

# Growth Diagnostics and Competitiveness Study of the Manufacturing Sector in Tanzania

June 23<sup>rd</sup> , 2023

This presentation is part of an intervention supported by the Investment Climate Reform (ICR) Facility. The ICR Facility is co-funded by the European Union (EU), the Organisation of African, Caribbean and Pacific States (OACPS) under the 11th European Development Fund (EDF), the German Federal Ministry for Economic Cooperation and Development (BMZ) and the British Council. The ICR Facility is implemented by GIZ, the British Council, Expertise France, and SNV.

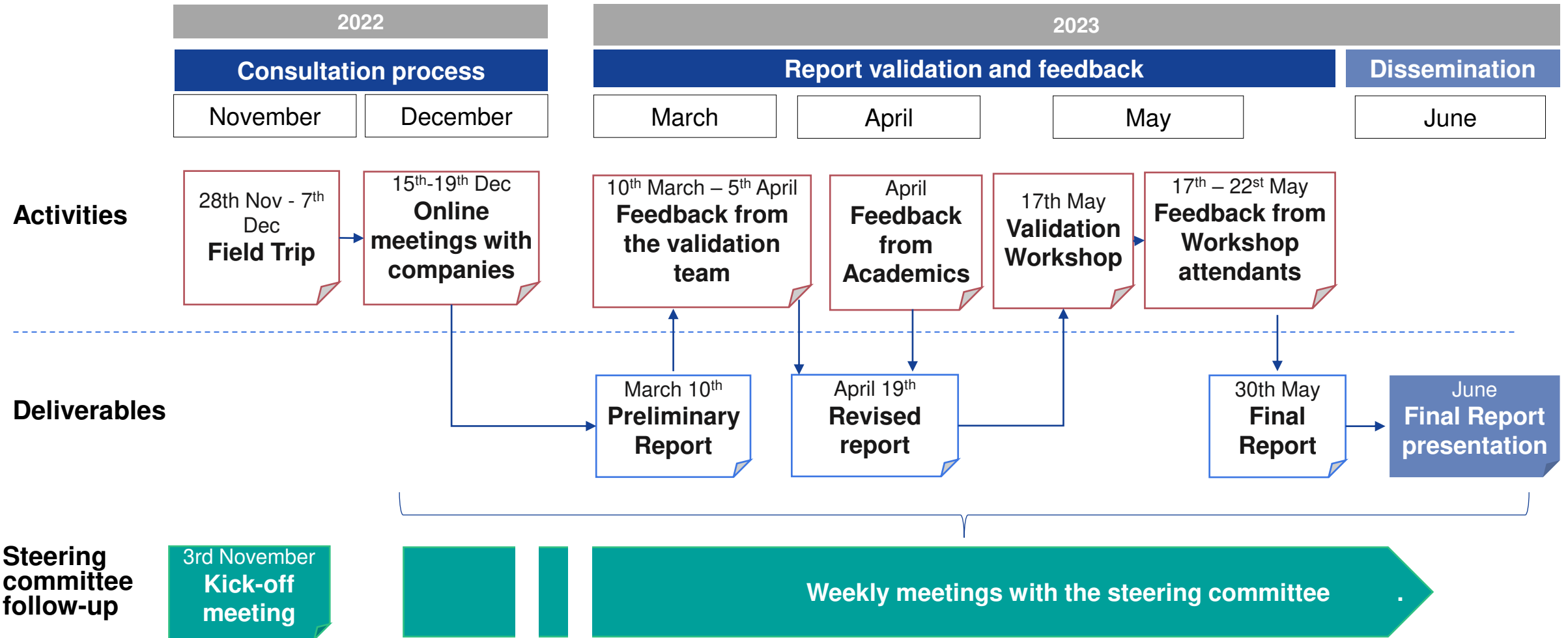
The ICR Facility supports countries and regional institutions of the Organisation of African, Caribbean and Pacific States (OACPS) in their public-private dialogue process to create a more conducive and sustainable investment climate.

More information: [www.icr-facility.eu](http://www.icr-facility.eu)

This specific intervention is led by **Growth Co-Lab** on behalf of SNV

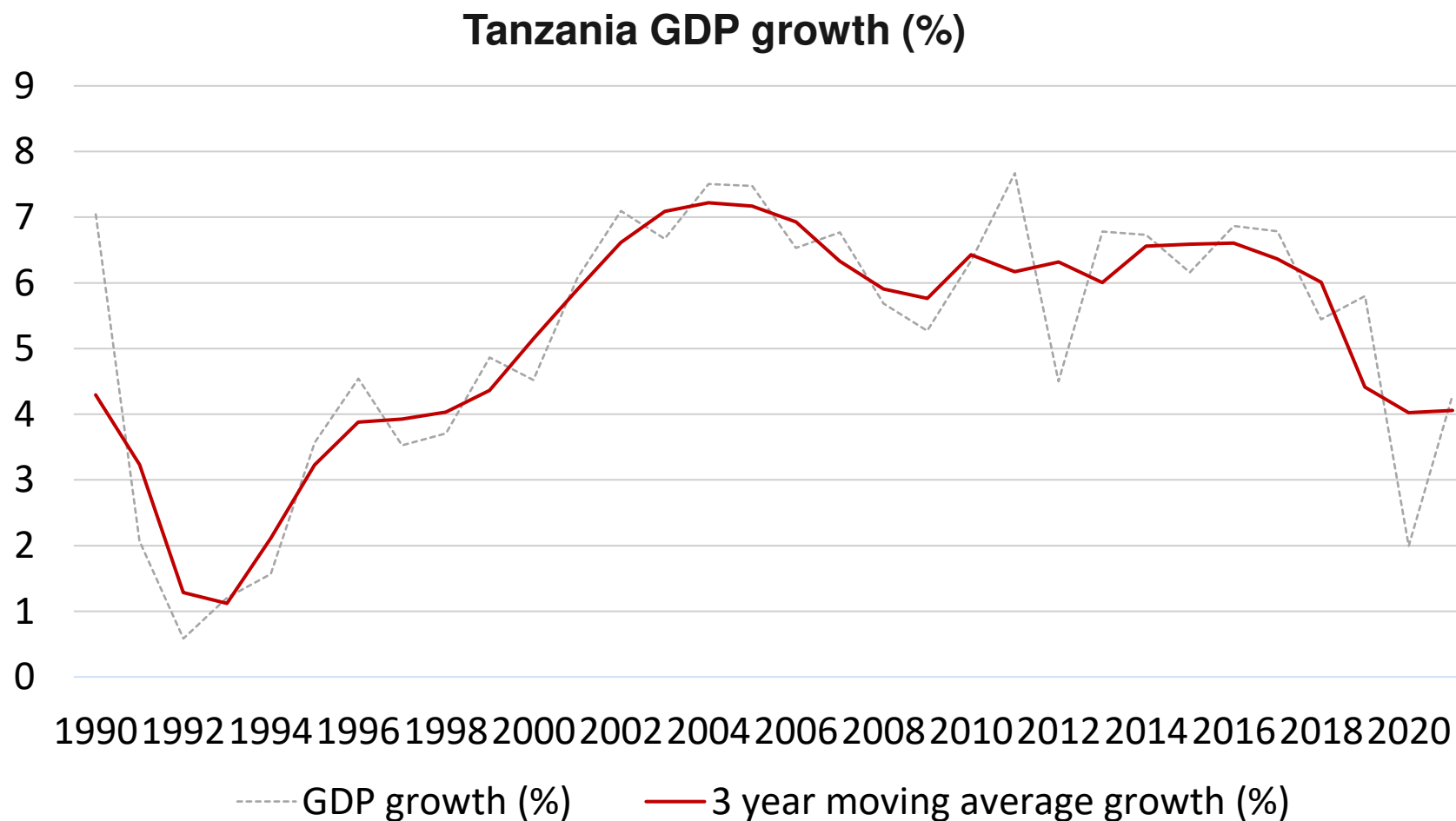
The contents of this publication are the sole responsibility of Growth Co-Lab and do not necessarily reflect the views of the donors or the implementing partners.

Implemented by



## Tanzania's economy experienced a significant acceleration over two decades

Real GDP grew at a compounded annual growth rate of 6% between 1998 and 2018.



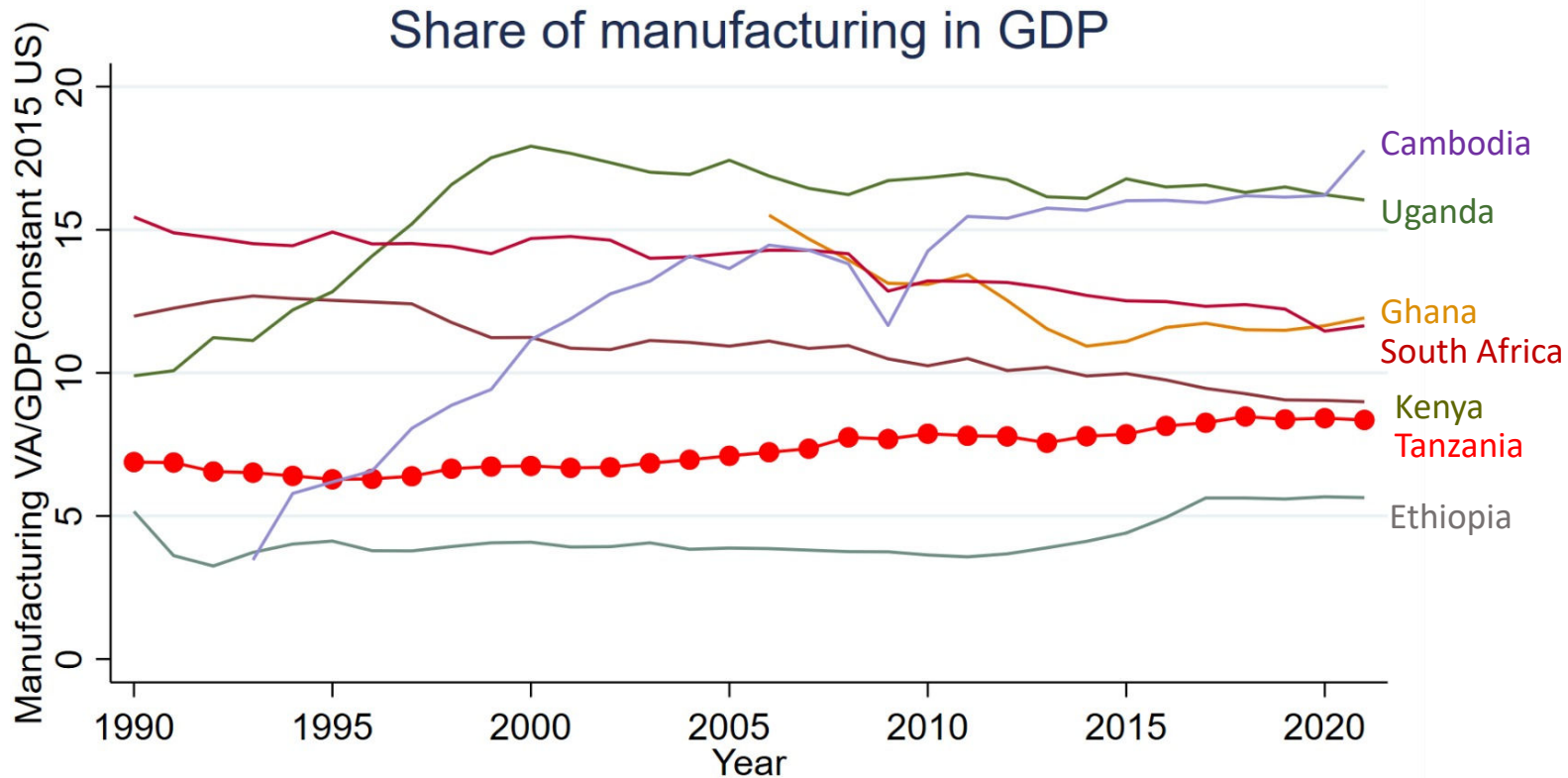
Source: Self elaboration using WDI data.

