characteristics as their central analytical focus rather than a comparison of GVCs and RVCs per se. Tanzania has not featured in recent academic research on

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[1] Specifically, the paper aims to contribute to the reviews by Tanzanian authorities of the Integrated Industrial Development Strategy 2025 and the Sustainable Industrial Development Policy 2020.

the T&A sector in SSA, but given the range of value chains into which Tanzanian firms are integrated, the sector presents an appropriate case study to address the gaps identified in the literature.

The second area of literature with which this paper engages is around the political economy of industrial policy rents in the contemporary context of overlapping value chains and trade regimes at the national, regional, and global levels.[2] Despite dissenting voices within and without, mainstream development thinking continues to advise countries to conform to their (static) comparative advantage rather than defy it (Lin and Chang 2009; Cherif and Hasanov 2019) and prioritize entering GVCs and widening participation therein rather than building integrated NVCs (Taglioni and Winkler 2016). In the context of the Tanzanian T&A sector, this points towards a short-term focus on encouraging FDI in labour-intensive, low-skill apparel assembly for global markets using imported inputs, rather than backward integration to capital-intensive textiles manufacture or value addition of domestic inputs (Dinh and Monga 2013). Preferential trade agreements such as the US African Growth and Opportunity Act (AGOA) and the European Union's Everything But Arms arrangement encourage the GVC approach by providing rents to global exporters, supported by relaxed rules of origin (ROO), which allow apparel made from imported fabrics to qualify for duty-free market access (Pickles et al. 2015).

GVC-based industrialization strategies advocated today contrast with the NVC approach of classical development economists such as Albert Hirschman (1977), who focused on multiple linkage dynamics within national economies as main drivers of the 'multidimensional conspiracy' for development. They also differ from the industrial strategies of east Asian newly industrialized countries (NICs), with their emphasis on building domestic productive capabilities through rents fostering strategic value chain integration, first through import substitution (building NVCs) and then by export promotion (insertion into RVCs and GVCs) (Chang 1994; Andreoni 2019). Among industrial policy scholars, there remains a bias against NVCs, with the assumption that exposure to global competition through exporting is necessary to induce 'learning for productivity' (Whitfield et al. 2015), despite the high levels of import competition in the liberalized domestic markets of many countries in the global South (e.g., Torreggiani and Andreoni 2019).

With shifts in demand growth dynamism from north to south and renewed efforts towards regional integration by developing countries, RVCs have emerged as a basis for industrial policy (Barrientos et al. 2016). Regional trade agreements (RTAs) such as the East African Community (EAC) and Southern African Development Community (SADC) create rents aimed at promoting RVCs, with ROO critical to determining who benefits in the T&A sector particularly (UNCTAD 2019). Yet the design and enforcement of domestic and regional policies in many ways still favour GVCs, such as the case of export processing zone (EPZ) regimes (Whitfield et al. 2015), indicating a strategic misalignment of market opportunities and rent allocation.

The academic literature on industrial policy has not kept pace with changes in the global economy, with a lack of research into the complexities of policy-making at the national, regional, and global levels simultaneously (Behuria 2019). Further, questions of power and political economy are rarely given due attention in value chain studies (Dallas et al. 2017; Andreoni 2019). This paper examines

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[2] A rent is income higher than the minimum that would have been accepted (defined as the income from the next-best opportunity) and can be generated by policies to encourage firm entry and learning in currently unprofitable but socially desirable areas like manufacturing (Khan 2000). All economic policies generate some form of 'rent', from obvious examples like subsidies (i.e. direct transfers of resources) to import licences or preferential market access where states allocate the right to operate in a certain market or activity, granting firms access to otherwise unavailable income streams.

policies at different levels and how they interact, the effects on rent distribution among competing actors, and the extent to which multi-scalar industrial policy is successfully supporting strategic engagement in different value chains by Tanzanian T&A firms.

3   Methods and data

To address the research questions outlined, we combine sector-level analysis of T&A in Tanzania, firm-level analysis of performance in value chains, and rents-based policy analysis at different geographic levels. Section 4 provides an overview of economic and social upgrading in the Tanzanian T&A sector, i.e. movement towards higher-value economic activities and accompanying changes in social outcomes, drawing on public data from Tanzanian authorities and international organizations. Tanzania's Annual Survey of Industrial Production (ASIP) from the National Bureau of Statistics (NBS) provides data on economic outcomes in the manufacturing sector such as value added, exports, and productivity (value added per worker) as well as social outcomes such as employment, gender balance, wages, and local sourcing of raw materials. Data are available for most years from 2008–16, broken down by manufacturing subsector and also by firm size for some indicators.[3] Section 4 also uses international trade data from UN Comtrade (2020) to assess performance, following Kaplinsky and Readman (2005) in using a combination of export unit values and market share trends to identify upgrading trajectories, first at the sector level and then the product level.

Section 5 presents an integrated analysis of firm performance and associated policies across NVCs, RVCs, and GVCs. Firm data are drawn principally from a survey carried out in 2019 of all large T&A firms operating at the time, undertaken in collaboration with sectoral stakeholders. Firm-level trade data were made available by national authorities, which are used to contextualize and triangulate findings from the firm survey where possible. Given the pre-eminence of upgrading in the value chain literature, we first examine the upgrading outcomes—in terms of function, product, process, and end market (Morris et al. 2016)—observed in NVCs, RVCs, and GVCs.[4] A contribution of this paper is to develop an approach to assessing functional upgrading and performance, which accounts for how firms carry out different activities in multiple value chains simultaneously. We 'unbundle' the traditional packages of functions used in the literature (e.g., CMT, FOB, ODM, OBM)[5] and elicit information on the activities and services provided in each value chain type. Given the limits to the upgrading framework identified in the literature review, we also use other economic and social metrics available such as capacity utilization, employment, and local content.[6]

Policy analysis draws on semi-structured interviews with firms and policy makers; trade and tariff data; and official notifications, legislation, and regulations. Rather than premising our analysis on

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[3] The definition of textiles in the International Standard Industrial Classification (ISIC) system used by NBS for ASIP includes the production of mosquito nets, packaging materials, sisal fibres, and related products, but these categories are excluded from the rest of the analysis because the production processes and capabilities involved are different from those of the T&A value chain.

[4] The upgrading outcomes mentioned are defined respectively as moving to higher-value activities, products, production processes, and end markets.

[5] CMT: cut, make, and trim. FOB: free on board, aka full package service. ODM: original design manufacturer. OBM: own brand manufacturer.

[6] Wages are excluded from the firm-level analysis because of incomplete and missing survey responses to these questions.

policy and strategy documents, which may not be fully implemented, we focus on concrete measures that allocate rents between actors where possible. For NVCs this includes analysing the valuation of imported products using international trade data, as well as public procurement policy and the granting of duty remission, drawing on official documents. For RVCs we use trade data to assess the rents provided by the SADC and EAC free trade areas (FTAs) and the impact of EAC policy towards used clothes. In GVCs we examine AGOA rules and associated rents, along with the use of EPZs to create additional rents for GVC-oriented firms. Rents from duty-free trade arrangements are calculated simply as the product of trade values and most favoured nation (MFN) tariff rates, i.e. approximately the tariff payments that would otherwise have been due.[7] More cross-cutting policy issues affecting Tanzanian firms across value chains and sectors—such as constraints linked to power supply, infrastructure (roads, railways, and ports), skills, and credit—are well documented and not addressed here (see Andreoni 2017a, 2017b).

4 Sector overview: economic and social upgrading in Tanzania's T&A sector

4.1 Economic upgrading

Manufacturing value added

Tanzania's manufacturing sector as a whole has performed well compared to the region, with manufacturing value added (MVA) growing the fastest of all EAC countries at 7.7 per cent per annum between 2000 and 2015, but nonetheless, Tanzania's share of manufacturing in gross domestic product (GDP) increased only marginally from 6.2 per cent in 2006 to 6.8 per cent in 2015 (EAC 2017: 33). The story for T&A is more mixed, with data suggesting an industry struggling to maintain competitiveness in a changing domestic and external environment, with heterogeneous outcomes across subsectors. Figure 1 shows the textile sector's share in MVA having fallen from 5 per cent in 2008 to 2 per cent in 2016. Counteracting the poor performance in textiles is the emergence of the apparel sector, which was negligible in prior years but accounted for an average of 5 per cent of MVA in 2015 and 2016.

When the figures are broken down by firm size it becomes evident that large firms make a disproportionately large contribution to T&A sector outcomes. This is particularly evident in data for 2013, the only year when all industrial establishments were included (in other years only establishments with 10 or more employees were surveyed), which is reproduced in Table 1. In the textile sector the value added for the eight firms employing more than 500 people each was greater than the remaining 700 firms put together, and value added per establishment was vastly higher because of the large economies of scale and capital-intensive nature of the textile industry. Interestingly, the picture is different for productivity, where medium-sized establishments (10–50 employees) see the highest levels of value added per person engaged. In the apparel sector the large number of micro-enterprises (1–10 employees) makes up the vast majority of employment and value added overall, yet larger firms perform far better on productivity measures. When it

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[7] In the absence of duty-free market access, trade volumes are likely to have been lower. Another approach would be to calculate trade rents based on the higher prices that buyers are willing to pay to suppliers within an FTA to avoid paying tariffs on importing the same products from outside. However, the relatively small volumes of apparel exported from Tanzania and the nature of trade statistics make it impossible to identify benchmarks of the same type and quality.

comes to exports and thus the potential to earn foreign exchange, the largest establishments again account for almost all activity.

Figure 1: Total manufacturing value added and T&A subsector shares
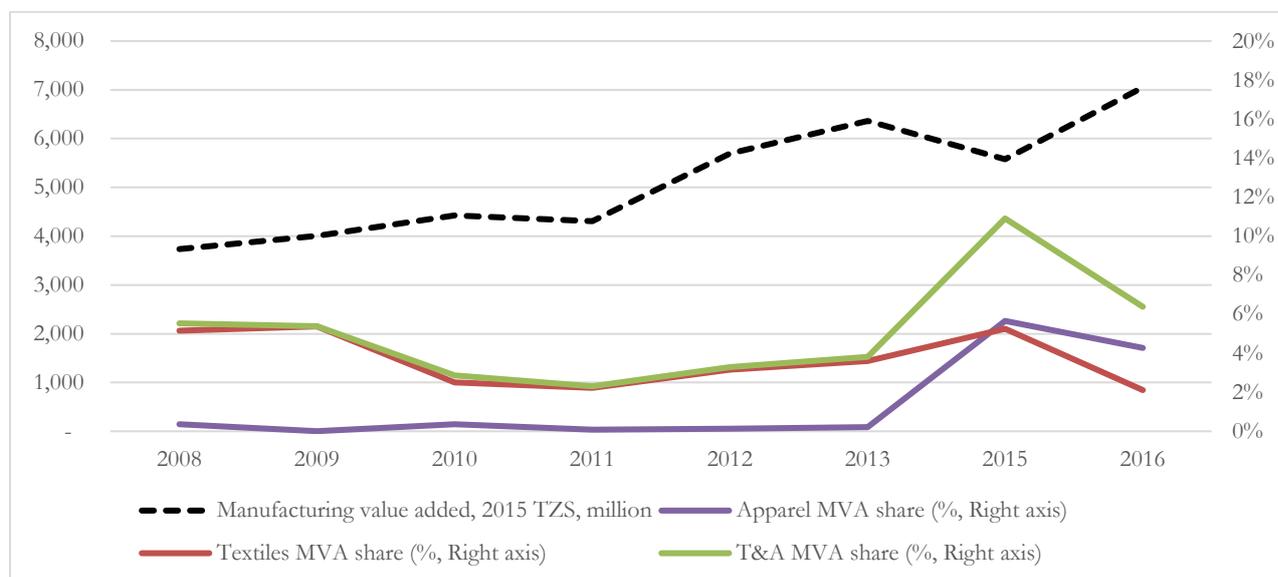
Source: authors' illustration based on ASIP (2018). World Bank (2020) GDP deflator for Tanzania used to convert MVA from nominal to real values.

