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Trade, Productivity and competitiveness

By Binyam A. Demena, Jamal Msami, Donald Mmari and Peter A.G. Van Bergeijk

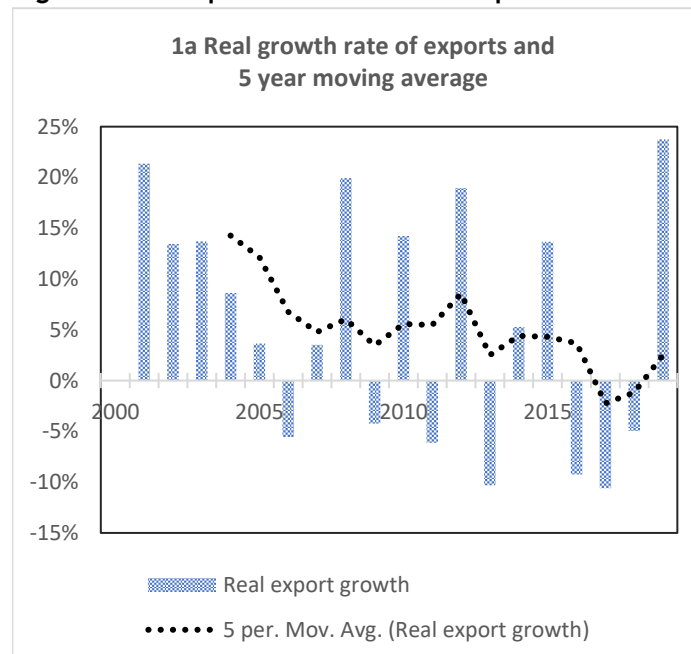
Key Messages

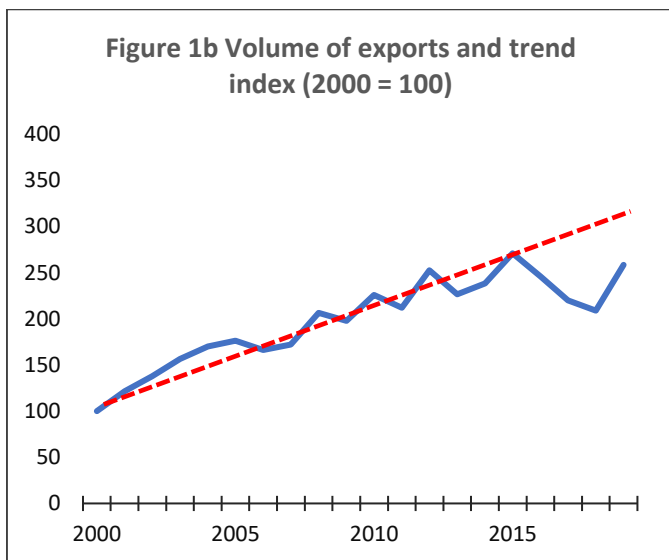
- Tanzania's exports are 15% to 25% below potential.
- Tanzania is lagging Kenya, Uganda and Rwanda on logistics and Ease of Doing Business; its weakest spot is in the category 'Trade across borders'.
- In our panel for the Democratic Republic of Congo (DRC), Kenya, Malawi, Rwanda, Tanzania, Uganda and Zambia we find an export productivity premium for nationally owned firms of almost 9 percentage points.
- Beneficial international specialization based on comparative and competitive advantage is possible and a viable strategy for these seven countries, but not all sectors can benefit as there are winners and losers from stronger international competition.
- Regular training programmes are an important instrument to enhance productivity.