# But manufacturing has not taken off, and does not match the country's ambitions

## National Target:

**Manufacturing  
Contributes 23% to GDP  
by 2025**

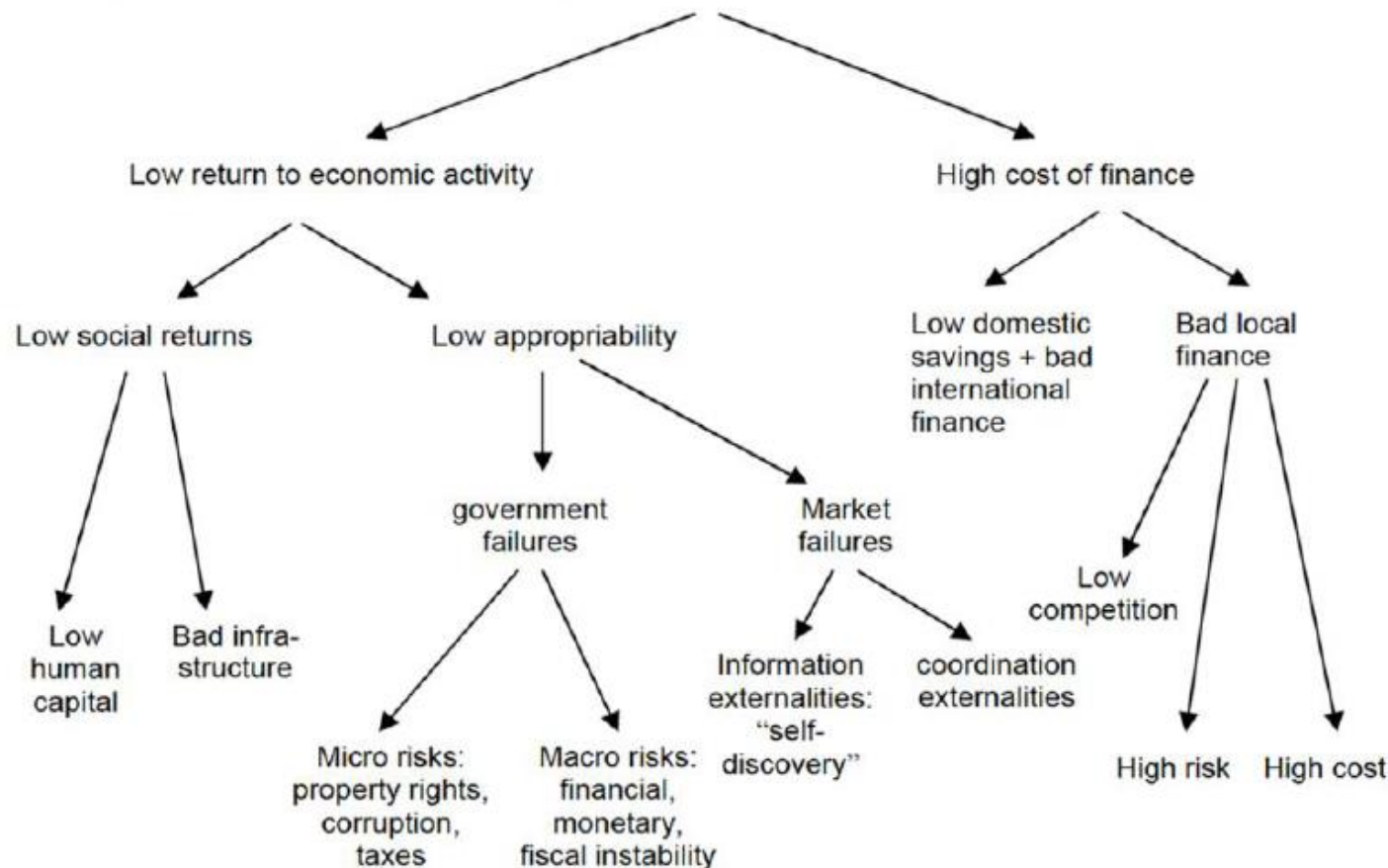
Source: Tanzania Integrated Industrial  
Development Strategy 2025, page 2.  
Dec 2011



Source: World Bank WDI

# The Growth Diagnostics Framework

Problem: Low levels of private investment and competitiveness



- How do growth accelerations happen?
- How to identify what is the binding constraint?
- What did we do?

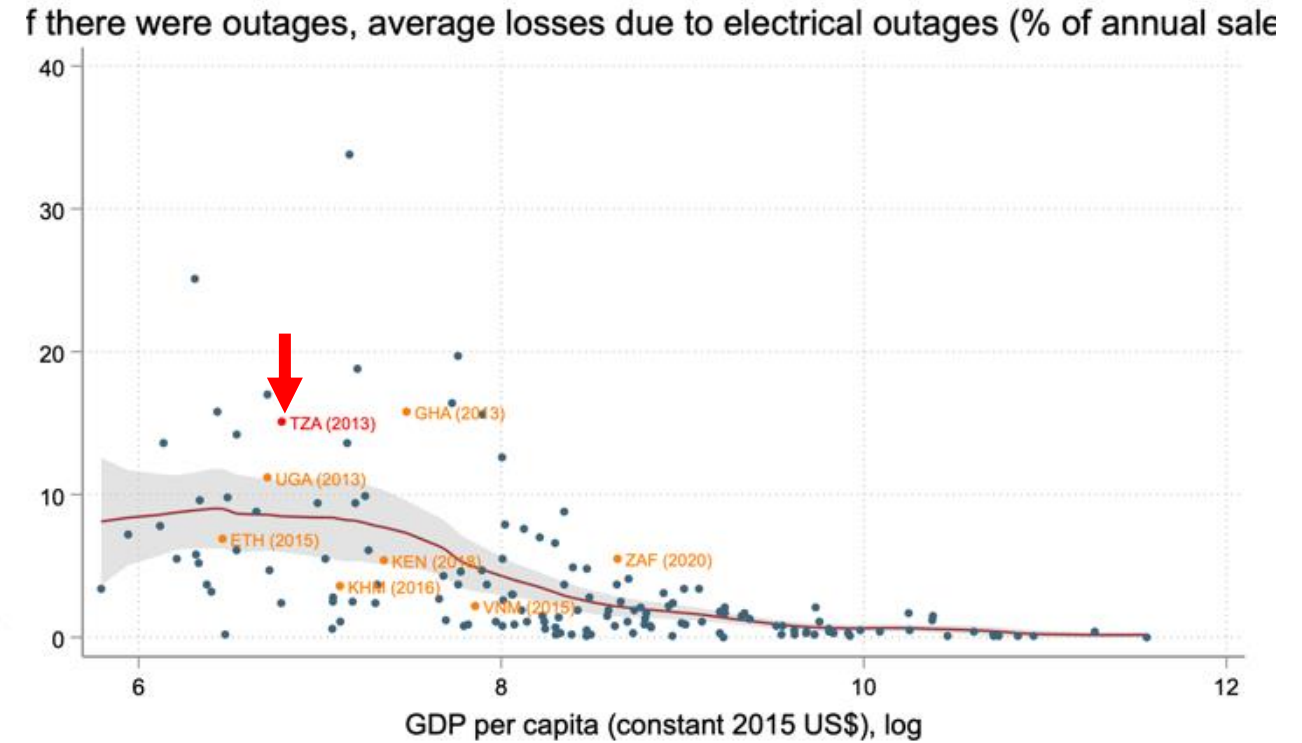
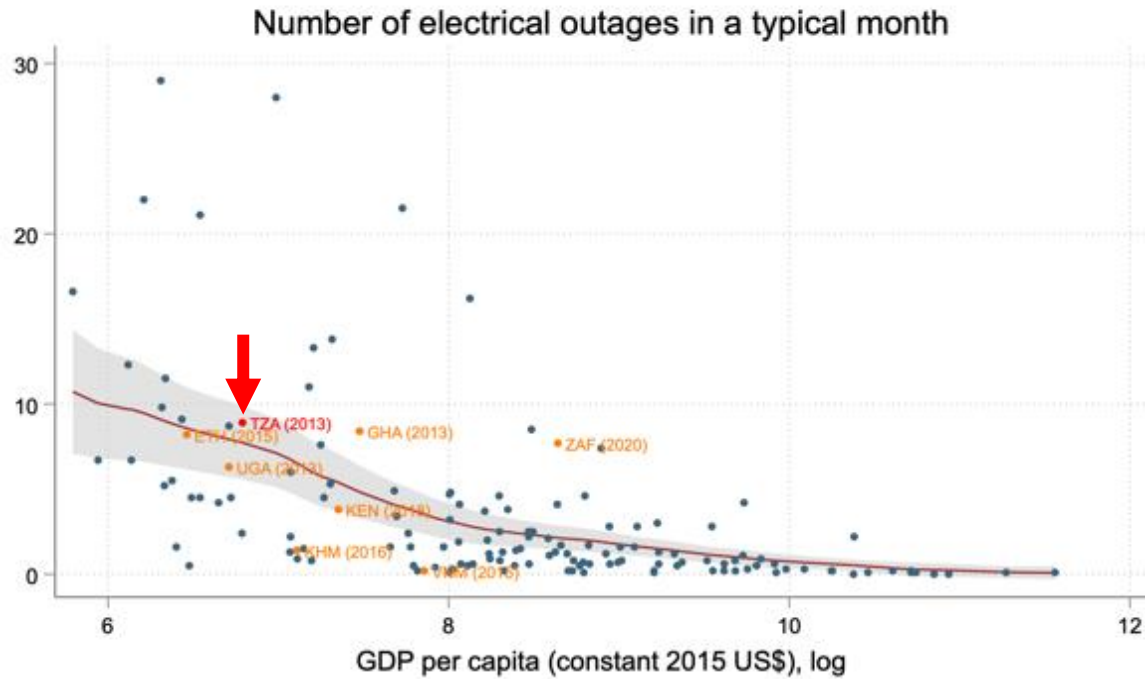
Source: Hausmann, Klinger and Wagner (2008).

---

**Constraint 1: The most binding constrain to returns to investment is the availability and quality of electricity supply**



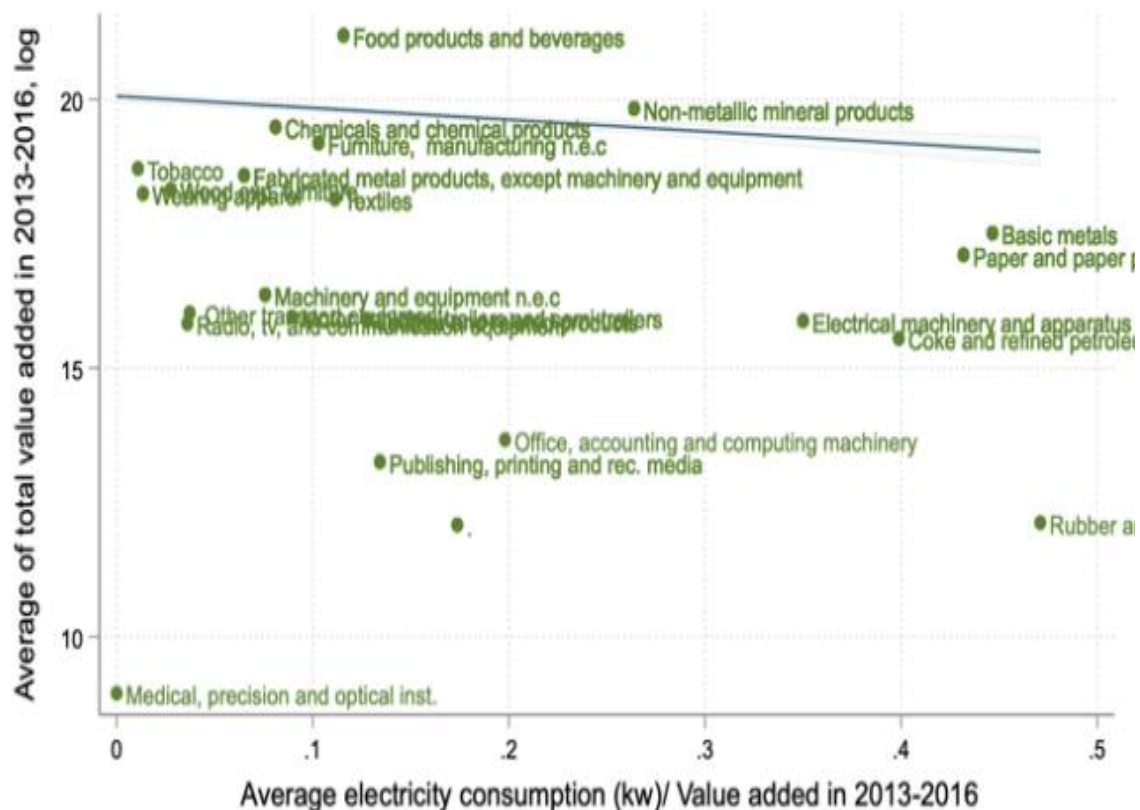
# More than 80% of the firms experience outages, leading to some of the highest sales losses compared peers