Table 1: Census of industrial production, T&A sectors, 2013

		Establishment size				
		1–10	10–50	50–500	500+	Total
Number of establishments	**Textiles**	676	10	14	8	708
	Apparel	13,280	10	2	1	13,293
Number of persons engaged	**Textiles**	1,648	279	3,478	12,309	17,714
	Apparel	28,795	212	229	1,302	30,538
Value added (TZS thousands)	**Textiles**	3,748,878	16,532,648	43,446,234	103,753,978	167,481,738
	Apparel	54,188,621	2,145,500	1,022,422	6,881,590	64,238,133
Value added/person engaged	**Textiles**	2,275	59,216	12,490	8,429	9,455
	Apparel	1,882	10,114	4,456	5,286	2,104
Value added/establishment	**Textiles**	5,549	1,594,098	3,152,483	13,334,485	236,702
	Apparel	4,080	212,483	505,774	6,808,396	4,832
Export sales (million TZS)	**Textiles**	-	-	13,101,678	128,692,263	141,793,942
	Apparel	-	-	77,525	14,787,730	14,865,255

Source: authors' calculations based on ASIP (2018). Figures are in TZS thousands.

The trend in the number of large T&A establishments operating reflects subsector MVA outcomes. Despite their high levels of productivity, the number of textile firms employing more than 500 employees declined from nine in 2008 to only four in 2016. Meanwhile there were no apparel firms in this size category operating in 2008 and two by 2016. The apparent paradox of a decline in textiles alongside growth in apparel production is accounted for below, with reference to the weak linkages between the subsectors and their different value chain directionality.

Export composition and destinations

The trade statistics presented in Figure 2 suggest functional upgrading in the T&A sector alongside increased orientation to RVCs. The share of manufactured goods in Tanzania's exports of T&A value chain products steadily increased to a peak of 70 per cent in 2017 before declining again in 2018, indicative of functional upgrading, i.e. moving from lower- to higher-value chain functions, namely from the agricultural production of cotton fibres to fabric and apparel manufacture for

export. This has been achieved through exploiting access to the US market under AGOA but also increasingly exporting to regional neighbours, especially South Africa via SADC, with the share of total T&A exports to Africa peaking at 44 per cent in 2017. The share of manufactured products in T&A exports to Africa is much higher (by 2–3 times in recent years) than to the rest of the world, confirming a longstanding observation in the trade directionality literature (Amsden 1986).

Figure 2: Tanzanian exports of T&A value chain products
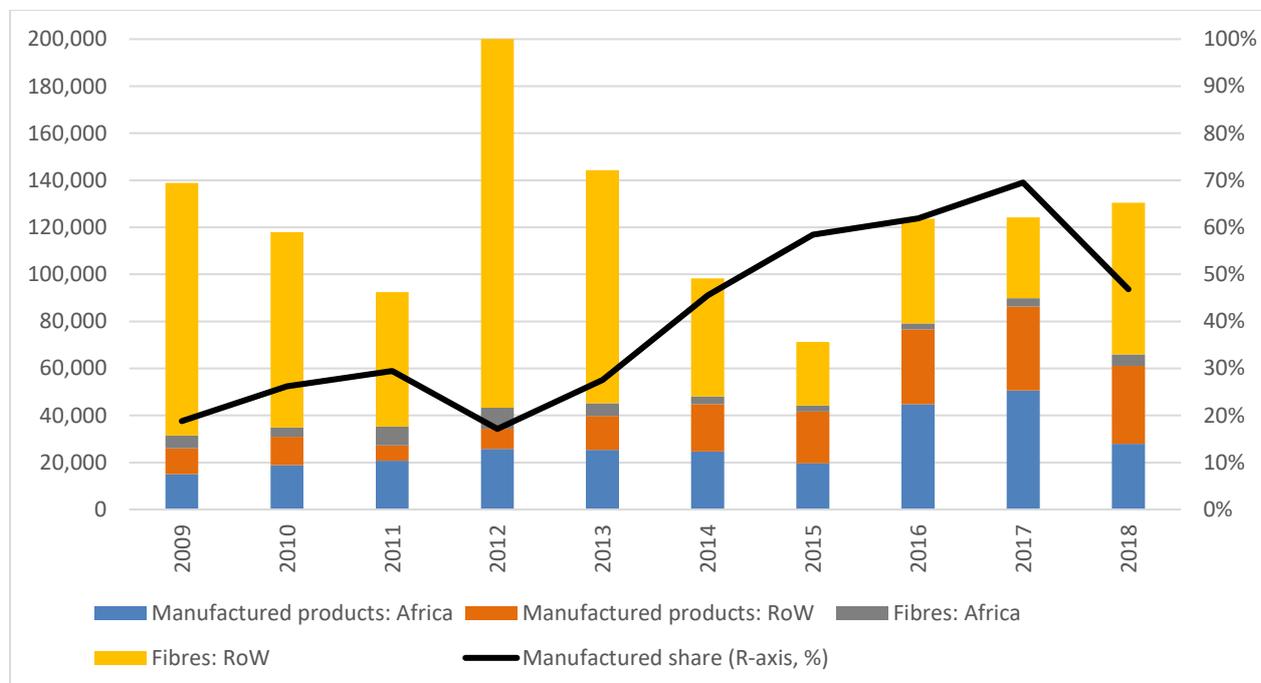
Source: authors' illustration based on Comtrade (2020).

Exports are in US$ thousands. RoW: rest of world. Manufactured products are yarns, fabrics, articles, and apparel. Sacks and bags, sisal products, and mosquito nets are excluded from analysis. Processed share is calculated as share of manufactured T&A products in total T&A exports.

Export unit values and market share

Figure 3 shows that unit values of Tanzania's T&A exports relative to world export unit values have risen steadily concurrently with Tanzania's market share of world T&A exports, suggesting that the sector is moving towards exporting higher-value products while improving its competitiveness.

Turning to the higher-value apparel segments of Tanzania's T&A exports, a more mixed upgrading picture emerges at product level. Table 2 lists Tanzania's top apparel exports at the HS six-digit level, representing 72 per cent of total apparel exports (and 42 per cent of T&A exports) over the 2016–18 period, in descending order by export value. The following columns respectively show the main end market for each product (either the United States or South Africa); the relative unit value reported by the importing country in 2019, expressed as a share of the import unit value from China; the percentage change in relative unit value from 2016–19; Tanzania's market share of the importer's total imports of that product in percentage terms in 2019; percentage change in market share from 2016–19; and finally, potential interpretations of the relative unit value and market share trends, following Kaplinsky and Readman (2005).

Figure 3: Tanzania share of world exports and export unit values of manufactured T&A products
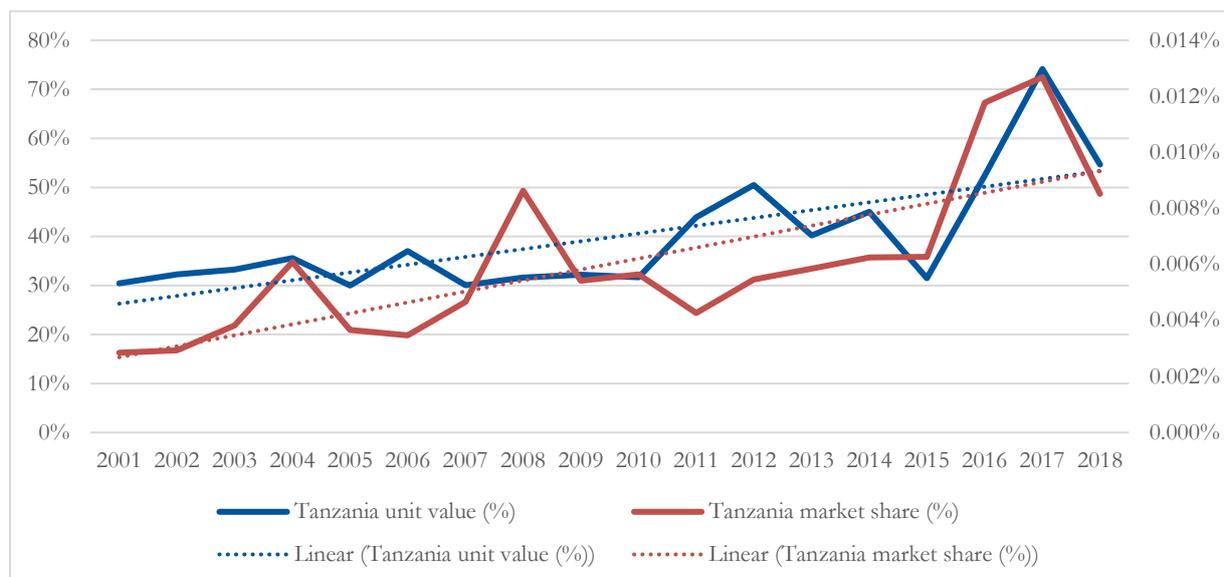
Source: authors' illustration based on Comtrade (2020).

Manufactured T&A products only, from Harmonized System (HS) chapters 52–63, as per Figure 2. Market share (per cent of world exports on right axis, relative export unit value on left axis [US$/kg, expressed as per cent of China's unit values]).

Table 2: Tanzania apparel export unit values, market shares, and upgrading outcomes

Product	End market	UV	UV %	Mkt share %	Mkt share %	Up/downgrading outcome
620342 M/b trousers…(c)	USA	1.09	7	0.33	101	Product upgrading
610990 T-shirts… (nc)	USA	1.45	12	0.38	-23	Failed product upgrading
610910 T-shirts… (c)	SA	0.84	-29	3.86	39	Process upgrading
610510 M/b shirts… (c)	SA	0.63	-27	2.49	-4	Product and process downgrading

Notes: Cotton-based products marked (c); (nc) = non-cotton; M/b = Men's/boys'; codes beginning 61 are knitted or crocheted, and those beginning 62 are not. UV: unit value; SA: South Africa.

Source: authors' calculations based on Comtrade (2020) and national authorities via ITC/Trademap.org.