Introduction

An important goal in the next five-year national development plan (FYDP III) is the achievement of an export-led competitive economy. The goal is challenging because Tanzanian export volumes have been under pressure since 2015. As illustrated in Figure 1a, real exports contracted over the years 2016 to 2018. Indeed, at the end of 2018 the volume of exports was 23% below the previous peak level of 2015. Fortunately, trade rebounded in 2019, with a spectacular increase although the volume of trade was still about 5% below previous peak and some 30 to 40% below potential as indicated by the trendline in Figure 1b. This finding is also supported by detailed econometric analyses using a PPML gravity trade model that we have used to estimate the direct and/or partial equilibrium effect of processing time and cost (in terms of documentary and border compliance). Indeed, while the developments in 2019 are encouraging, the general trend in the years before the partial rebound provides a warning that export competitiveness and logistics need urgent policy attention.

Figure 1 Development of Tanzanian exports 2000-2019





---- trend based on 2000-2015, inclusive
 Source: calculations based on World Bank, *World Development Indicators*

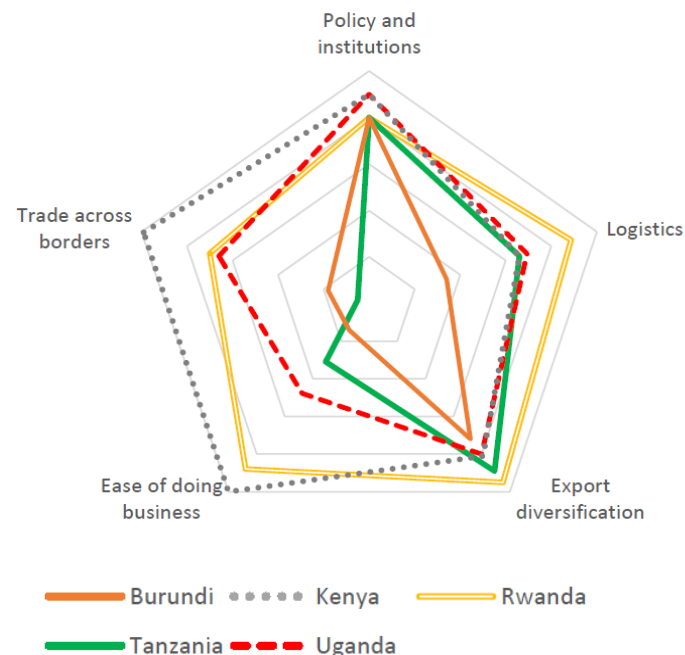
Therefore, this policy brief aims at assessing the trade development and competitiveness of Tanzania by assessing the productivity of its firms against the background of further integration into the East African Community (EAC). The note addresses both the export premium of an internationalization strategy, the opportunities for specialization within the EAC and the impact of the challenges that currently are hindering trade competitiveness.

Finally, the brief provides recommendations on how to enhance trade competitiveness and remove policy bottlenecks in order to reap the significant trade potential. This brief is based on econometric research, literature review and informed by many sources including background interviews, field research, government reports, academic papers as well as non-governmental reports.

Policy and Competitiveness

Figure 2 provides a spider web diagram for five factors often associated with export performance: trade policy and institutions, logistics, diversification and business climate and 'Trade across borders' that measures time and costs of border procedures. The further away from the center of the spiderweb the better a country's performance. Tanzania is lagging Kenya, Uganda and Rwanda on most components; its weakest spot is in the category 'Trade across borders'. Indeed, a recent REPOA policy brief (Msafiri 2021) concludes: 'Despite numerous efforts taken by the government of Tanzania in enhancing port efficiency, port operations are still hindered by prolonged dwell time of local containers handled by TPA, prolonged dwell time of transit containers handled by TICTS and TPA'. Policy is of course very important, but even when policies are perfect, domestic firms may not be able to benefit from international trade. Therefore, the findings reported in Figures 1 and 2 need to be complemented with a comparative analysis of firm level productivity in Tanzania and its major regional trading partners.