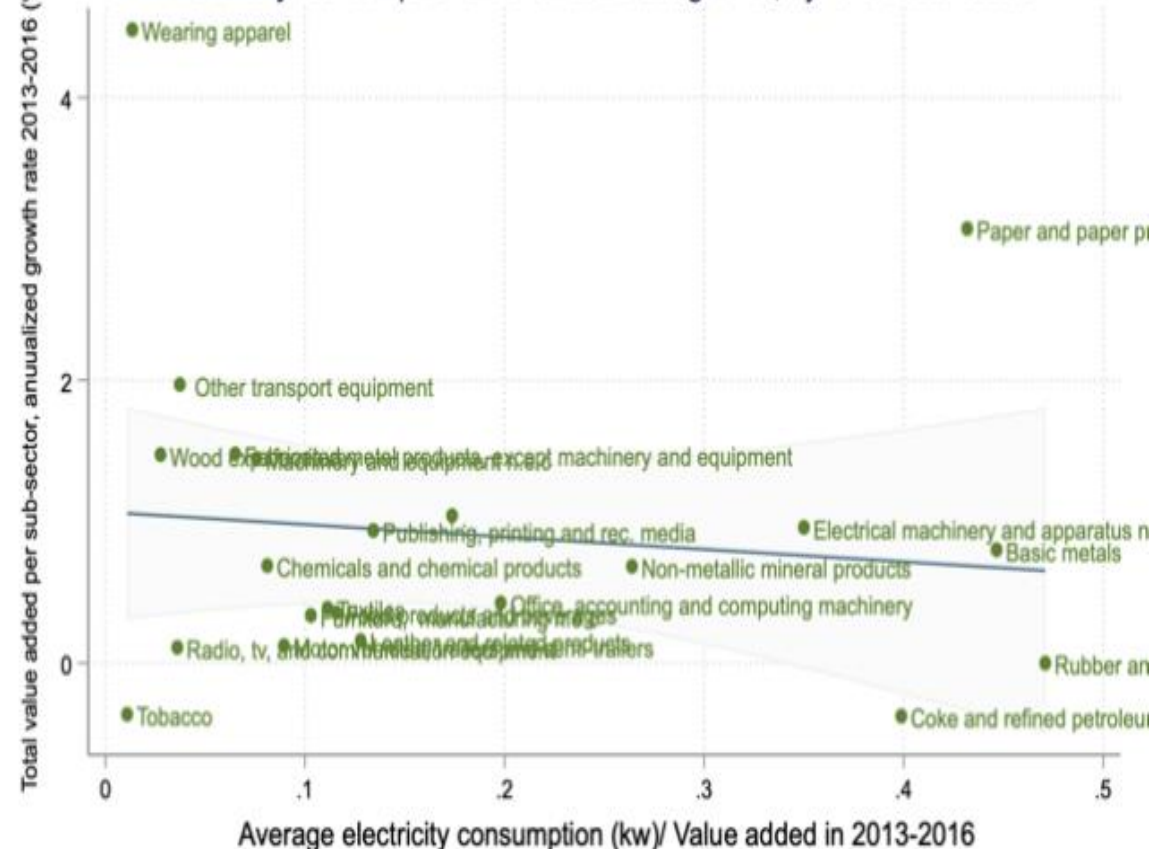


# Evidence, based on firm-level data available for 2013-2016, also suggests that electricity poses a binding constraint to firms in the manufacturing sector

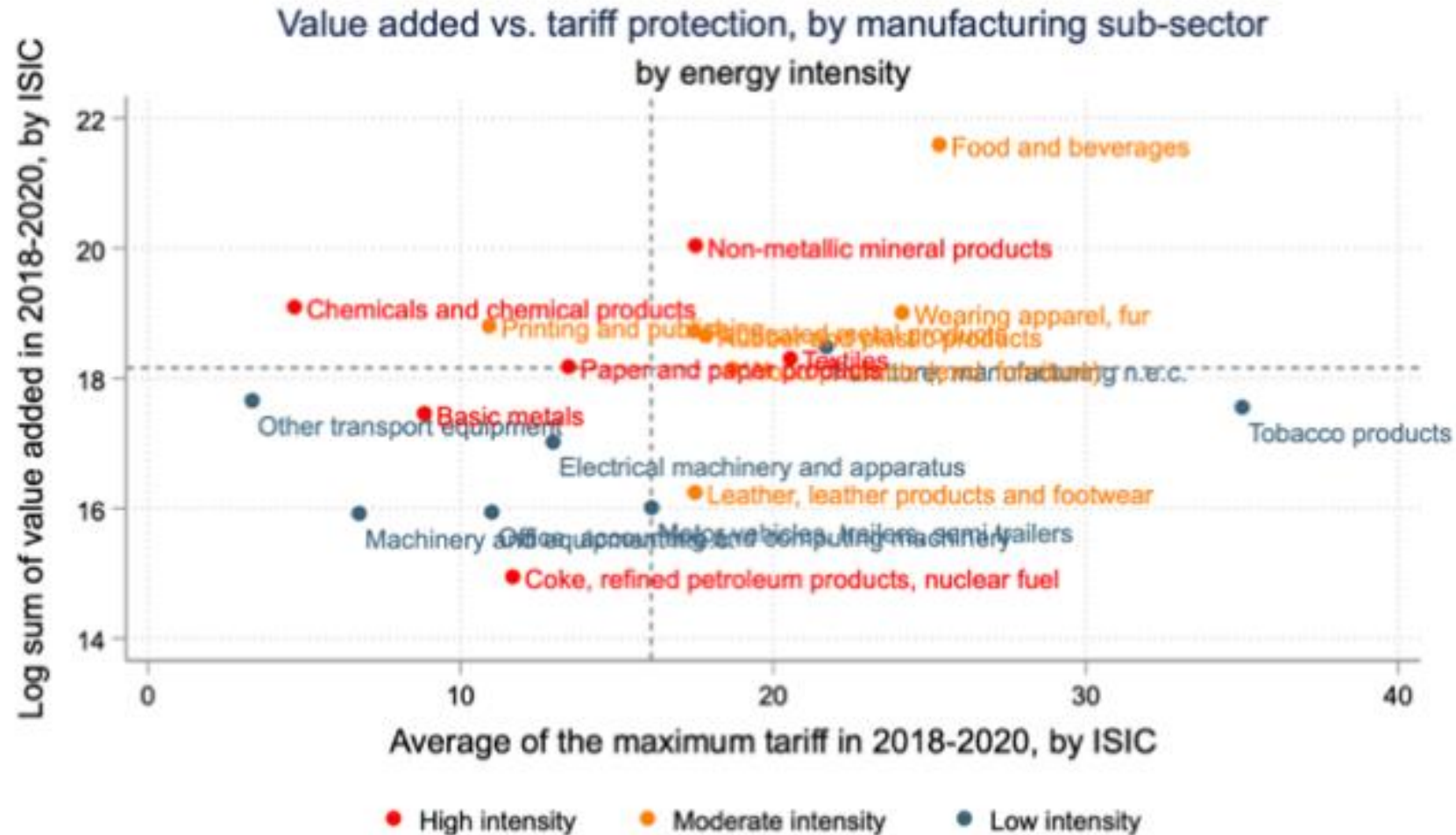
Electricity consumption and value added, by ISIC3 sub-sector



Electricity consumption and value added growth, by ISIC3 sub-sector



# Tax and trade policy have been used to partially offset the infrastructure challenges



Source: WTO, UNIDO

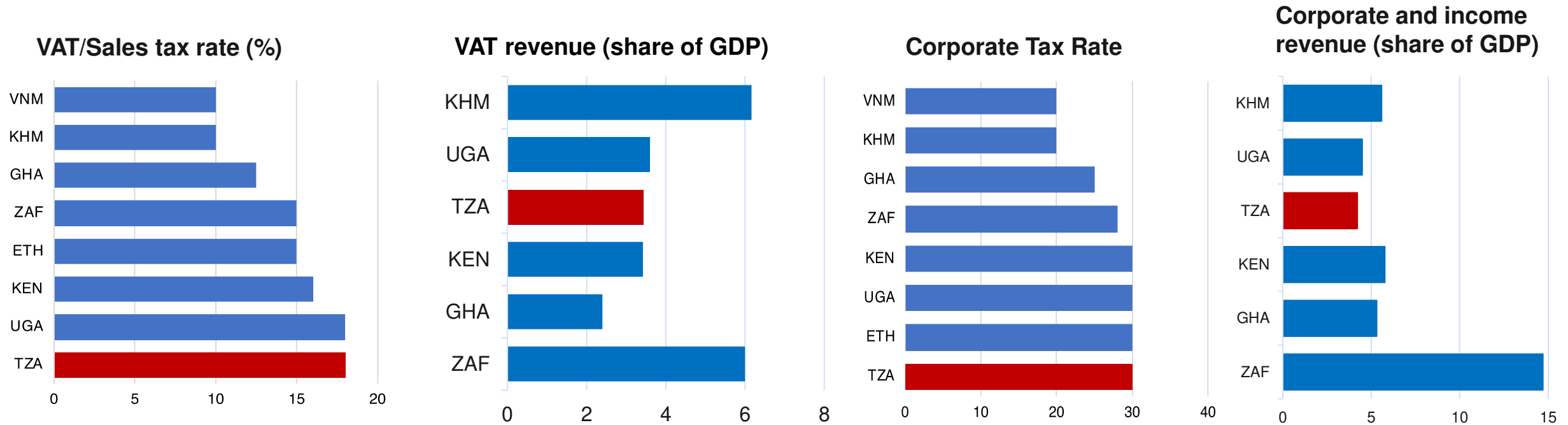
Note: dotted lines represent median values for the respective axes' variables

---

**Constraint 2:  
Microeconomic failures  
such as access to land,  
labour regulations and red  
tape seem particularly  
relevant for investors and  
exporters**

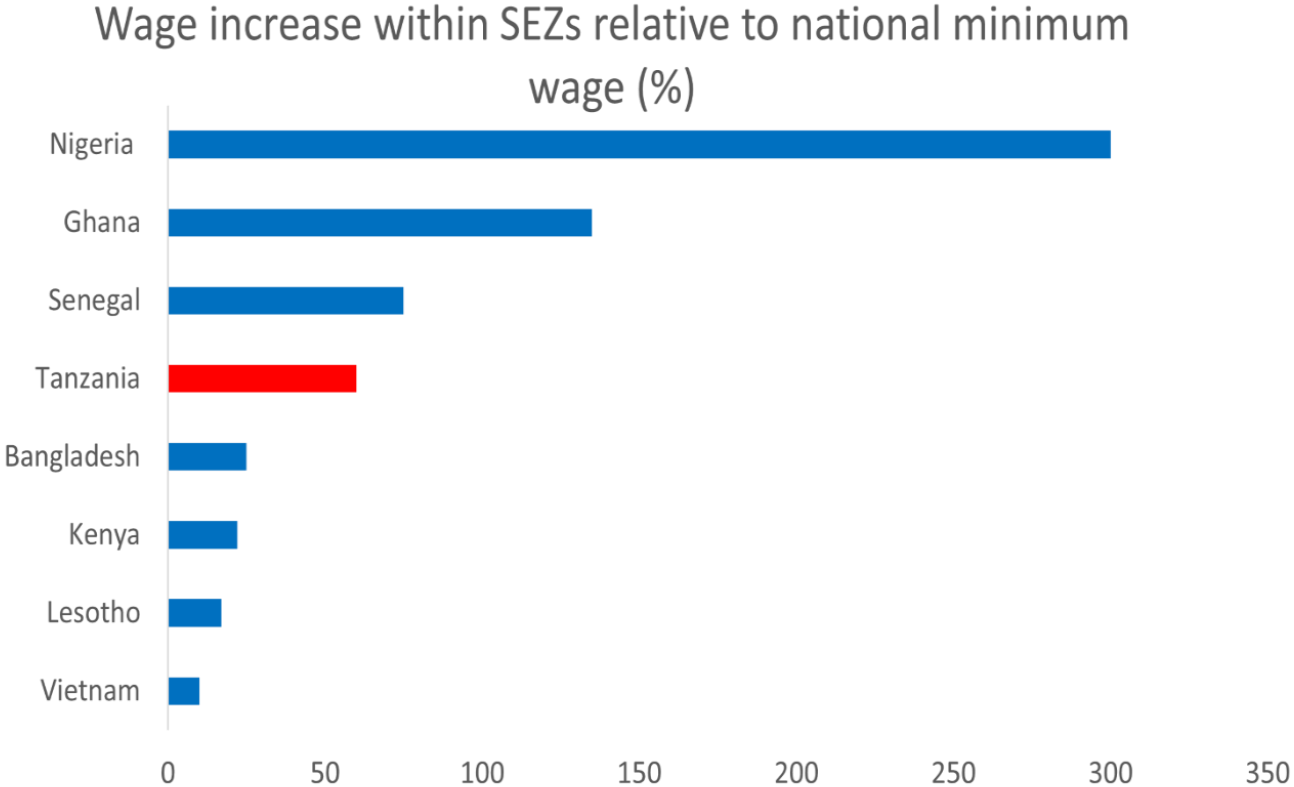
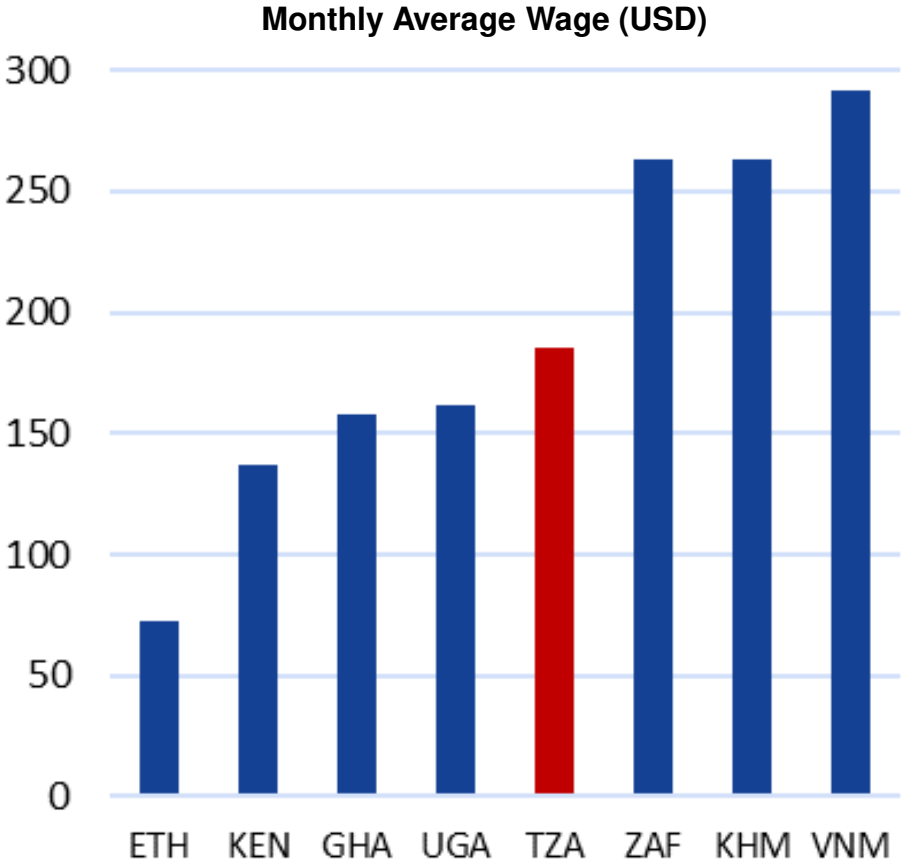