Across the four main export products, Tanzania sees each of the four possible outcomes. For the top export, cotton trousers to the United States, an increase in market share despite rising relative unit value indicates successful product upgrading. By contrast, in the case of non-cotton T-shirts, increasing unit values (rising prices) are apparently not being offset by improved quality, resulting in falling market share and suggesting failed product upgrading. For cotton T-shirt exports to South Africa, falling unit values alongside increased market share is indicative of process upgrading, i.e. improved competitiveness in production. Exports of cotton shirts to South Africa show falling unit values alongside falling market share, indicating product and process downgrading.

4.2 Social upgrading

As awareness of the potential disconnect between economic upgrading and social outcomes has grown, a wide range of indicators that captures aspects of social upgrading have been proposed (Milberg and Winkler 2011). Human development and poverty indicators at the national level provide context before employment, wages, and local content are examined in the T&A sector. Tanzania has registered relatively strong improvements in human development, with its Human Development Index (HDI) value increasing by around 42 per cent between 1990 and 2018 (from

0.373 to 0.528), but it remains in the 'low human development' category, ranked 159th out of 189 countries (UNDP 2019). In mainland Tanzania the proportion living below the national basic needs poverty line fell from 34.4 per cent in 2007 to 26.4 per cent in 2018 (URT 2019), but nearly half live below the international poverty line of US$1.90 (World Bank 2020).

Employment

The value-added trajectory of T&A subsectors described above is also shown in employment data for firms employing 10 or more people. In Figure 4 the number of persons engaged in textile manufacture falls to around 9,000 in 2016, down from a peak of over 16,000 in 2013. Apparel meanwhile employed a negligible number in the 2000s, but by 2016 there were already over 4,000 persons engaged. Taken together, the T&A sectors saw a decline in employment from 2013–16 with growth in apparel not completely offsetting decline in textiles, but the 2016 level was still higher than the pre-2006 period. Data from the annual survey of large T&A firms conducted by Tanzania's Textile Development Unit (TDU) suggest increases in employment from 2016–18 (TDU 2019), but ASIP data are not available for those years.

Figure 4: Employment: total persons engaged, firms with 10+ employees
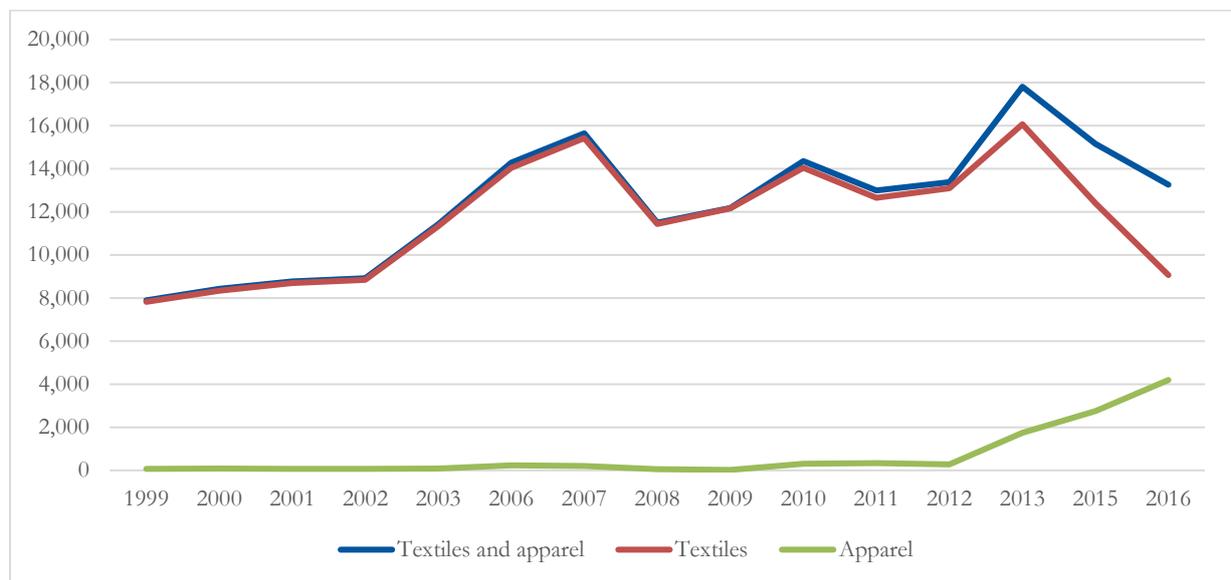
Source: authors' illustration based on ASIP (2018).

Around half of operatives in the T&A sector are skilled (as opposed to non-skilled), higher than in the manufacturing sector as a whole (42 per cent). This along with the changing composition of T&A towards apparel may bring greater opportunities for women. The female share of employment in apparel manufacturing was 60 per cent, compared to 44 per cent in textiles and only 32 per cent in the manufacturing sector as a whole. Delving deeper into subcategories of employees, 72 per cent of skilled operatives and 56 per cent of non-skilled operatives in the apparel sector were women, compared to 50 per cent and 47 per cent, respectively, in textiles (and 31 per cent and 34 per cent in manufacturing overall). When it comes to management positions, men dominate in both subsectors, occupying 63 per cent of such roles in apparel and 71 per cent in textiles, compared to 77 per cent in manufacturing overall.

Wages

Figure 5 shows trends in real wages per worker in the manufacturing sector overall and in the T&A subsectors for firms employing 20 or more employees. Wages in T&A are consistently and significantly less than average wages in the manufacturing sector as a whole, while also being

greater than the national poverty line. Apparel subsector wages showed an upward trend between 2009 and 2013, after which they fell to nearly half of their previous value. This coincided with employment expansion by the largest apparel exporters, but wages in large apparel factories employing 500 or more employees are overall slightly higher than in smaller firms. Textile subsector wages were largely stagnant to 2012, after which they doubled by 2015 before declining again by one-third in 2016. Large textile firms (500 or more employees) followed a similar trend except for 2015. Overall T&A wages largely track those in the textile subsector given negligible apparel employment until the final years, therefore showing an upward trend indicative of social upgrading over the period.

Figure 5: Real wages per worker and national poverty line, constant 2015 TZS (thousands)
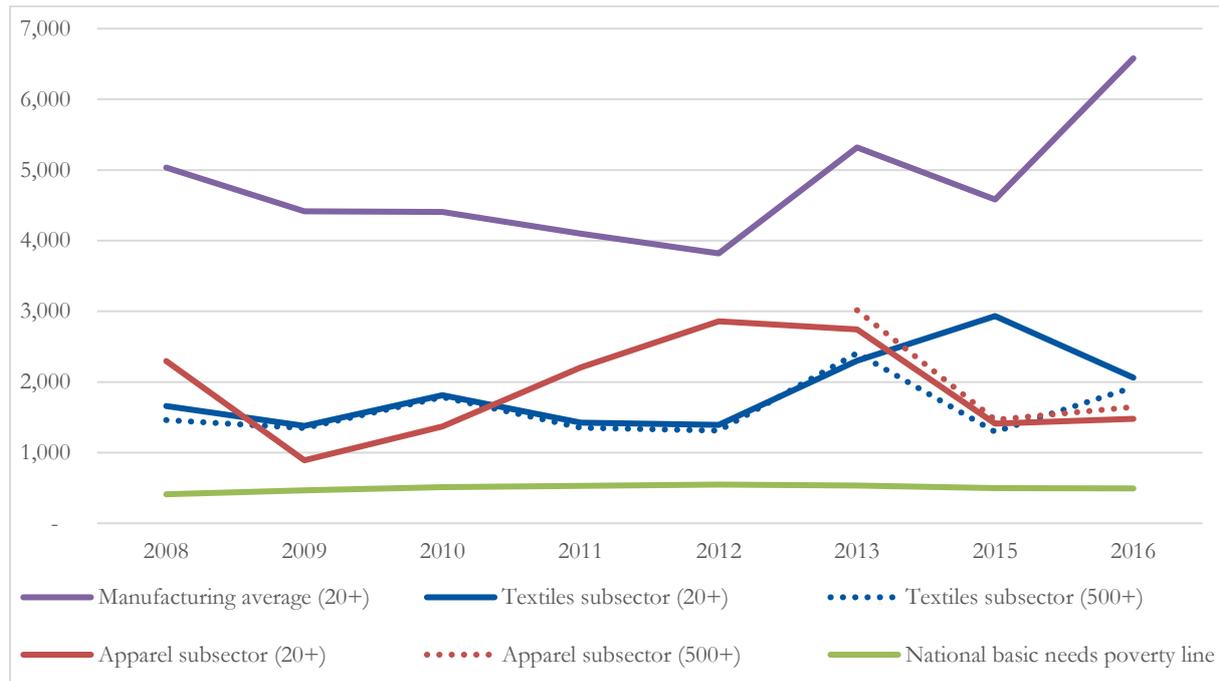
Source: authors' illustration based on ASIP (2018) for nominal wages and persons engaged (no data for 2014). Results for T&A are given for firms employing 20 or more (20+) and 500 or more (500+) employees; smaller firms are excluded because of wage data discrepancies. The World Bank (2020) GDP deflator for Tanzania was used to convert nominal to real values. NBS (2019) gives the national poverty line for 2007, 2012, and 2018; values for other years are interpolated linearly. All figures are annual.

Besides wages and salaries, employees also benefit from contributions by employers to social security schemes. In this regard, the T&A subsectors perform better, with the share of employer contributions in total labour cost standing at 8.2 per cent and 7.1 per cent, respectively, compared to 5.7 per cent in the manufacturing sector as a whole.

Local content

The degree to which manufacturing sectors source inputs locally is an indicator of how well integrated they are into the 'local production system' and the extent of backward linkages in the NVC (Andreoni 2019). More inputs sourced regionally or globally indicate greater integration into RVCs and GVCs, respectively. The ASIP surveys provide data on the T&A sectors' sourcing of inputs locally and from imports but does not distinguish regional from global imports. This suggests that the share of raw materials sourced locally by the textile sector alone has fallen from 93 per cent in 2009 to only 43 per cent in 2016. This closely tracks the trend in the manufacturing sector as a whole, where the same indicator fell from 86 per cent in 2009 to 45 per cent in 2016.

For the textile sector at least we can conclude there is a trend away from backwardly integrated NVCs to greater integration into RVCs and GVCs, which is also true for the manufacturing sector as a whole.[8] In terms of labour, T&A subsectors employed a higher share of locals than the manufacturing sector overall. The share of foreign workers in apparel manufacturing firms was 1.3 per cent, compared to 1.8 per cent in textile firms and 2 per cent on average among manufacturing firms.