Figure 2 Spiderweb diagram of main policy determinants of export performance



Source: World Bank World Development Indicators and Ease of Doing Business

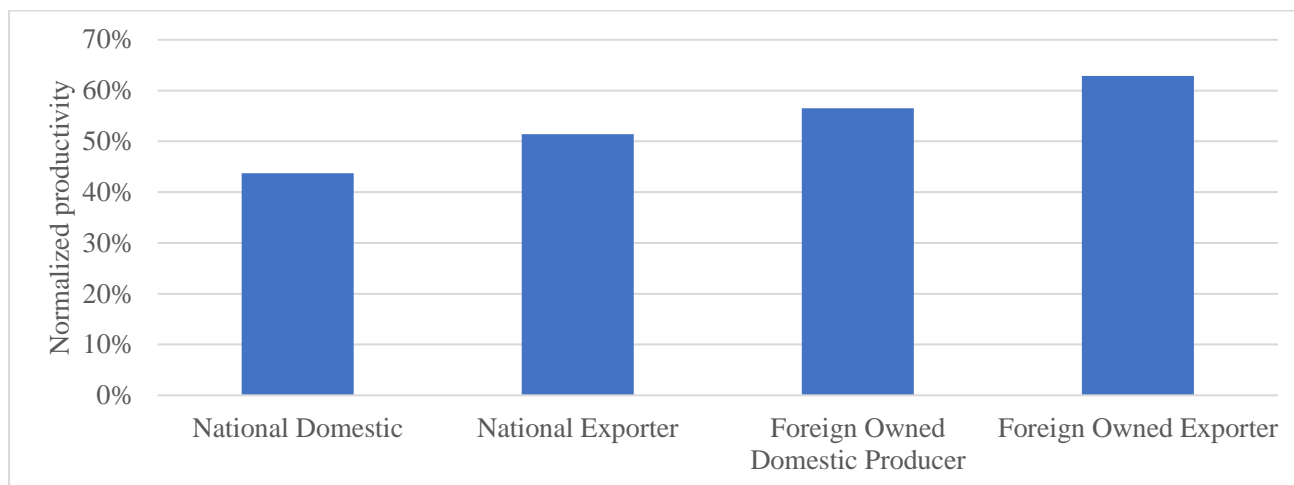
Firm level analysis: Export premium and productivity heatmap

A key driver of international competitiveness is the productivity of the private sector. Productivity increases are not only important because such improvements are crucial for the success of an export-oriented growth strategy, but also because of the relationship between productivity and economic development. The basis for the analysis is a detailed econometric analysis (Demena et al., 2021) that uses panel data from seven major trading countries that are part of the tripartite free trade area of COMESA-EAC-SADC. The seven countries are the Democratic Republic of Congo (DRC), Kenya, Malawi, Rwanda, Tanzania, Uganda and Zambia. The panel covers the period 2013-2014 and consists of firm-level information for 4,488 observations. We first focus on the issue of the benefits of internationalization at the firm level for the panel as a whole, and then deal with the issue of sector level competitiveness in relation to international specialization on the basis of comparative advantage and the issue of winners and losers from trade liberalization and further economic integration of the EAC.

Export premium

We first make corrections for industry structure and calculate normalized productivity levels. Using export and ownership dimensions, we identify four types of firms in Figure 3: National Domestic (locally-owned non-exporters), National Exporters (locally-owned exporters), Foreign Domestic (foreign-owned non-exporters) and Foreign Exporters (foreign-owned exporters). Figure 3 allows us to compare the difference in normalized productivity for these four types of firms: for example, for nationally-owned firms the export premium is almost 9 percentage points.

Figure 3 Normalized productivity levels by exporter status and ownership



We also analyzed these data in more detail distinguishing between manufacturing and services and always find a clear export productivity premium for national manufacturing firms and service sectors. We also find a clear foreign-ownership productivity premium for both non-exporting and exporting firms in manufacturing sectors, but not so in the services sectors. Moreover, we find that firm-level productivity increases when firms are larger and when they engage in regular training programmes. In the services sector, these effects are always smaller and only significant for medium-sized firms.