# High tax rate + lots of exemptions + low tax take



Source: OECD, WDI, BoT, and PWC

# High wages despite low incomes, particularly in SEZs

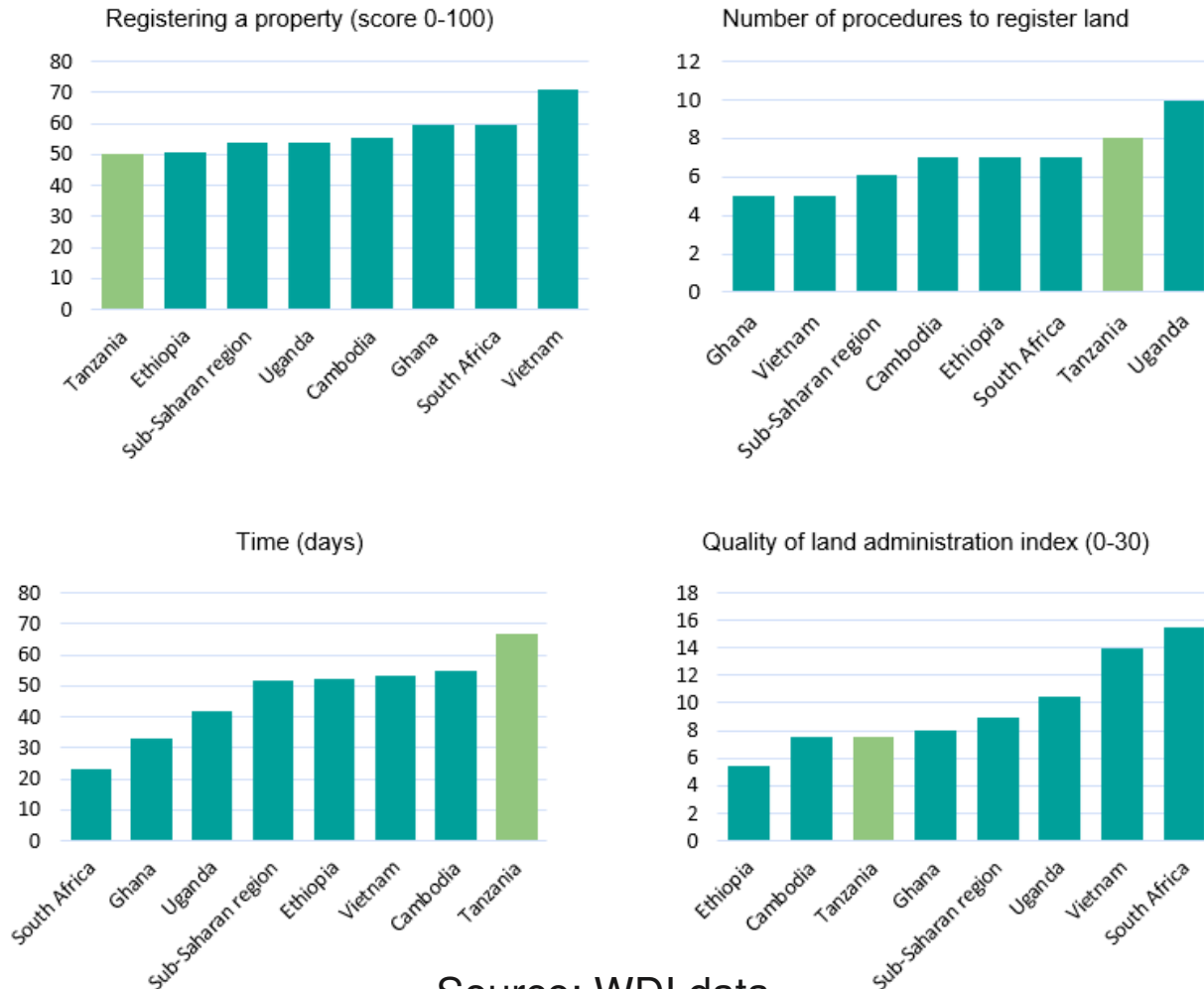


Source: Own elaboration from Farole 2011

# The current land property regime does not make access to land for investment easy

Land acquisition is particularly complicated for foreign investors, as current legislation does not allow for direct ownership

## Registering a property indices



Source: WDI data.

- ✓ Firms located in SEZs, are overburdened with red tape and bureaucratic procedures, adding costs and reducing their competitiveness (Kinyondo et al., 2016)
- ✓ One important constraint harming the implementation of EPZ and SEZ schemes is the non-availability of serviced land, and the payment of compensation in acquiring industrial land (Kweka, 2018).
- ✓ Land acquisition is one of the most complicated and time-consuming segments of the process to develop industrial parks (MIIT, 2011)

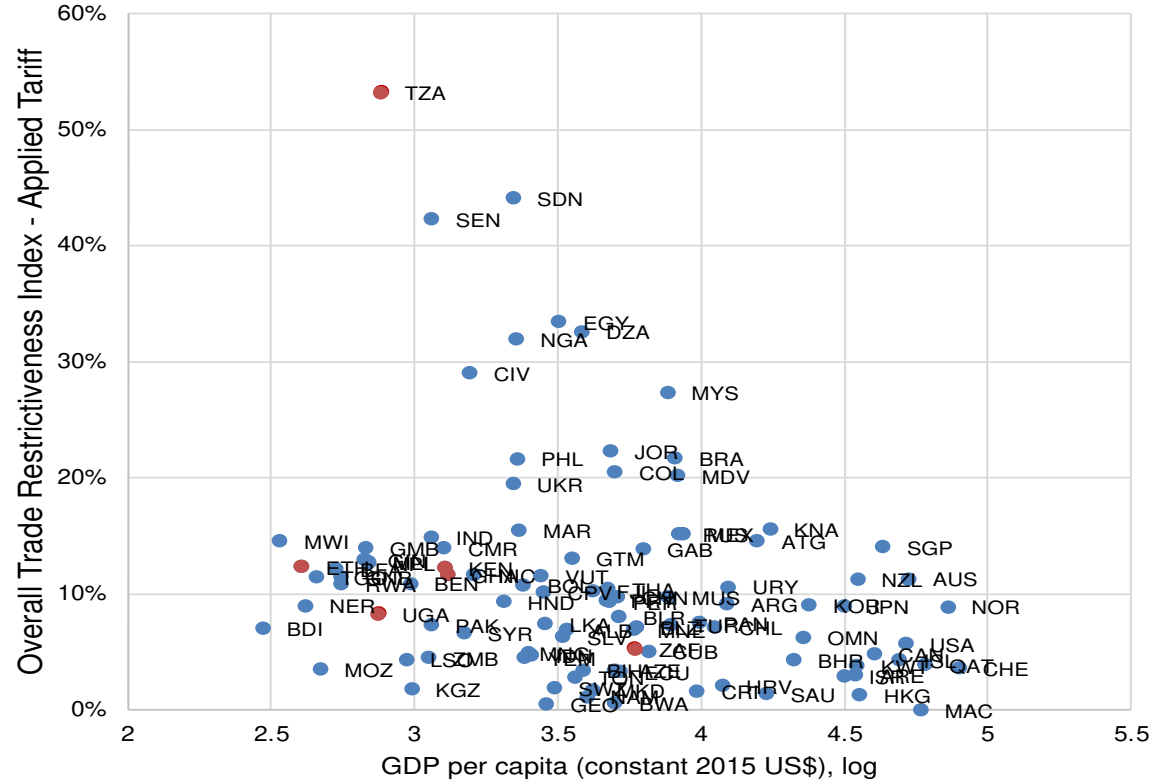
**Constraint 3: Trade policy has a role in compensating firms for other constraints, but is based against exports & labour, towards capital and the domestic market**

---



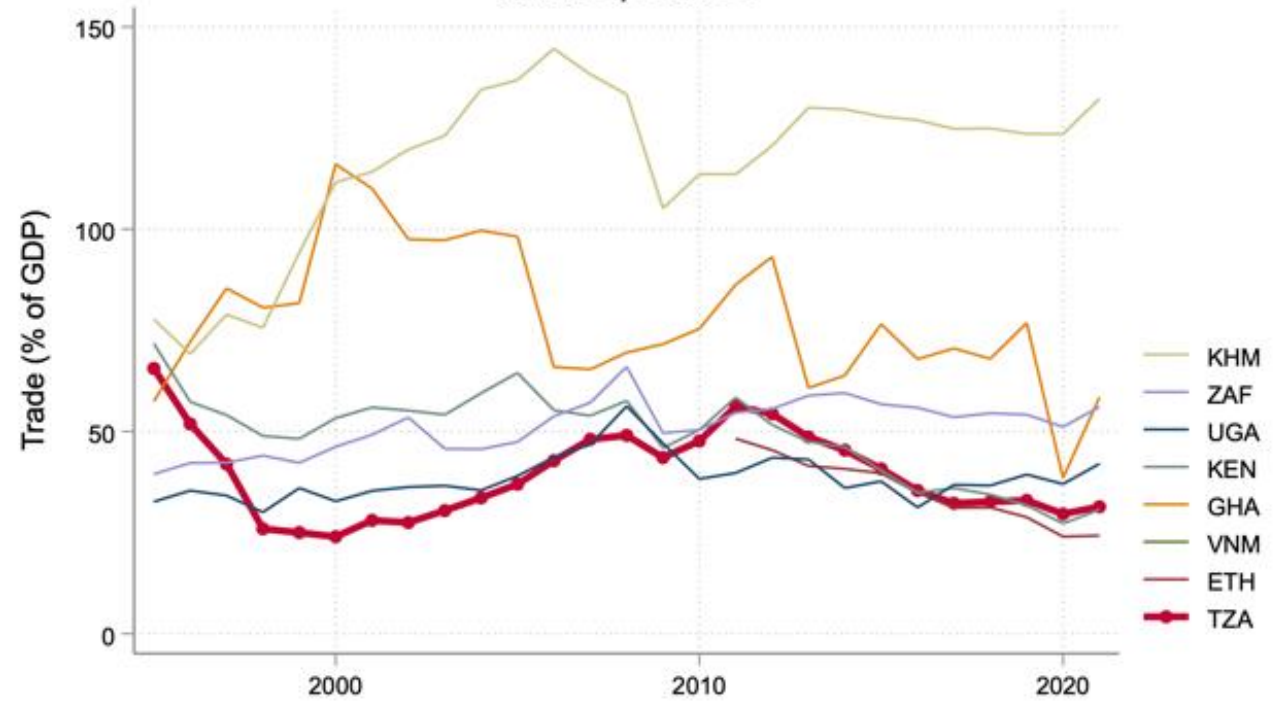
# Despite Foreign Trade Agreements (FTAs), Tanzania is a trade-restricted country

Trade restrictiveness index vs. GDP per capita, 2009



Source: Own elaboration using WDI data.