4.3 Economic and social upgrading summary

Given the myriad possible approaches to measuring overall economic and social upgrading, we follow efforts in the literature to develop a parsimonious approach based on four key indicators among those already presented above, which also have the benefit of enabling comparison across countries and sectors (Bernhardt and Milberg 2011). Table 3 shows Tanzania's outcomes on these indicators across different periods and suggests that over the 2008–16 period, the T&A sector experienced social and economic upgrading overall despite economic downgrading from 2008–12 and ambiguous social outcomes in each sub-period taken separately. This makes Tanzania unusual as studies of the apparel sectors in other developing countries find relatively few cases where economic and social upgrading coincide (Bernhardt and Pollak 2015).[9]

Table 3: Economic and social upgrading in Tanzania's textile and apparel industry

	2001–08	2008–12	2012–16	*2008–16*
Economic upgrading	**Upgrade**	**Downgrade**	**Upgrade**	*Upgrade*
Market share	203.0%	-36.8%	115.9%	36.5%
Unit values	3.9%	59.7%	3.9%	65.9%
Social upgrading	**Incomplete data**	**Ambiguous**	**Ambiguous**	*Upgrade*
Employment	31.2%	16.3%	-0.9%	15.3%
Real wages per worker	No data	-15.3%	33.2%	12.8%

Sources: authors' calculations based on Comtrade (2020) for economic and ASIP (2018) for social upgrading indicators, as per Figures 3, 4, and 5 (note slight differences in products/activities captured by in ASIP and Comtrade data). Percentage changes are between first and last year of periods.

While these findings give some insight into upgrading trends in the sector—*what* happened—more detailed research at the level of firms and policy-making is needed to build a clearer picture of the underlying processes driving the observed outcomes—the *how* and *why*. Given the suggestion in the literature that 'economic upgrading seems to be a necessary but not sufficient condition for social upgrading' (Milberg and Winkler 2013: 260), the next section will largely focus on economic upgrading with some attention to social outcomes where data are available.[10]

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[8] The data for the apparel sector appear unreliable as zero raw material imports are reported in 2015 and very low levels in 2016, suggesting the exclusion of raw material imports into EPZs.

[9] Although, caution in making comparisons is necessary because of the different time periods and product categories analysed.

[10] These two processes—economic and social upgrading—can present cumulative dynamics once a country has entered into a sustained path of industrial expansion, but Tanzania has not reached that stage yet.

5   NVCs, RVCs, and GVCs: firm strategies, policy drivers, and outcomes

We draw from a survey carried out in early 2019 of firms and policy makers in the T&A sector of Tanzania, alongside data from official sources.[11] All large firms (with 100 or more employees) operating in 2018 were surveyed, a total of nine factories, two of which are separate legal entities but owned and managed together, leaving effectively eight firms. The inclusion of exclusively large firms reflects their disproportionate actual and potential contribution to value added, employment, exports, and productivity growth, as outlined above. Firms are grouped according to their value chain directionality: those principally integrated into NVCs, RVCs (i.e. African), or GVCs.

The archetypal apparel upgrading trajectory from CMT (cut, make, and trim) assembly operations (at first on a subcontracting basis, then with direct links to buyers) to providing a full package/free on board (FOB) service, with the possible achievement of original design manufacturer (ODM) and own brand manufacturer (OBM) status, involves the successive addition of higher-value functions (Staritz et al. 2017). Table 4 unbundles these packages of functions, listing the main value chain activities relevant to T&A firms, from backward integration (input manufacture—spinning, weaving, knitting, and associated fabric finishing processes) to those linked more closely to final products, roughly in order of the production process. Design capability designates ODM status; a sampling section is required to have direct links to buyers; input sourcing (as opposed to buyer-nominated inputs) indicates full package/FOB production; cut, sew, and finish (aka CMT) are the basic steps of apparel assembly; printing, embroidery, and washing are additional finishing processes for T&A products; branding is associated with OBM status; and distribution (either retail or wholesale) is a post-production service allowing extra value capture. Rather than assuming a linear upgrading trajectory or engagement in one value chain only, firms were asked which functions they carried out for national, regional, and global markets.

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[11] As mentioned in Section 3, firms focused exclusively on mosquito nets, packaging materials, sisal fibres, and related products were excluded from the survey.

Table 4: Summary of NVC, RVC, and GVC firm characteristics, outcomes, and policy drivers

Firm type		NVC firms	RVC firms	GVC firms
Number of large firms		3	2	3
Ownership		Local	Local	Foreign
Privatized		Yes	No	No
EPZ status		No	No	Yes
Domestic inputs		Cotton	Cotton	Cotton, packaging
Regional inputs		Cotton	Cotton, yarn	-
Global inputs		Dyes, yarns, etc.	Yarns, trims, etc.	Fabrics, trims, etc.
Backward integration functions	Spin	3/3; N, R, G	1/2; N, R, G	1/3; G
	Weave/finish	3/3; N, R	1/2; N, R	-
	Knit/finish	1/3; N	2/2; N, R, G	-
Apparel and fabric value chain functions	Design	3/3; N, R	2/2; N, G	-
	Sample	3/3; N, R	2/2; N, R, G	1/3; G
	Input source	3/3; N, R	2/2; N, R, G	1/3; G
	Cut/sew/finish	1/3; N	2/2; N, R, G	2/3; G
	Print	3/3; N, R	2/2; N, R, G	-
	Embroidery	1/3; N, R	2/2; N, R, G	1/3; G
	Wash	3/3; N, R	1/2; N	1/3; G
	Brand	3/3; N, R	2/2; N, G	-
	Distribution	3/3; N	1/2; N	-
Employees - range		500–2,600	1,200–2,500	150–2,560
Employees - average		1,667	1,850	1,753
Capacity utilization range		35–70%	60–100%	50–91%
Capacity utilization average		49%	80%	75%
Product groups		Fp, Fi, A, Y	A, Fp, Fi, Y	A, Y
Sales by end market (average)	National	80%	38%	0%
	Regional	19%	60%	0%
	Global	1%	2%	100%
Upgrading outcomes	Function	1/3	-	-
	Product	-	-	1/3
	Process	2/3	1/2	2/3
	End market	1/3	1/2	-
Export UV, $/kg, all products		4.84	6.43	4.79
Export UV, $/kg, apparel only		-	9.76	8.70
Policy rents		Procurement contracts; national duty remission	SADC and EAC duty-free market access	AGOA duty-free market access, EPZ policy

Source: authors' survey data and national authorities.

Figures by value chain functions indicate how many of the firms in each group perform the function. Green indicates all firms in the group perform the function; amber indicates some firms perform it; and red indicates no firms do. N/R/G indicates for which end markets (national, regional, or global) functions are performed. Product groups are in order of importance for each group of firms: A: apparel; Fp: processed fabric; Fi: intermediate fabric; Y: yarn. Export UVs (unit values) are weighted averages for 2017 and exclude cotton lint and waste, used clothes, bed nets and netting, sacks, and bags.

Figure 6: Exports by firm group (current US$)
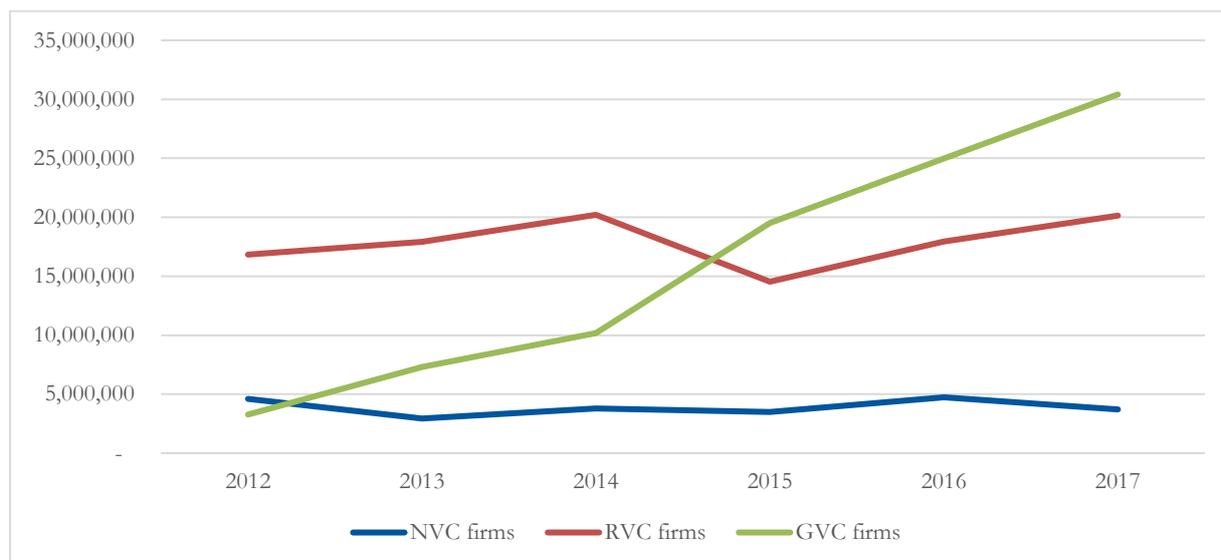
Figure 7: Export unit values by firm group (weighted average, current US$/kg)
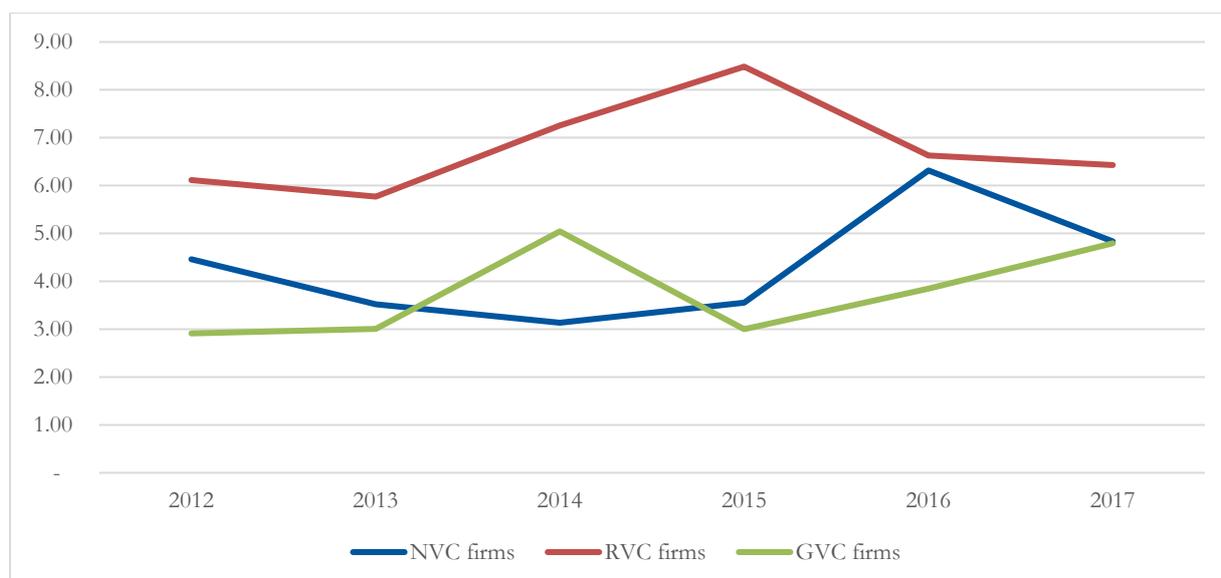
5.1 National value chains

Context

Three of the firms surveyed are integrated primarily into NVCs, with their main input—cotton lint—sourced domestically and an overwhelming majority of sales occurring in the Tanzanian market. All of these 'NVC firms' were established as state-owned enterprises (SOEs) from the 1960s, often with the support of concessional loans or aid from bilateral donors and benefited from rents in the protected domestic market (see also James 1996). This group has struggled to maintain competitiveness through Tanzania's phase of privatization and liberalization, with nine other NVC-oriented factories closed at the time of the survey (TDU 2019).