In order to compare the productivity of the countries we developed a productivity heat map (Figure 4) where green indicates a relatively high and red a relatively low productivity level. The comparison can be made horizontally across countries and additionally we can vertically compare the productivity of a sector across countries. For example, for food, we see that firm-level productivity in Rwanda, Uganda and Zambia is higher than in Kenya, Malawi, Tanzania and especially DRC. We can also look vertically and see what sectors are strong within a country. For example, chemicals are red for Tanzania, indicating weakness in terms of productivity both within Tanzania and compared to the other countries.

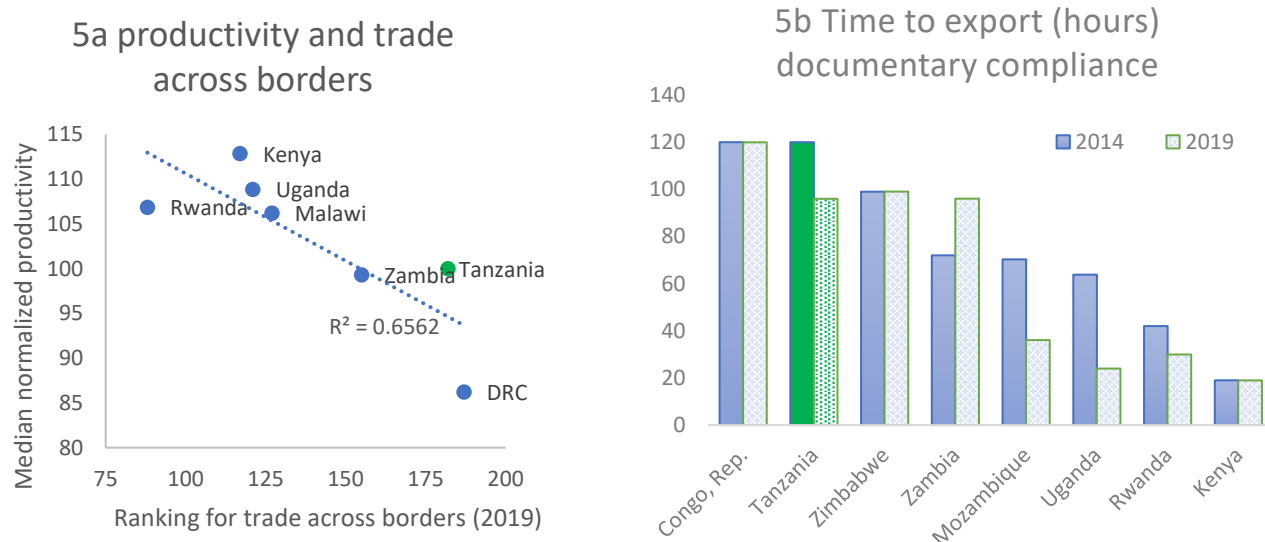
Figure 4 productivity heat map

	Tanzania	DRC	Kenya	Malawi	Rwanda	Uganda	Zambia
Food	Yellow	Orange	Yellow	Yellow	Green	Green	Green
Textile	Yellow	Yellow	Red	Green	n.a.	Yellow	Orange
Garment	Orange	Orange	Green	Green	n.a.	Yellow	Green
Wood	Yellow	Orange	Green	Yellow	Orange	Yellow	Orange
Publishing, media	Green	Yellow	Orange	Yellow	Green	Yellow	Orange
Chemicals	Red	Yellow	Green	Green	Yellow	Green	Orange
Non-Metallic	Orange	Yellow	Orange	Yellow	Green	Yellow	Orange
Fabricated Metal	Yellow	Yellow	Green	Yellow	Green	Green	Orange
Furniture	Green	Orange	Green	Green	Orange	Red	Orange
Other Manufacturing	Yellow	Yellow	Orange	Yellow	Red	Yellow	Green
Avg. Manufacturing	Yellow	Orange	Yellow	Yellow	Yellow	Yellow	Yellow
Retail	Orange	Orange	Yellow	Orange	Yellow	Orange	Yellow
Hotel and restaurants	Orange	Orange	Yellow	Orange	Yellow	Green	Yellow
Wholesale	Yellow	Yellow	Orange	Yellow	Green	Orange	Orange
Transport & communication	Green	Yellow	Orange	Green	Yellow	Yellow	Green
Services of motor vehicles	Orange	Orange	Green	Orange	Yellow	Orange	Green
Other Services	Yellow	Yellow	Green	Yellow	Red	Orange	Orange
Average Services	Orange	Orange	Yellow	Yellow	Yellow	Yellow	Yellow