Trade openness

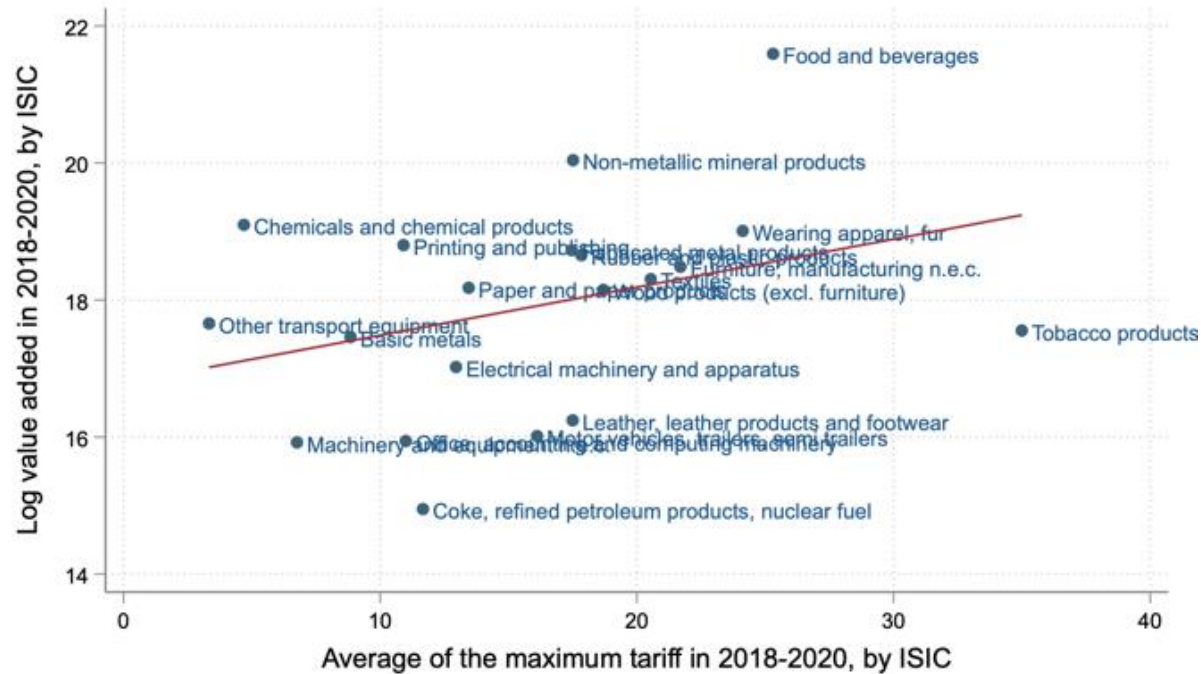


Source: World Bank WDI

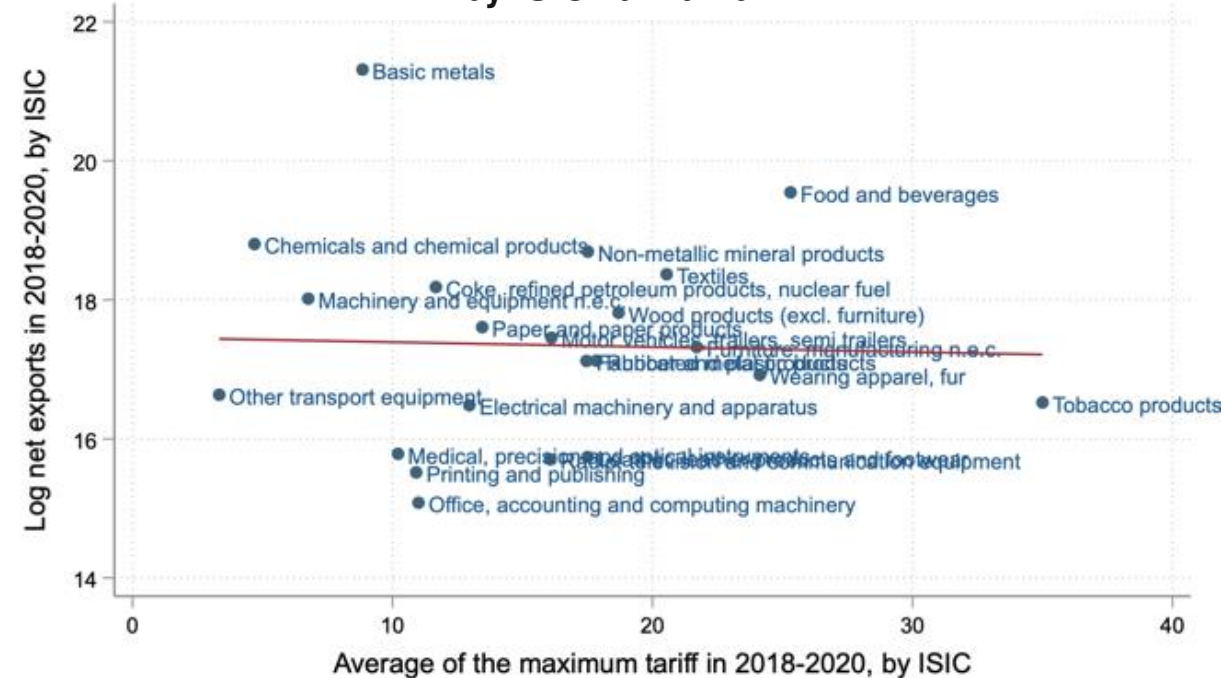


# Protection favors large producers for the domestic market, but not exporters

## Value added vs. Trade protection, by ISIC Tanzania



## Net exports vs. Trade protection, by ISIC Tanzania

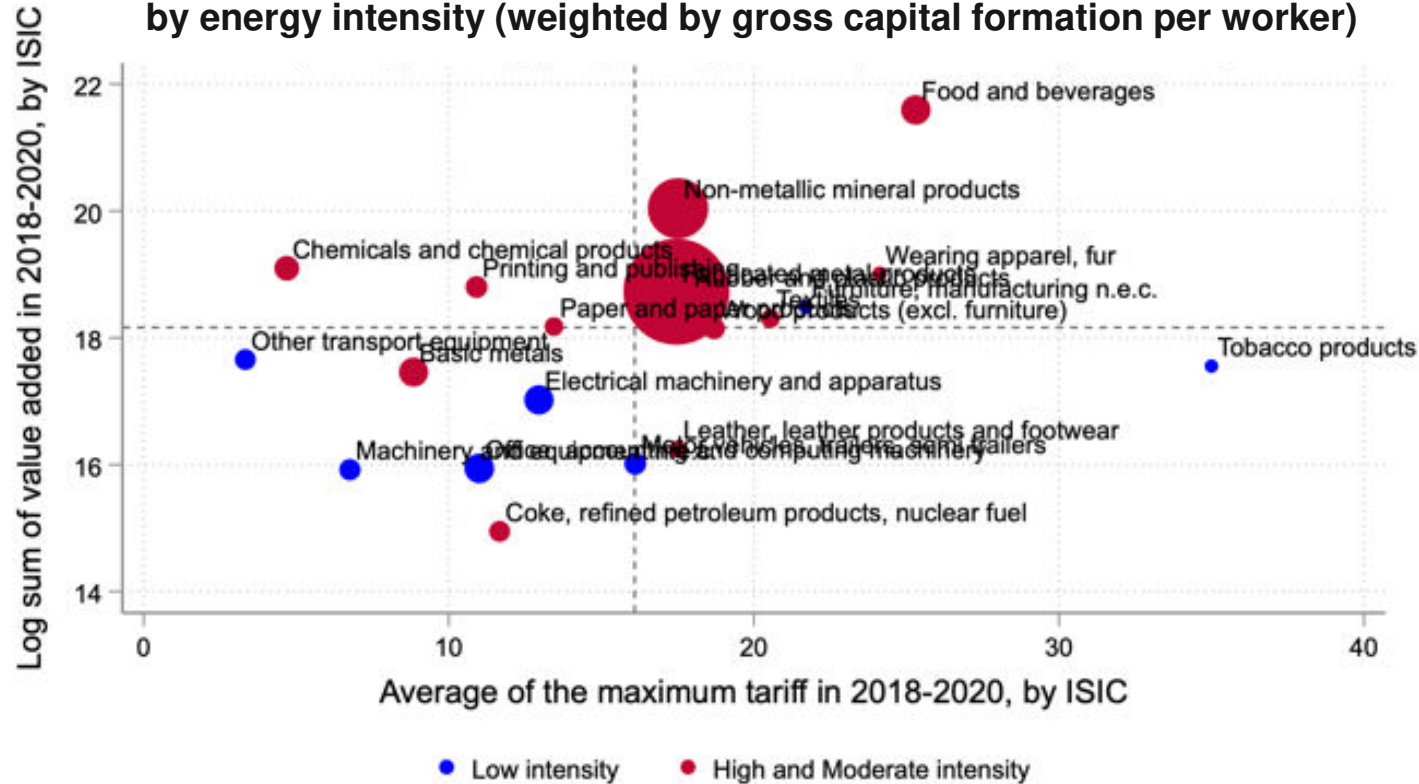


Source: Own elaboration based on WTO, UNIDO.

# Protection favors capital- and electricity-intensive sectors (but not labour-intensive sector). Tanzania's large manufacturers are large, capital intensive, focused on the domestic market, but not growing

## Value added vs. Trade protection

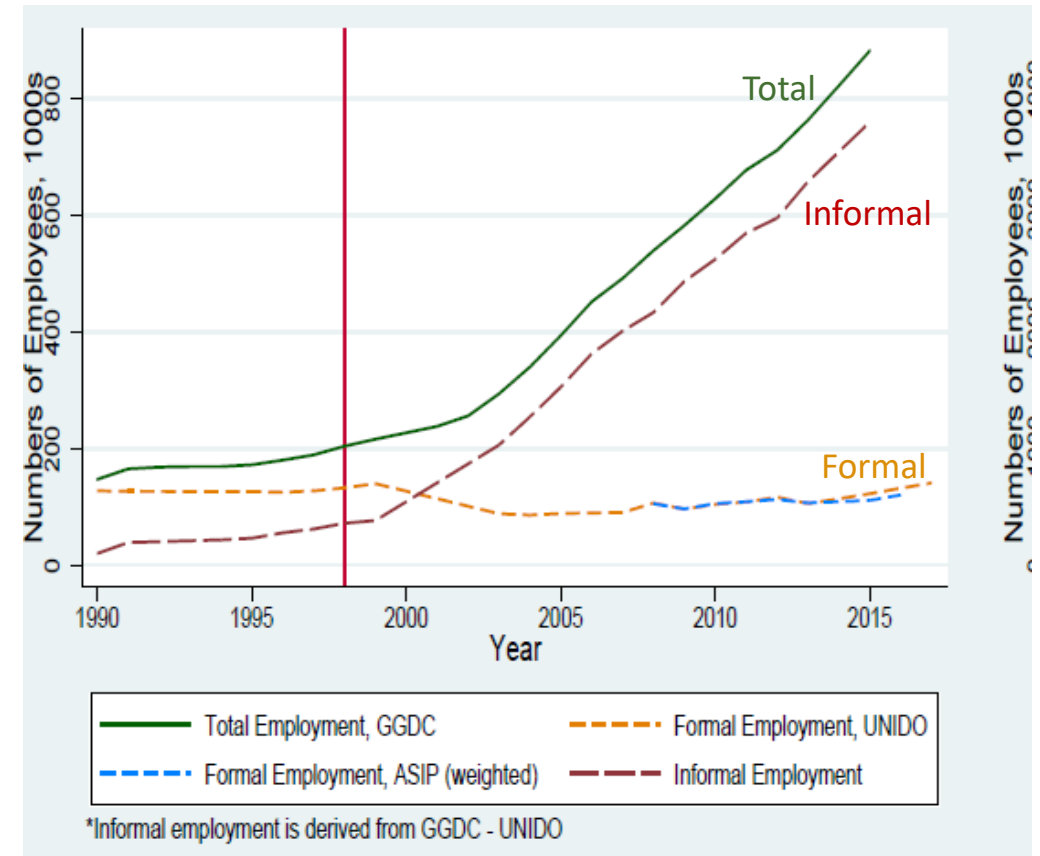
by energy intensity (weighted by gross capital formation per worker)