Factories of current NVC firms were privatized during the 1990s, losing the rents associated with state ownership. Survey respondents highlighted difficulties with privatization processes in Tanzania, which occurred in a rapidly changing political and institutional environment, resulting in a perception that factories were acquired for less than market value. The NVC factories and assets were acquired by Tanzanian family-owned business groups of south Asian origin largely focused on trading, with little experience running industrial enterprises. Ownership has changed little since privatization, and managers interviewed were either from the same family or a similar background. Owners do not rely on earnings from the textile factories alone: NVC firms are part of diversified business groups, with intra-group financing often important for providing working capital and supporting operations in lean periods (see also Andreoni and Sial 2020). The wider groups often engage in unrelated activities, such as gold mining, or areas with apparently contradictory interests to their textile factories (e.g., the import of used clothes).

Privatization also coincided with trade liberalization such that the new owners lost much of the rents from trade protection and struggled to remain competitive even in the domestic market. The applied weighted average tariff rates on manufactured T&A products fell sharply from 35.6 per cent in 1993 to 14.5 per cent in 1997 after Tanzania's accession to the World Trade Organization (WTO), then increased after the implementation of the EAC customs union to reach 24.1 per cent in 2018.[12] Tanzanian applied rates under the EAC Common External Tariff (CET) are 0 per cent on cotton lint and synthetic fibres; 10 per cent on cotton and synthetic yarns; 25 per cent on buttons, zippers, cotton, and synthetic sewing threads, woven cotton and synthetic fabrics, made-up garments, and textile articles; 35 per cent on used clothing; and 50 per cent on khanga and kitenge (K&K) printed fabrics. Although there is a duty remission scheme for inputs (discussed below), this is under-utilized in Tanzania, so tariffs on inputs reduce competitiveness and have not provided sufficient rents to encourage new productive investment.

Liberalization was followed by increased import competition, not only because of tariff reductions but also the increasing export competitiveness of Asian producers, particularly China. During interviews Tanzanian manufacturers complained of unfair competition because importers underreport the value of goods to evade taxation, enabling them to sell in the domestic market at lower prices than if tariffs were applied to proper values. This is corroborated by Andreoni and Tasciotti (2019), who use mirror statistics to estimate that T&A products are among the most important areas where trade mis-invoicing of imports occurs, with underreporting to the tune of US$563 million in 2017, resulting in foregone tax revenue of US$165 million.

Underreported imports of K&K fabrics, a speciality of NVC firms and their main product line, are viewed as particularly harmful. Figure 8 shows that Tanzania's import UVs are comparable to those in Kenya and Uganda but much lower than those in Rwanda, whose UVs are closest to those reported by China. This would suggest the rent from the 50 per cent tariff on K&K written into the EAC CET does not fully benefit the intended beneficiaries, i.e. EAC producers. Although import valuation data are suggestive of unfair competition for NVC firms, more important challenges are likely to be the export competitiveness of China already mentioned and declining national demand for K&K fabrics. Historically a fashion mainstay in East Africa, they are now losing ground as consumer tastes move towards Western-style clothing, especially with the availability of cheap used clothes (see below).

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[12] Data are from UNCTAD-TRAINS (2020).

Figure 8: Import unit values for EAC countries and Chinese export unit values for K&K (US$/ton)
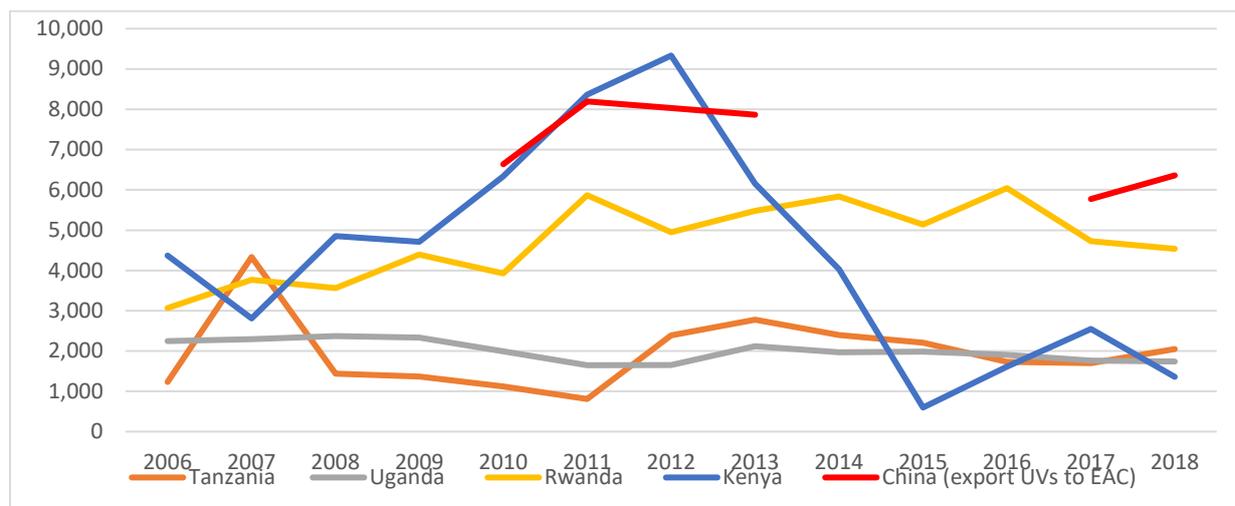
Source: authors' illustration based on Comtrade (2020) and national authorities via Trademap.org. Chinese export unit values are only available for years shown. HS 520852, designated in EAC CET as containing Khanga, Kikoi, and Kitenge.

Firm operations and strategy

The current business models of NVC firms largely date from their establishment as SOEs, based on vertical integration from spinning to weaving and processing, but one firm has recently added knitting and apparel manufacturing capacity. NVC firms all carry out higher-value T&A value chain functions of design, branding, and distribution. The combination of vertically integrated production and design capability is critical to the remaining competitiveness of NVC firms, enabling them to respond quickly to buyer demands for made-to-order products. Design capacity varies, with two only copying buyer samples using computer software and another employing more designers to respond to buyer specifications, producing its own samples based on original designs. Firms report that several decades ago they had greater capacity for original design, but this has been eroded over time, representing a partial downgrading (not shown in Table 4).

The principal products of NVC firms are processed fabrics such as K&K and bedsheets, with some sales of curtains, masai shuka (striped or chequered cloth), grey fabric for further processing, and yarn. Although by definition NVC firms are principally oriented to the Tanzanian market, these products are also exported by formal and informal channels. Exports account for 19 per cent of total sales on average, ranging from less than 5 per cent in one case to 40 per cent in another, and are almost entirely to regional markets, though one firm exports small quantities of surplus yarn to Europe. Apparel production is for the domestic market only, consisting of uniforms for the public sector (e.g., army, police, prison, medical, security, schools) as well as T-shirts and polo shirts sold under the firm's own brand.

Facing intense import competition, declining domestic demand for traditional products and a lack of affordable credit, NVC firms want to diversify but struggle to accumulate or borrow capital to finance investment in inherently risky new ventures. The entry to apparel manufacture by an NVC firm was enabled by two policy-based rents from national authorities, namely public procurement contracts and duty remission. A government procurement contract for public sector uniforms provided a secure enough revenue stream to allow the firm to invest in learning to manufacture apparel. This was made easier by Tanzanian procurement rules giving special preference (a margin of up to 15 per cent) to domestic suppliers (URT 2013). Such a margin can serve as productive

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rent, compensating for the risk and cost of learning associated with developing capabilities in a new activity, if accompanied by sufficiently strict disciplining measures such as quality requirements by buying institutions (Khan 2000). Other NVC firms expressed interest in upgrading to apparel manufacture if public procurement contracts could be secured.

Tanzanian authorities provided targeted rents to NVC firms through the EAC duty remission (DR) scheme, which exempts firms from import duties on inputs. Although the main raw material of NVC firms is domestically produced cotton, they also import a significant share of their production inputs. In principle, the EAC DR scheme is a regional policy, but national authorities can in practice grant exemptions unilaterally on the condition that the resulting finished products cannot be sold duty free in other EAC countries, i.e. are only for the national domestic market, termed 'national DRs'.[13] These have only been granted to NVC T&A firms since 2018, suggesting their under-utilization. Combining information from official DR notifications, EAC Gazettes (EAC 2020), with average unit prices from international trade data for the same inputs imported into Tanzania in the same years, we value the duty exemptions granted to NVC firms at around US$5 million in 2018 and 2019. The final products to be made from the inputs are designated in the notifications and include K&K but also apparel, confirmed by the listing of apparel inputs like buttons, zippers, and buckles, suggesting the rent is conditional on being used productively by NVC firms to diversify away from traditional products.

Outcomes

Upgrading outcomes among NVC firms have been diverse. The clearest success is the case of functional upgrading to knitting and apparel manufacture, but this initiative is still in its early stages and for the domestic market only, despite aspirations to export to regional and then global markets. No cases of product upgrading were observed, with NVC firms making the least complex products of the three firm groups. Technical reports find fabric quality to be lower than international standards, with defects covered in the printing process for K&K (Salm et al. 2012). The apparel manufacturer currently focuses on the most basic products, namely uniforms and round-neck T-shirts but can also make more complex polo shirts.

There was one case of end-market upgrading in the group, an NVC firm that recently started exporting to regional markets. Otherwise there has been little change in end markets served in recent years according to export data, with Figure 6 showing no growth in exports overall. Although exports account for a minority of sales, export UVs were slightly higher than those of GVC firms on average, as shown in Table 4 and Figure 7, but this is mainly because one GVC firm exclusively exports low-value yarn.

NVC firms had the oldest production technologies of any group, but factories have seen some recent investments in process upgrading. Two firms had invested significantly in machinery in recent years, one replacing nearly half the ring frames in its spinning section and another upgrading most of its weaving section with Chinese looms. This was motivated by the need to maintain competitiveness and difficulties getting spare parts for older equipment. In some cases, technologies were 20–30 years old or more at the time of the survey, making them effectively obsolete given changes in the industry over that period.

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[13] This condition attached to a nationally granted DR aims to maintain a level playing field between EAC producers. 'Regional DRs' are agreed between EAC governments and allow duty-free sale across EAC countries but are less common.

In outcomes apart from economic upgrading, NVC firms performed worst, except on local sourcing because of their heavy reliance on domestic cotton lint. Capacity utilization was lowest among NVC firms, with one firm achieving only 35 per cent. In social outcomes NVC firms did slightly worse than others, having the fewest employees on average. NVC firms are not obliged to prove compliance with international standards around labour, safety, and environmental issues so cannot be measured against those, but firms reported complying with stringent national requirements.

5.2   Regional value chains

Context

There are two large T&A firms in Tanzania currently oriented principally to regional markets and designated as RVC firms, although they retain a strong foothold in the Tanzanian market with own-branded products. RVC firms were established as private businesses in the mid-1960s by Tanzanian entrepreneurs of south Asian descent and have remained predominantly in control of the same families ever since as part of diversified business groups. While not affected directly by privatization, RVC firms have been strongly affected by other issues affecting NVCs described above, especially liberalization in Tanzania and across regional markets.