It is important to note that due to data limitations this is a snapshot only and the snapshot is somewhat dated (2014 is the most recent year for which we have observations) and somewhat unsharp because we look at comprehensive aggregates that may hide underlying heterogeneity and because the sample size at the country level is relatively small. Therefore, the heatmap needs to be interpreted with caution. This being said, two robust and important conclusions emerge. First, the heatmap shows that beneficial international specialization on the basis of comparative and competitive advantage is possible when these countries get more integrated economically because of the different patterns of strong and weak sectors horizontally. Second, we find for all countries that there are winners and losers from stronger international competition. As discussed earlier the heatmap only gives an indication where sectors were in 2014, so the heatmap cannot be used to set policy priorities without

a detailed evaluation of current conditions on the ground. Still, the message is clear: not all sectors can benefit if (not tariff) barriers to international trade are reduced. Productivity in general depends on the health of the private sector and therefore productivity is to a large extent determined by a country's business environment. Figure 5a focuses on one of the key determinants of the efficacy of international trade - that is the ease of trading across borders. The vertical axis reports index numbers for median normalized productivity by country. Focusing on EAC countries we observe that productivity levels in Rwanda, Uganda and Kenya exceed Tanzania by 7%, 9% and 13%, respectively. The horizontal axis reports the World Bank ranking for trade across borders. When we move down the ranking, we observe that productivity also decreases. Figure 5b by way of illustration reports one of the components of the World Bank's Ease of Doing Business ranking, namely the hours required for submitting export documents and their review by the authorities.

Figure 5 Productivity, trade across borders and recent improvements of time to export



Tanzania already made progress between 2014 and 2019, as illustrated in Figure 5b, but the improvement was not sufficient in view of the reductions by Rwanda and Uganda, while the difference with Kenya remains a very important hurdle and a reason why trade is redirected via Mombasa or Nairobi in Kenya. Tanzanian exporters and importers have to deal with (too) many ministries and regulators. Government taxes and regulates activities that it wants to encourage, and the resulting policy incoherence reflect that the costs of taxation and regulation are not appropriately recognized. This provides a double challenge for policy makers because (a) competitiveness of value chains needs to be improved and (b) institutional and regulatory bottlenecks for international trade must be addressed as well.

Policy recommendations

This note clarifies that a significant trade potential in the order of magnitude of fifteen to twenty five percent exists for Tanzania, but also that a major policy challenge needs to be addressed as the business climate needs to be strengthened and bottlenecks in logistics and in particular of the major trading hubs need to be solved. Our analysis finds that regular training programmes can offer support for this process as these enhance productivity both for exporters and non-exporters. Our analysis cautions that the process towards an export-led competitive economy will not be a free lunch and that next to winners there will also be sectors that will lose from trade liberalization, trade integration and international competitiveness.

A significant export productivity premium of almost nine percentage points has been found for exporting firms which is an encouraging finding that motivates in relation to efforts to strengthen EAC integration and validates the FYDP III goal to achieve an export-led competitive economy.

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This policy brief is an output of the project "Targeted support to strengthen capacity of policy makers, exporters, and trade associations to assess and review trade and related economic policies to promote trade competitiveness and diversification for widening trading opportunities with the EU".



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