Source: WTO, UNIDO

Note: dotted lines represent median values for the respective axes' variables

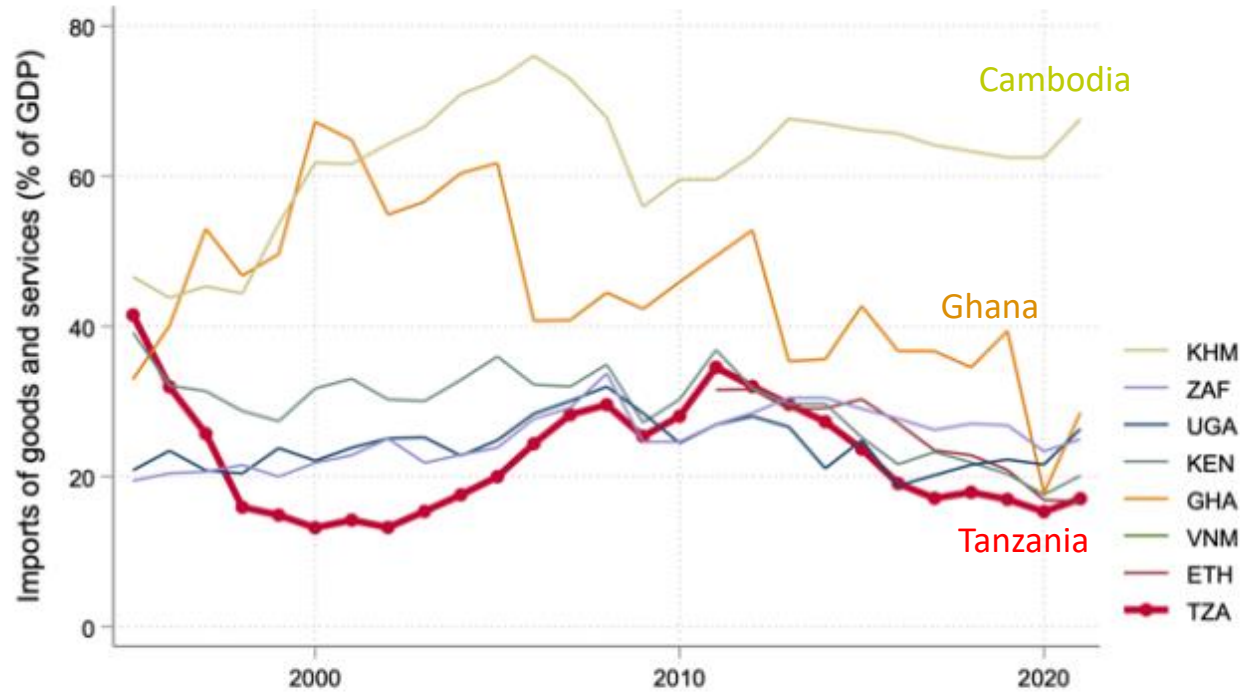
## Employment in Tanzania, by type



Source: Diao et al .,(2021)

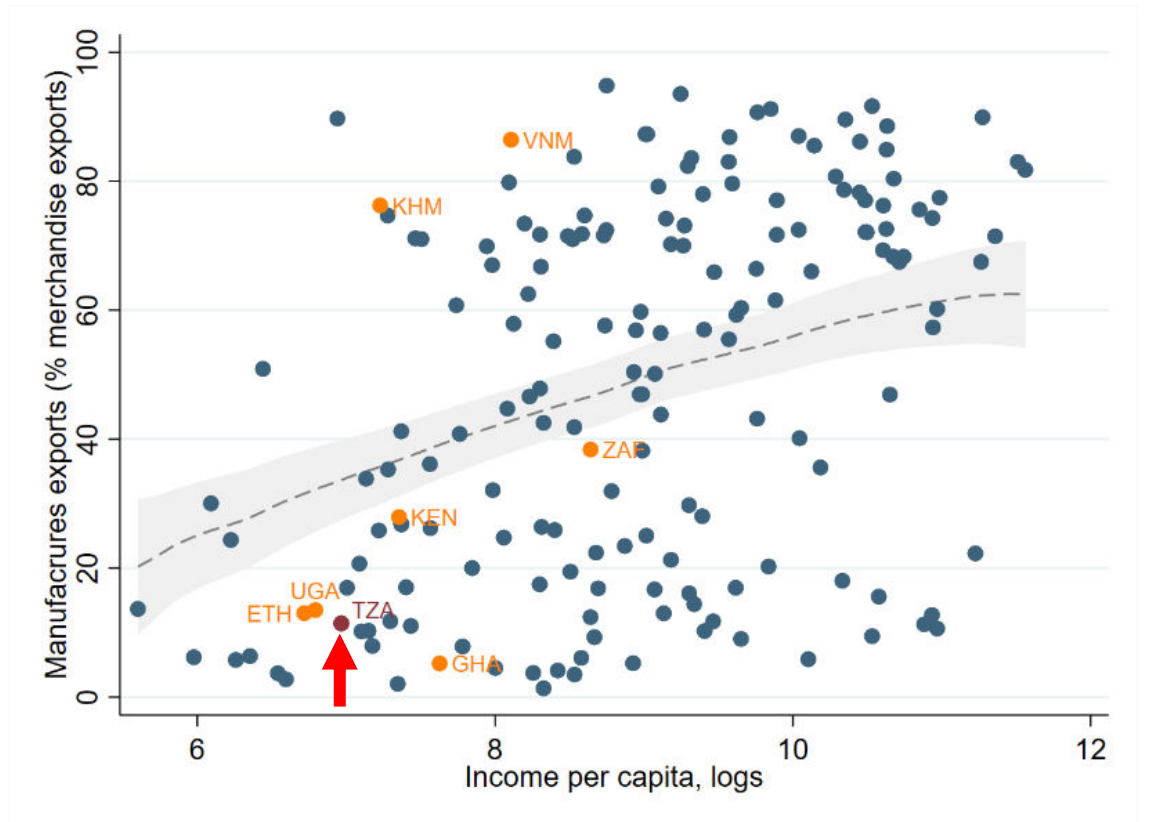
# Tanzania's imports of goods and services are among the lowest in the world: limits to *Import Substitution Industrialization* localization. Meanwhile, manufacturing exports are minimal

## Imports of goods and services, by % of GDP

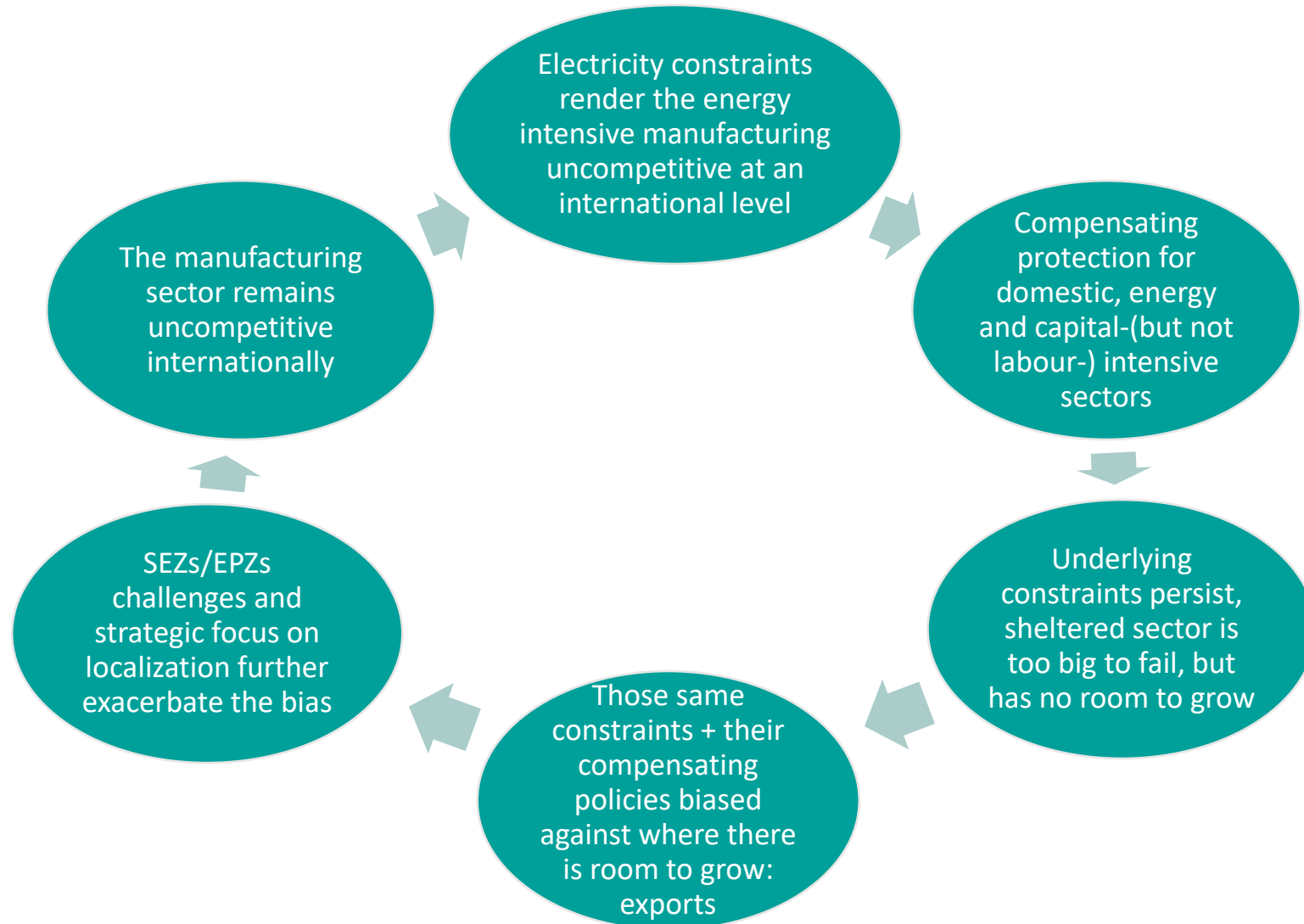


Source: World Bank WDI

## Manufacturing exports vs. Income per capita



# A 'Sheltered Manufacturing Syndrome'



# Policy Recommendations

1

## Fix the binding constraints

- Ensure generation grows as planned, accompanied by investments in transmission & distribution & financially sound TANESCO
- Prioritize & act on the blueprint\* (all of it)
- Vocational training & financial sector reform

2

## And shift focus from localization to exports

- Reduce anti-export bias in tax & trade policy, cost of intermediate inputs
- Explore new ways to manage EPZs and invigorate FDI – must relieve constraints, not exasperate them
- Target sectors based not just on backward linkages - explore the full opportunity set

3

## Later, rationalize tax and trade policy

- As constraints are relieved, compensatory protection can be reduced and tax and trade policy can be rationalized
- But in the meantime, domestic protection does not require anti-export bias.

\* Blueprint For Regulatory Reforms To Improve The Business Environment (MITI, 2018)

# It is essential to address the limitations in the design and implementation of special economic zones (SEZ and EPZ)

Industrial parks should **provide relief for the constraints identified** by manufacturing firms.

**Adopting public-private model would be beneficial**, ensuring coordination and high-level political support, and delegating the zones' management to private contracts.

**The framework of SEZs and EPZs should be unified** and simplified, to reduce the regulatory burden associated with them.

With private initiative and capital introduced into the management of the zones, **returns would be further improved by decreasing the cost of finance** with capital market reforms and further deepening of the financial system.

# Target high-export growth potential sub sectors

---



## Approaches for targeting



**Economic complexity approach:** based on current capabilities to prioritise existing products that can be scaled up or emerging products that can be developed.

**Electricity intensity:** Prioritise low-intensive products while electricity is still a big constraint.

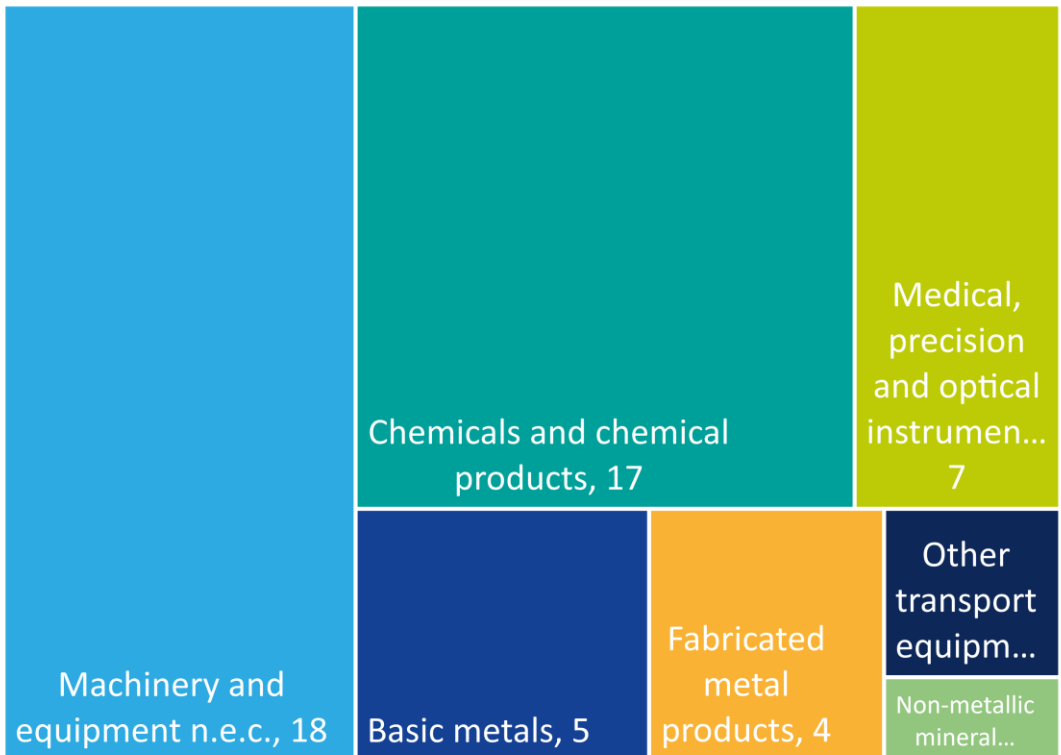
**Environmental equilibrium:** Promote manufacturing industries that are consistent with environmental standards.