Rents from RTAs are crucial to RVC firm competitiveness, particularly duty-free market access to South Africa under SADC and Kenya via the EAC customs union. The SADC FTA allows for duty-free trade in goods originating in member states, with restrictive ROO for T&A products imposing a 'double transformation' requirement for apparel and fabrics. Being vertically integrated, the Tanzanian RVC firms comply with the double transformation requirement and can export fabrics and apparel duty free to South Africa, a highly prized market that makes up around 60 per cent of total SSA apparel imports because of its significant middle class and developed retail sector. By contrast, GVC firms that import fabrics and produce apparel (e.g., on a CMT or FOB basis) are not eligible to export duty free to South Africa. The SADC FTA and accompanying ROO therefore have the effect of providing a targeted rent to vertically integrated, regionally oriented producers. The rent is disciplined by market relations because, to continue to benefit, Tanzanian RVC firms must maintain good relationships with South African buyers and comply with requirements such as cost, quality, and delivery timelines.

The EAC FTA and customs union implemented from 2005 allows for duty-free trade between members and is complemented by a 25 per cent tariff on most finished T&A products, which gives regional producers extra rent to help them compete with imports.[14] EAC ROO are more relaxed than in SADC, with the same double transformation requirements applying to knitted fabrics (HS 60) but only single transformation rules applying for apparel (i.e. manufacture from imported fabric is allowed). Only one of the RVC firms carries out its own spinning so is eligible to export knitted fabrics duty free, but both firms can export apparel duty free. GVC firms operating on a CMT or FOB basis would also be able to export apparel duty free to the EAC, but they do not because of different market conditions.

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[14] As mentioned above, tariffs are 35 per cent on used clothes and 50 per cent on K&K. The EAC CET is under review at the time of writing, with plans to change the rate on most T&A products from 25 per cent to between 30 per cent and 35 per cent.

Another important aspect of the market context for RVC firms is imports of used clothing (*mitumba*) across the region, which are in direct competition with their own apparel products.[15] Since trade liberalization, EAC imports of used clothing have exploded from almost nothing to nearly US$350 million in 2018, and this was consistently highlighted by industry stakeholders as a major factor in the decline of the domestic industry. In 2015 EAC leaders announced their intention to phase out used clothes, confirming in March 2016 that this would take place over three years and subsequently raise tariffs on used clothes (Wolff 2020). When one of the main U.S.-based exporters of used clothes to the EAC complained to the Office of the US Trade Representative, the new Trump administration responded by threatening to remove AGOA access if the tariff increase was not reversed. This created a binary choice for Tanzanian authorities between maintaining several thousand jobs in GVC firms in the short term and longer-term NVC and RVC development. After lengthy negotiations, Tanzania complied with US demands, unlike Rwanda, which was removed from the list of countries eligible for the AGOA scheme.

One aspect of the used clothing issue is firmly within the purview of EAC governments, namely their valuation by customs authorities. Firms surveyed complained of import undervaluation for the purposes of tax evasion, making it even more difficult to compete with used clothes in the domestic market. Figure 9 shows that Tanzanian authorities have consistently valued used clothes lower than their EAC neighbours, suggesting support for the allegations, but the 50 per cent increase in unit value from 2017 to 2018 may indicate a change of approach by Tanzanian authorities.

Figure 9: Import unit values of used clothes (US$/ton)
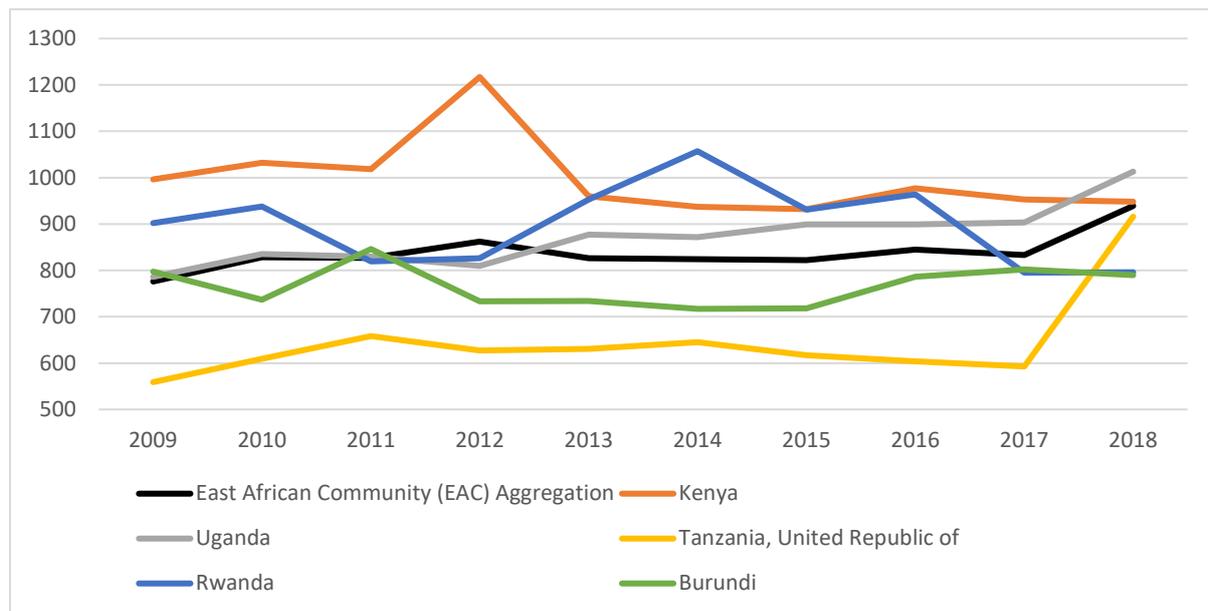
Source: authors' illustration based on Comtrade (2020) and national authorities via Trademap.org.

Firm operations and strategy

RVC firms are vertically integrated but to different degrees, one doing spinning, knitting, weaving, finishing, and sewing while the other buys yarn and does only knitting in preparation for apparel production. Both firms provide a full package service for buyers in the markets they serve, sourcing

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[15] Imports of used clothes affect both NVC and RVC firms, but the latter are far more focused on apparel, and because EAC policy towards used clothes has a strongly regional element, it is addressed here.

the inputs they do not produce themselves. For the higher-value functions of design and branding, both companies are active in the domestic market but not regionally, and one RVC firm fulfils these functions in global markets, albeit for a relatively small share of total sales. One of the firms also engages directly in distribution through a wholesale and semi-wholesale depot.

The more vertically integrated firm produces a diverse range of products in accordance with the wide range of value chain functions it performs, selling the least complex products—processed fabrics (e.g., K&K, suiting and shirting fabrics, tablecloths, masai shuka) and uniforms—in the domestic market; assorted products—cotton yarn, grey knitted and woven fabrics (for processing by others), knitted cotton shirts, and T-shirts—in regional markets; and knitted cotton T-shirts in global markets. The other firm mainly sells T-shirts, polo shirts, and underwear in Tanzania; T-shirts, polo shirts, leggings, and fleece tracksuits in regional markets; and T-shirts in global markets. There is a roughly equal split of cotton and non-cotton products overall. RVC firms earn 60 per cent of their revenues in regional markets on average, with the EAC taking more than SADC in 2016 and 2017 overall (see Table 4 and Figure 10). The overwhelming majority of apparel exports have gone to South Africa in recent years.

Figure 10: RVC firm exports by destination (US$)
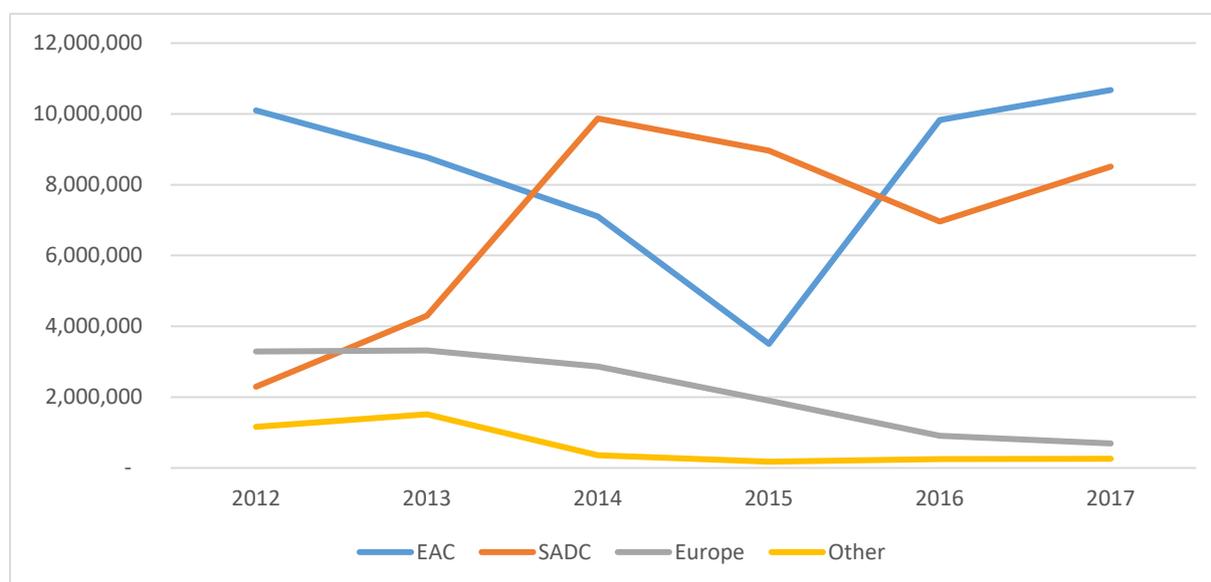
Source: authors' illustration based on export transaction data provided by national authorities.

Capitalizing on the targeted rents available through SADC for exports to South Africa is a core element of RVC firms' strategy. We estimate the magnitude of these rents using publicly available trade and tariff data, cross-checked against transaction-based data at firm level from national authorities for available years. Virtually all of Tanzania's T&A exports to South Africa are knitted apparel articles (HS chapter 61), almost all of which are manufactured by the two RVC firms in our sample, and all are eligible for duty-free market access as opposed to South Africa's MFN tariff of 45 per cent. The total rent generated by the SADC FTA is approximated by the tariff payments that would otherwise have been due, as shown in Table 5 to be around US$18.9 million over the five years to 2018. We take this as principally benefiting Tanzanian RVC firms because South African buyers are able to import duty free from Lesotho and Swaziland, so if tariffs were due on imports from Tanzania, buyers would be able to shift the burden to supplying firms through lower prices. However, in the absence of duty-free market access it is unlikely that the same level of exports would have been seen, given that even GVC firms are not competitively exporting to South Africa with tariff barriers. This is supported by the fact that apparel exports from Tanzania

to South Africa were at much lower levels before the implementation of the SADC FTA in 2008, after which the rate of growth increased substantially.

Table 5: SADC trade policy rents, knitted apparel articles

	2014	2015	2016	2017	2018	Total
Tanzania's exports to South Africa, US$ thousands	8,746	8,691	6,456	8,128	9,930	41,951
Weighted average MFN tariff, South Africa (%)	45.0	45.0	44.9	45.0	45.0	
Rent from duty-free market access, US$ thousands	3,936	3,911	2,901	3,657	4,468	18,872

Source: authors' calculations based on Comtrade (2020) and UNCTAD-TRAINS (2020). HS 61.

By exporting to Kenya under the EAC, RVC firms can access another important source of rents, albeit less targeted than SADC (because GVC firms could also benefit from the more relaxed ROO for apparel). Using the same approach as above, we estimate the magnitude of these rents around US$6.4 million in the five years to 2018, as shown in Table 6. Because the RVC firms in our sample make up almost the entirety of Tanzania's exports of these products to Kenya, and because Kenyan buyers would be able to source from domestic suppliers in the presence of tariffs on imports from Tanzania, we suggest this rent accrues principally to Tanzanian RVC firms, following the same logic as for SADC rents and with the same caveats.[16] The EAC could provide additional rents through its DR scheme, but RVC firms have had less success accessing these than NVC firms. One of the RVC firms in the sample sought a regional DR, i.e. one that would not affect its ability to sell within the EAC, but it was instead granted a national DR, which ruled out duty-free sale to Kenya so it chose to withdraw from the scheme altogether.

Table 6: EAC trade policy rents, knitted fabrics, and apparel articles

	2014	2015	2016	2017	2018	Total
Tanzania's exports to Kenya, US$ thousands	3,149	2,019	6,607	6,557	7,405	25,737
Weighted average MFN tariff, Kenya (%)	25	25	25	25	25	
Rent from duty-free market access, US$ thousands	787	505	1,652	1,639	1,851	6,434

Source: authors' calculations based on Comtrade (2020) and UNCTAD-TRAINS (2020). HS 60, 61, 62.

Outcomes

Instances of upgrading among RVC firms were scarce with no cases of functional or product upgrading reported in recent years or planned for the immediate future. Figure 7 confirms that export UVs for RVC firms have not shown a clear trend that would indicate product up- or downgrading, while Table 2 indicated mild downgrading for one product, cotton shirts (HS 610510). Table 4 shows that RVC firms had higher export UVs for apparel than GVC firms in 2017, but these are absolute values that reflect product type above all, with the heavier cotton jeans/trousers for the US market in particular dragging down US$/kg UVs. Table 2 suggests that relative UVs of RVC firms' main exports are below the global benchmark, while those of GVC firms are above, but this could reflect either product specificities (e.g., complexity, quality) or production cost, so no strong conclusions can be drawn.

End-market upgrading outcomes were positive overall. Figure 10 shows a decline in RVC firm exports to Europe, but this was mostly accounted for by lower value yarn, while over the same period exports of higher-value apparel to South Africa have risen considerably. In 2019, one RVC firm started exporting to the United States under AGOA for the first time starting with polo shirts for children, representing a case of end-market upgrading. It follows previous end-market

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[16] RVC firms also export woven fabrics and yarn to Kenya, but the trade values are relatively low so the rents generated are smaller, and NVC firms also export these products so rents are less targeted. For simplicity, they are excluded from the analysis.

upgrading by the same firm. In 2012 apparel production was for Tanzania, Uganda, and Kenya only; in 2013 exports to South Africa started and increased substantially in the following years; and finally some exports to Canada and Japan have been achieved. The firm's management reported that quality standards for the US market were higher than for South Africa, which was more demanding than Kenya and Tanzania in turn. This suggests support for an emerging finding in the literature that NVCs and RVCs can serve as stepping stones to GVCs (Slany 2017; Beverelli et al. 2019).

Unlike NVC firms, RVC firms have engaged in a fairly continuous process of technological upgrading since their establishment, although one had not seen significant investment for a few years. One firm had machinery between 5 and 15 years old at the time of the survey with variation by section, while the other used more recent technologies, all being less than five years old. The firm starting sales to the United States is also upgrading in terms of compliance, factory organization, and production system management in response to and with the active support of new US buyers.

In other economic outcomes, Figure 6 shows that RVC firms were the biggest group of exporters in our sample until 2015 when they were overtaken by GVC firms, and overall, there was little growth in RVC firm exports to 2017. One RVC firm reported full capacity utilization in 2018, the only such case in the whole survey, while the other RVC firm achieved only 60 per cent capacity utilization, resulting in a higher average than for other firm groups. One firm reported having recently doubled their knitting capacity, an important outcome that does not fit neatly in the upgrading framework.

On local content, the firm doing spinning buys cotton lint mainly within Tanzania, having stopped sourcing from Uganda (despite superior lint quality there) because of delays receiving refunds for value added tax (VAT) paid on imported cotton. The other firm sources cotton yarn regionally, and both companies import inputs they cannot find at competitive prices locally (e.g., synthetic yarn, accessories, dyes) from China, India, and Bangladesh, among others. Although firm-level data on values of imported and locally sourced inputs are not available, RVC firms likely fall between NVC and GVC firms in terms of share of local content.

RVC firms perform well on social outcomes, employing 2,500 and 1,200 employees each, more than any other group of firms on average. RVC firms comply with a range of international and national labour, safety, and environmental standards,[17] but neither are currently certified by WRAP (Worldwide Responsible Accredited Production), one of the most well-known social compliance schemes. The RVC firm that started selling to the United States was instead required to meet the buyer's own code of conduct through regular audits, viewed by the Tanzanian firm as more stringent than WRAP, which they had previously participated in.

5.3 Global value chains

Context

Three firms operating in Tanzania are integrated into global value chains and designated as GVC firms. All have been established with EPZ status by foreign investors since 2009 and are owned by (separate) companies with headquarters in Hong Kong or mainland China. The main policy tool driving the integration of Tanzania into GVCs is preferential market access, especially the

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[17] Certifications held include OEKO-TEX (for the safety and sustainability of fabrics), ISO 9001:2015 (for quality management system), SA8000 (for social welfare compliance), and the Global Organic Textile Standard.

unilateral trade preferences of the United States and China. Other drivers include relatively low unit labour costs, the cultivation of cotton in Tanzania, and the incentives provided by EPZs.

The US AGOA is currently the most important preferential market access scheme for Tanzania, providing duty-free market access across 97.5 per cent of tariff lines. Key to the uptake of AGOA for T&A products is its relaxed ROO, particularly the third country fabric (TCF) provision, which allows duty-free access for apparel made from fabric originating anywhere in the world, i.e. a single transformation requirement. This creates the potential for significant rents for apparel assemblers, incentivizing them to create labour-intensive jobs in industrial districts of eligible countries. As a result, AGOA underpins a large number of urban jobs and is a powerful foreign policy tool for the United States, as shown by most EAC countries reversing used clothes tariff increases on the threat of AGOA's withdrawal (see above).

AGOA's expiry is scheduled for 2025, and the United States would prefer bilateral trade deals involving reciprocal tariff reductions over either AGOA renewal or the African Union proposal for an FTA between the African Continental Free Trade Area (AfCFTA) and the United States. Unsurprisingly, the US approach appears to be prevailing with Kenya already opening negotiations on a bilateral deal with the United States to safeguard its market access. It appears likely that Tanzania's duty-free US market access would continue in some form, but uncertainty over its future is already reducing incentives for new GVC investment in the apparel sector, with interviewees preferring at least a 10-year time horizon of policy stability for new investment, and existing firms anticipate having to find alternative markets or reducing their production.

AGOA has broader impacts on T&A value chain development at the national and regional levels. The TCF increases the value of rents to manufacturers in eligible countries but, at the same time, reduces incentives for investment in local textile production (Pickles et al. 2015). Furthermore, the incentives created by AGOA are different across value chain types because US MFN tariff rates are higher (at 25–32 per cent) for synthetic than cotton apparel products (13–17 per cent) (Staritz 2011). By reducing tariffs on all T&A products to zero, AGOA provides greater duty advantages for manufacturers using synthetic over cotton fabrics, and Table 2 shows that Tanzania's second-largest apparel export is non-cotton T-shirts to the United States, despite the presence of an established cotton sector in Tanzania. Thus, although AGOA promotes integration into T&A GVCs, its current design ensures that the local demand generated for fabric will be met through imports rather than backward integration, and linkages with NVCs and RVCs are likely to remain weak.

The Tanzanian and EAC-level policy framework towards EPZs is one of the most prominent national/regional industrial policy instruments in the T&A sector and actively favours integration into GVCs. EPZs give favourable fiscal incentives and other arrangements to investors, on the condition that no more than 20 per cent of output may be sold in the 'domestic' market, i.e. the EAC single customs territory in this case. The priority on export is justified by the potential to earn foreign exchange and the discipline imposed on exporters by global markets, requiring firms to meet the highest standards, although the export requirement is sometimes weakly enforced (Whitfield et al. 2015). Discussions are ongoing around changing EPZ rules (e.g., by weakening export requirements) so as to extend rents to RVC and NVC firms to finance upgrading or allow a partial re-orientation of GVC firms to EAC markets.

Firm operation and strategy

One GVC firm is a spinning mill only, while the others are apparel manufacturers carrying out assembly operations in Tanzania on a CMT basis, although one also does embroidery and washing at its facility. The apparel firms are part of triangular manufacturing networks with production

located in Tanzania to access AGOA rents, but all strategic decisions, such as on sourcing and production processes, are made at headquarters overseas. Even routine management and decision making are driven to a large extent by the head offices of the parent companies, who are involved in day-to-day production planning and receive daily and even real-time reports on progress. Buyers influence the decision making of parent companies but also engage with factory management directly (e.g., through the provision of training, technical advice, and product quality inspections), in one case with buyer representatives being present on a full-time basis. None of the GVC firms do any higher-value functions such as design, branding, or distribution in Tanzania, reserving these for headquarters. There are no immediate plans to change the mix of functions carried out in Tanzania.

The spinning mill produces only cotton yarn for export to China. One apparel manufacturer produces cotton jeans and woven trousers while the other makes sportswear from knitted polyester fabric, mostly T-shirts, long-sleeved polo shirts, and shorts. Both apparel manufacturers are overwhelmingly oriented to the US market, selling to major brands and retailers, although one firm is looking to open new markets in anticipation of the expiry of AGOA. They reported interest in the South African market, but SADC's double transformation ROO means GVC firms would have to pay tariffs, which are seen as prohibitively high.

Rents from AGOA are central to the strategy of the GVC apparel firms and are the principal reason for their location in Tanzania. As before, it is possible to use bilateral tariff and trade data to estimate the size of the rent from AGOA, which gives a figure of US$9.4 million in the five years to 2018, as shown in Table 7. Tanzania's apparel exports to the United States are composed almost entirely of the output of the GVC firms in our survey, and because US buyers can easily source duty free from other countries, the rent is considered to principally benefit the Tanzanian GVC firms and their foreign owners.