# For example, the Economic Complexity framework provides a roadmap to prioritise production based on the current capabilities in the sector

## Existing products that can be expanded



## Emerging products that can be successfully developed





---

# Thank you



# Who we are

---

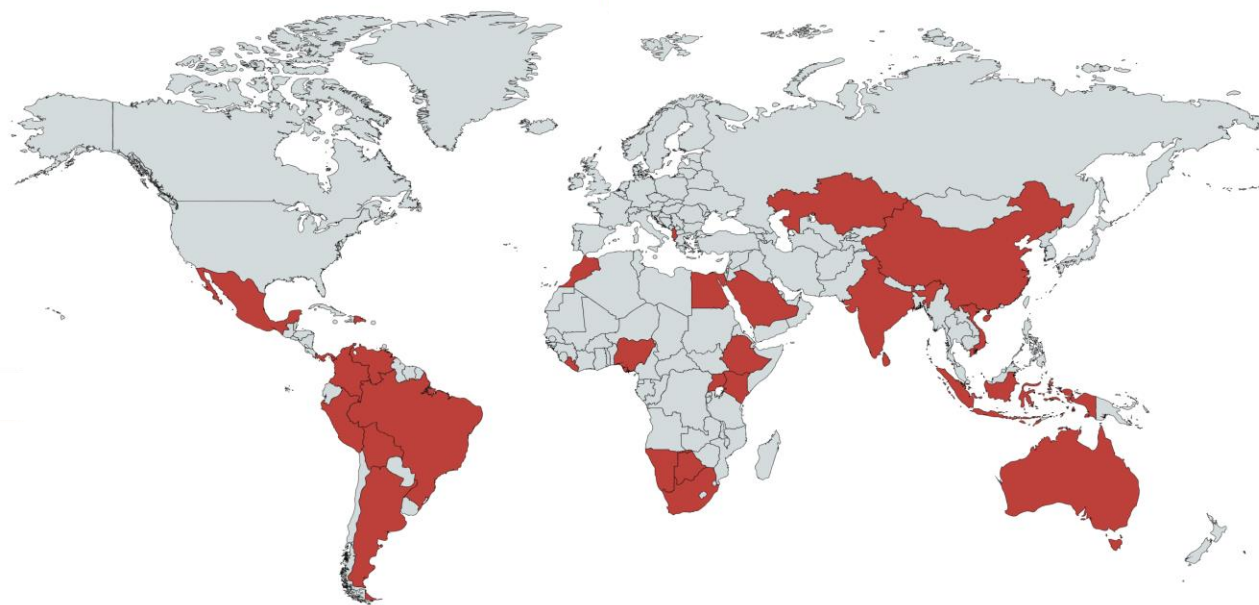
# The Growth Co-Lab

At the **Harvard's Growth Lab** and the **Growth Co-Lab at LSE** we research, teach and apply innovative ideas that expand shared knowledge on economic growth and development to help improve people's lives in a sustainable manner

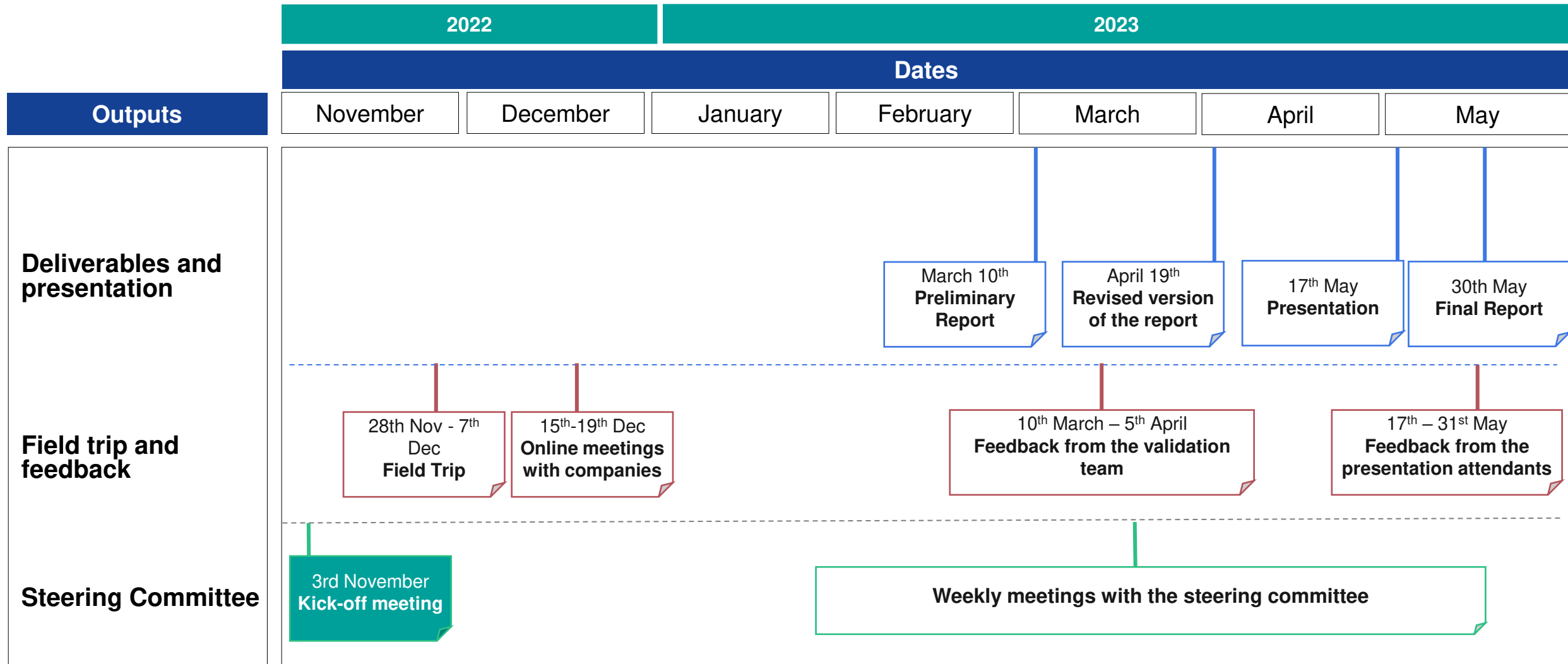
## What do we do?

- Push the frontiers of economic growth and development policy research
- Collaborate with policymakers providing inputs for policy design and learning from implementation
- Codify research insights and share them with the general public through teaching, tools and publications
- Build the next generation of evidence-driven policy analysis and policy leaders

## Global footprint of projects and research



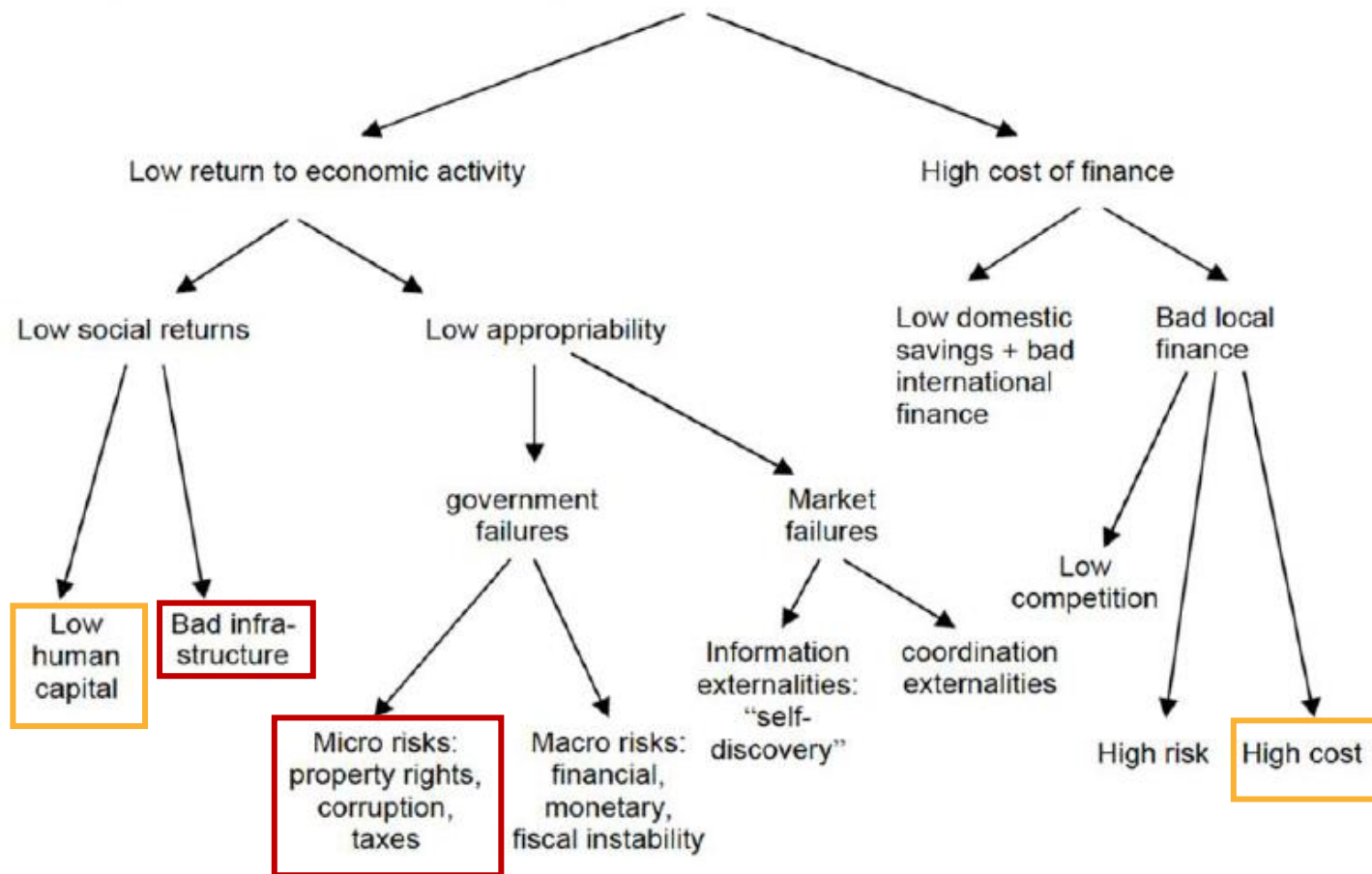
# About the project



# The Growth Diagnostics Framework

Problem: Low levels of private investment and competitiveness

- What did we find?