Table 7: AGOA trade policy rents, HS 61 and 62

	2014	2015	2016	2017	2018	Total
Tanzania's exports to United States, US$ thousands	10,689	9,648	16,066	22,934	18,285	77,622
Weighted average MFN tariff, United States (%)	16.74	16.13	14.46	13.40	13.36	
Rent from duty-free market access, US$ thousands	1,703	1,393	1,860	2,388	2,073	9,418

Source: authors' calculations based on Comtrade (2020) and UNCTAD-TRAINS (2020).

The EPZ regime provides rents to GVC firms in a number of ways. Prominent among these is a 10-year corporation tax holiday. Although firm-level profit data are not available, official data from ASIP (2018) allow the calculation of a close proxy for profit—gross operating surplus—for apparel firms employing 500 or more employees, which captures the two GVC apparel firms in our sample only.[18] After converting to US dollars with average annual exchange rates and assuming the standard corporate tax rate of 30 per cent in the absence of EPZs, the revenue foregone by national authorities and therefore the rent to GVC firms was US$0.255 million, US$0.659 million, and US$1.244 million in 2013, 2015, and 2016, respectively (US$2.158 million in total). Other advantages for EPZ firms are exemptions from withholding taxes on dividends and other payments to owners overseas (usually at 10 per cent) as well as from customs duty, VAT, and other taxes on imports. EPZ firms also often have access to serviced land in publicly maintained

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[18] Gross operating surplus is gross output less intermediate consumption, less employee compensation, which amounted to TZS1.360 billion, TZS4.374 billion, and TZS9.024 billion in 2013, 2015, and 2016, respectively, for GVC apparel firms. This differs from profit because it does not consider, for example, depreciation, taxes, interest, or office costs, but it does provide a rough approximation, especially for a labour-intensive industry with comprehensive tax exemptions and negligible local financing.

industrial parks at subsidized rates and benefit from facilitated customs administration. There is debate about the effectiveness of these incentives at promoting investment, with the national EPZ authority disputing the finding of a 2011 survey of investor motivations that 91 per cent would have invested in Tanzania without incentives (James 2013). Evidence presented here suggests that the EPZ rents are significant in magnitude, with the corporate tax holiday alone worth two-thirds of the AGOA rent in 2016.

Outcomes

Few cases of upgrading were found among GVC firms with no cases of, or prospects for, functional upgrading, reflecting the 'non-embedded' characteristics of their owners (Morris et al. 2016). The survey results provide further evidence for the longstanding finding in the literature that greater incentives for product and process upgrading are present with the more 'hierarchical' governance arrangements found in GVC firms (Bazan and Navas-Alemán 2004).

One GVC apparel firm interviewed has recently started producing a new product for a new end market—Canada—as it explores options to remain competitive after AGOA. The product is more complex, and this represents a case of product upgrading (the only one in our survey), but because Canada is on par with the United States in terms of buyer requirements, we do not call it end-market upgrading. This case echoes Pipkin and Fuentes's (2017) finding that upgrading often occurs in response to 'vulnerability shocks', which threaten the viability of firm strategies, but in this case merely the threat of losing duty-free market access to the United States was enough. Figures 6 and 7 suggest successful product upgrading, with rising exports alongside rising export UVs for GVC firms, while Table 2 indicates one successful and one failed product upgrading for the US market. Table 4 shows that GVC firms had the lowest export UVs of all groups on average, mainly because of the substantial exports of yarn by the spinning mill. When this is removed and export UVs of apparel are viewed in isolation, RVC firms show higher figures, but as discussed above, this is because of product type rather than quality or production efficiency.

GVC firms report being engaged in continuous process upgrading by replacing machinery to improve productivity, refining production processes, and providing ongoing skills training for workers. The technology used was less than 10 years old at the time of the survey, with not all machinery being new upon installation in Tanzania. Live order tracking is a requirement of US buyers so both apparel factories have invested in computerized systems to track their production. Quality requirements are high and rising, so products are inspected as they come off the production lines and reject/rework rates are closely monitored, with one firm reporting dramatic improvements.

In other outcomes, GVC firms have rapidly grown their exports and by 2017 contributed more to export earnings than the other two groups put together (Figure 6). Capacity utilization among GVC firms was slightly below that of RVC firms, with the main constraints to full utilization being absenteeism in apparel factories and lack of availability of cotton lint for the spinning mill. GVC apparel manufacturers have been the main contributors to employment growth in Tanzanian T&A in recent years, but average employment in GVC firms was slightly below that of RVC firms because of the presence of the capital-intensive spinning mill. Local content was very high for the spinning firm that sources cotton locally and negligible for the apparel manufacturers who import all production inputs from Asia—mostly China. On labour, safety, and environmental standards, as was seen with RVC firms, no GVC firm currently holds WRAP certification; instead, buyers carry out regular audits to ensure their own standards are met.

6 Conclusion and industrial policy implications: managing rents for upgrading

This section outlines the main findings on the Tanzanian T&A sector; the upgrading outcomes observed in NVCs, RVCs, and GVCs; the role of rents at the national, regional, and global levels; and how industrial policies at different levels could evolve to maximize the contribution of each value chain type for structural transformation. Sector-level analysis suggests T&A as a whole has experienced economic and social upgrading in the 2008–16 period, with increasing export UVs and global market share alongside rising employment and real wages, although this does not hold for every sub-period. The economic upgrading seen is a result of product and functional upgrading, i.e. moving to higher-value products and value chain functions, as shown by the rising share of manufactured products in T&A exports. This does not capture important compositional changes in the sector, however, with MVA and employment in the capital-intensive textile subsector having declined, while the reverse is true in labour-intensive apparel manufacturing.

Firm-level survey data reveal a spectrum of engagement with NVCs, RVCs, and GVCs, with significant variations in firm set-up and outcomes according to value chain directionality. GVC firms focus on a narrow range of lower-value functions (mostly apparel assembly) because of being foreign owned and the structure of AGOA trade rents, while RVC and NVC firms perform a wider range of functions including vertical integration to textile manufacture and higher-value activities (e.g., design and branding). Only one recent case of functional upgrading was found, an NVC firm that used highly targeted, firm-specific rents from public procurement contracts and DR to start manufacturing apparel for the local market, a model that could be replicated in other cases, potentially with added incentives or compulsions to start exporting to the region within a specified timeframe.

Results in the area of end-market upgrading confirmed the hypothesis that NVCs and RVCs can serve as 'learning grounds' or 'stepping stones' to more demanding but lucrative global markets, as demonstrated by the RVC firm able to start meeting the higher requirements of US buyers, building on its OBM status in domestic markets and experience exporting to the region. This case demonstrates that adequate rents are present in both regional and global export markets, from trade agreements and unilateral preferences, to support end-market upgrading trajectories from NVCs to RVCs and eventually GVCs, which could in principle be replicated. Product and process upgrading outcomes were best among GVC firms because of the nature of rents and governance arrangements, with GVC firms closest to the technological frontier followed by RVC and NVC firms, but process upgrading was observed in all groups.

In other economic and social outcomes, GVCs have made the greatest contribution to recent employment generation and export growth, and while T&A wages are below the average for manufacturing in Tanzania, they are 3–4 times higher than the national poverty line. Interestingly, there was little difference between RVC and GVC firms in terms of compliance with accredited international labour and safety standards, with no company being WRAP accredited, but global buyers have similarly demanding codes of conduct enforced by regular audits. Compliance with accredited social compliance schemes is not necessary for integration into GVCs, which is surprising, but whether this is a peculiarity of the buyers present in Tanzania or represents a broader change in the apparel industry remains to be seen. NVC firms performed best on local content with all firms relying on Tanzanian cotton, while some RVC and GVC firms also procure local cotton depending on firm set up but otherwise depend on imported inputs.

Regional and international duty-free market access arrangements, especially SADC, EAC, and AGOA, were critical sources of rents for RVC and GVC firms. The design of ROO in these arrangements determines which firms benefit and what kind of investment takes place.

Importantly for the design of RTAs in Africa, the double transformation ROO in SADC and Tanzania's resulting privileged access to the South African market have not resulted in significant new investment. One vertically integrated RVC firm is even moving away from serving the South African market, preferring to sell to US buyers under AGOA's single transformation ROO. This suggests policy makers negotiating the design of ROO in the Tripartite Free Trade Area and AfCFTA should be sceptical of the idea that double transformation ROO for T&A products will create sufficient incentives for new manufacturing investment in the regional cotton-to-clothing value chain. Instead, more relaxed ROO favouring export-oriented apparel producers might eventually result in a backward linkage effect (i.e. new investment in textile manufacture) by creating a critical mass of demand for fabrics, as seen in the case of Ethiopia.

The US unilaterally granted AGOA trade preferences have driven recent investment in Tanzanian apparel manufacturing and are an important source of rents for GVC firms, but ROO mitigate against backward integration by encouraging the import of raw materials and negligible local content. It appears likely that Tanzania's duty-free market access to the United States will continue in some form after the scheduled expiry of AGOA in 2025, but the potential 'vulnerability shock' of its loss is already reducing incentives for investment and, in line with other studies (e.g., Pipkin and Fuentes 2017), causing GVC firms to explore alternative products and end markets, with upgrading already happening as a result. As mentioned, GVC firms' current business models do not comply with SADC ROO so the South African market is not an option. The design of ROO in AfCFTA will be critical to determine the extent to which other regional markets could replace the United States. Changes to EPZ rules in Tanzania and the EAC may also play a role, such as the idea to relax export requirements to enable GVC firms to re-orient themselves to NVCs and RVCs (potentially coupled with commitments to increase local content).

Although a number of successful upgrading cases were observed, supported by various kinds of rents, the policy stance is unfavourable in several ways. At the national level, Tanzania's toleration of import undervaluation by customs authorities, particularly for K&K and used clothes, makes it difficult for NVC and RVC firms to accumulate capital for investment in upgrading, with little new capacity for textile manufacture added since liberalization. This undermines progress towards the stated policy goal of an integrated Tanzanian 'cotton-to-clothing' value chain (URT 2016), the best hope for which may paradoxically be through orienting rents primarily towards apparel production for RVCs and GVCs and only later targeting the development of backward linkages, as was also argued at the regional level.

The EAC CET, which has nominally governed tariff rates in Tanzania since 2005, is currently under review, offering the potential to address a number of failings for the T&A sector. First, tariffs on finished goods are seen as too low at 25 per cent, so the proposal to increase them to 30–35 per cent will be welcomed by producers but is unlikely to stimulate new investment. Second, T&A manufacturers complain that intermediate goods such as thread and fabric often attract the top rate of 25 per cent, which may be addressed by the proposed reallocation of intermediates across bands. Third, intermediate products made from synthetic and cotton fibres often receive the same tariff treatment despite the production of the latter in the EAC but not the former, which could be changed under a proposal to impose higher tariffs on intermediates available in the EAC. The criteria for availability will be critical to the impact of this measure because some cotton-based intermediates are or could be produced in the EAC but not always at internationally competitive prices, so incentivizing local sourcing by raising tariffs on imports will harm the competitiveness of manufacturers. The EAC scheme for duty remission on imported inputs could address this issue but has been under-utilized by NVC firms. Furthermore, the use of unilaterally granted national DRs, which rule out the sale of finished goods in other EAC countries, denies a potentially important source of rents to RVC firms.

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