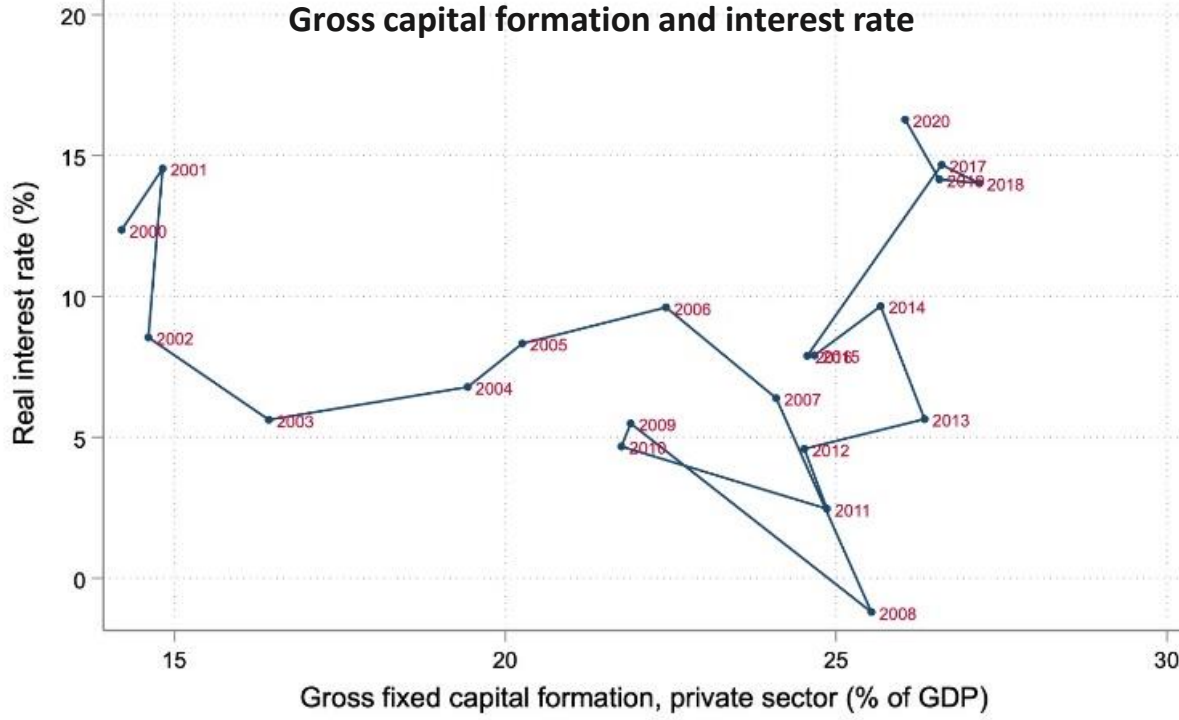
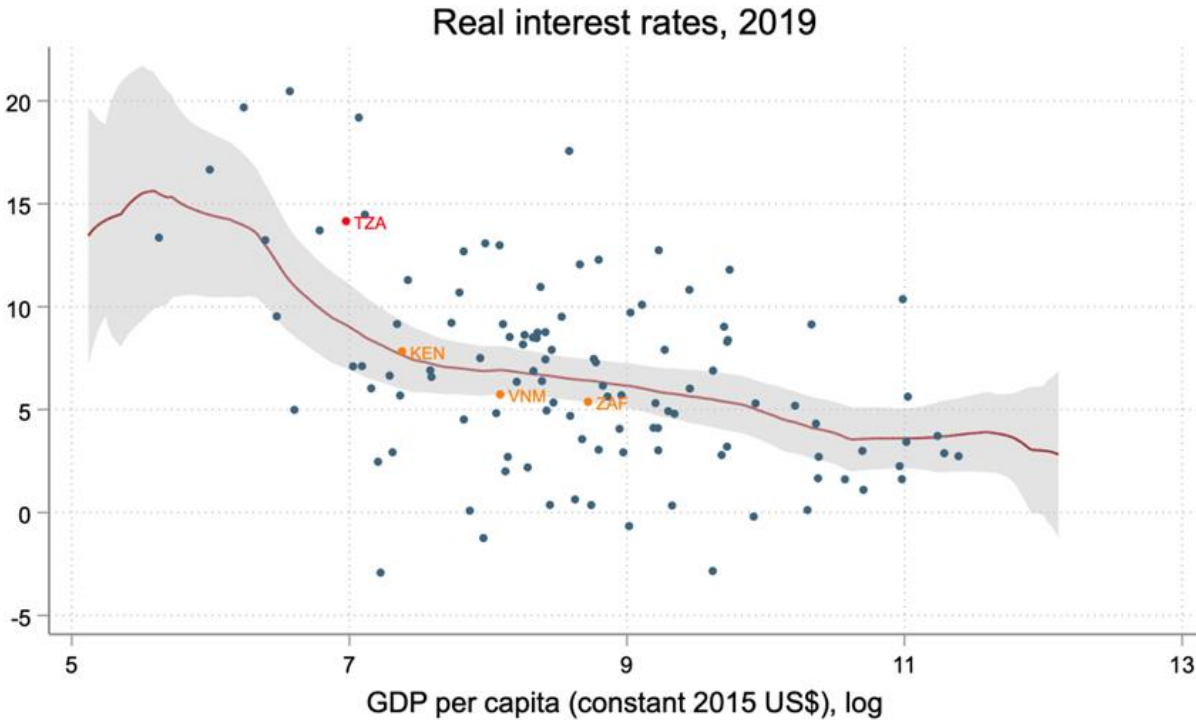
Source: Hausmann, Klinger and Wagner (2008).

**There is sufficient  
evidence to  
determine that  
finance not  
currently the  
binding constraint**

---



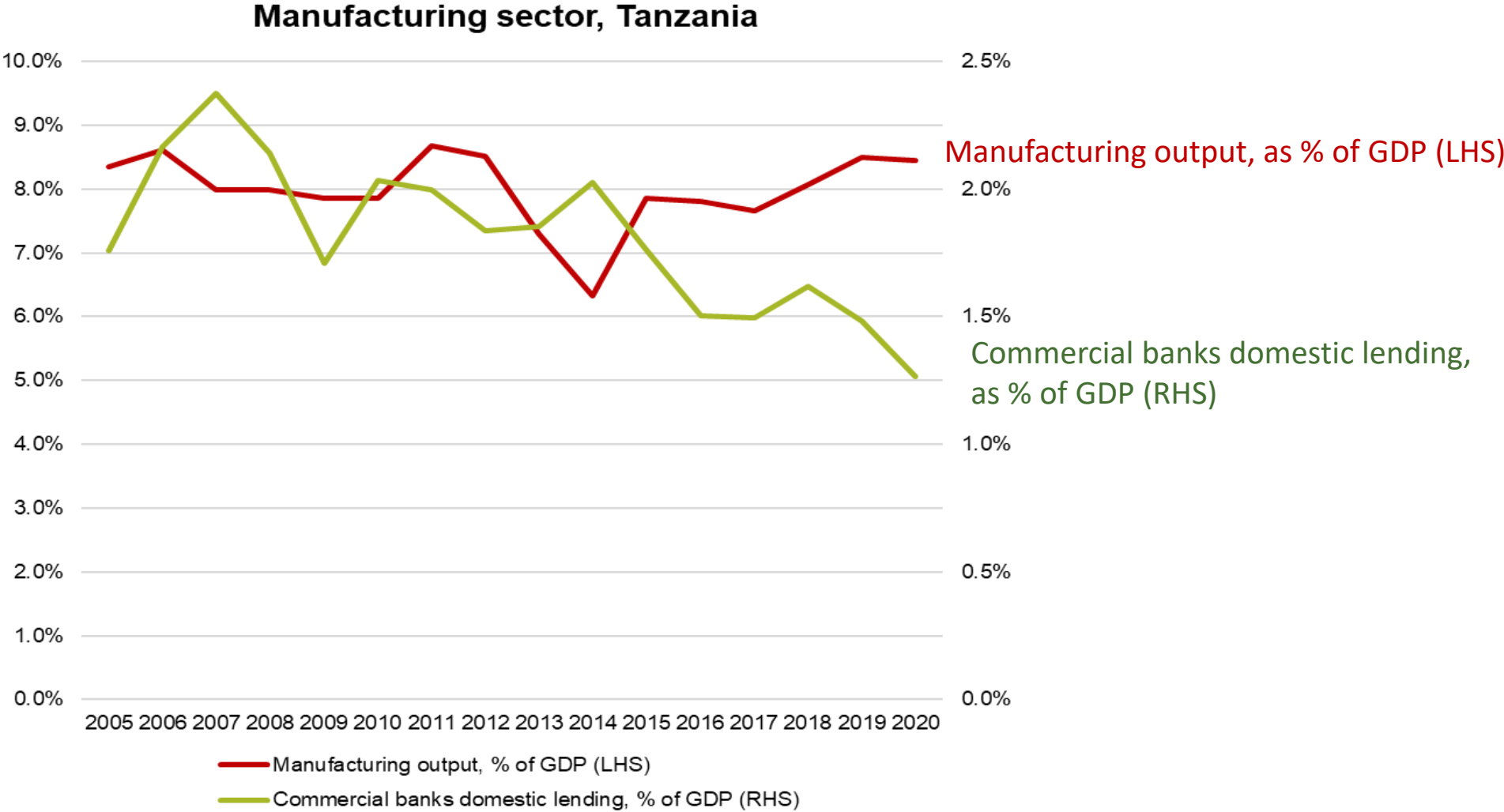
# Though real interest rates are high, it does not seem to be the case that growth in credit translates into economic growth for the whole economy



Note: Data winsorized at 5%  
Data source: World Development Indicators

Source: WDI data.

# This is true of the manufacturing sector as well: positive changes in financing do not result in higher manufacturing output



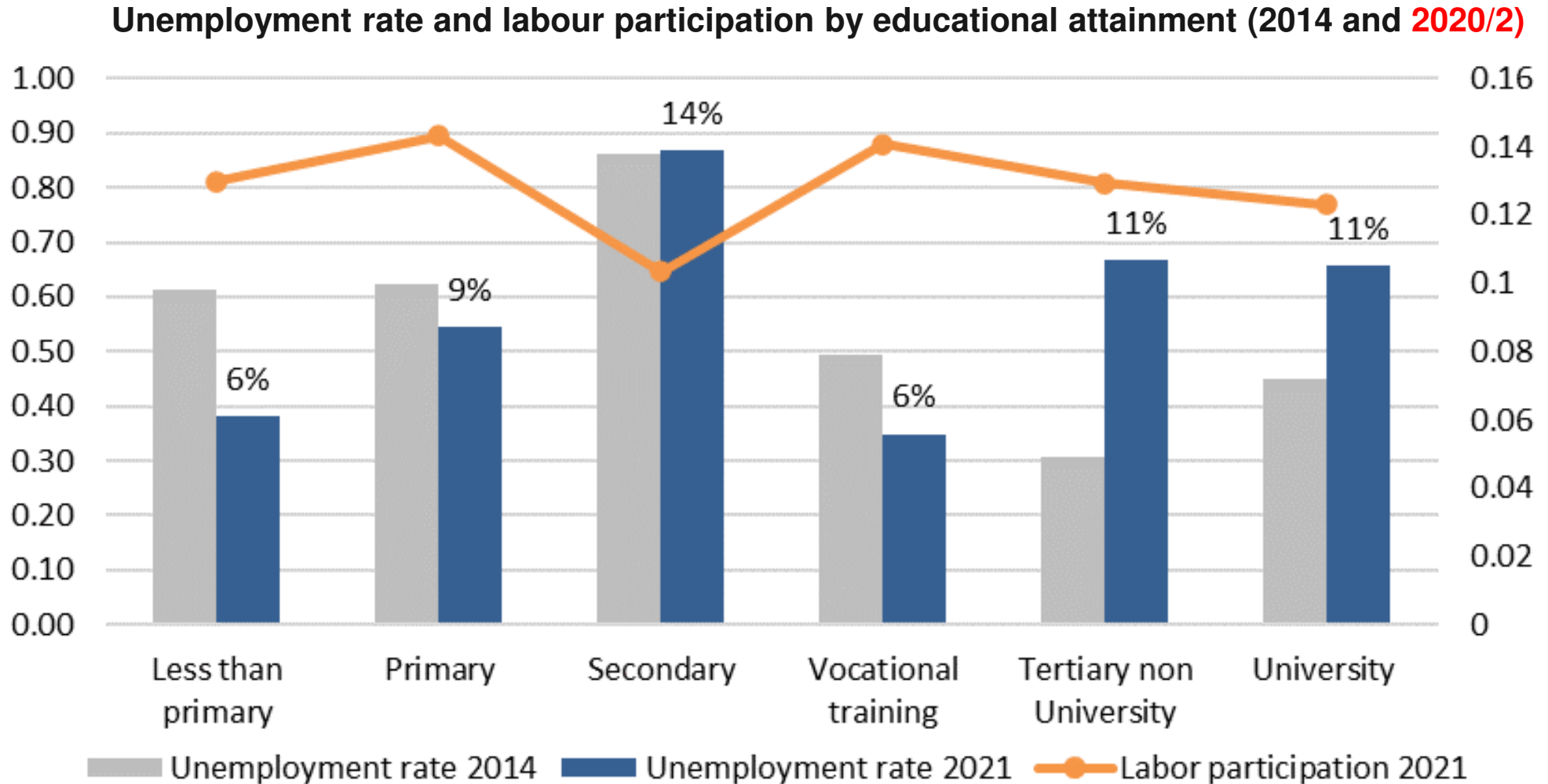


**Human capital is not holding down returns to investment in manufacturing. But the sector requires an increasing supply of workers with vocational training and continued access to skilled foreign workers**

---



## Returns to schooling have been declining and unemployment is high for secondary education and rising for tertiary education

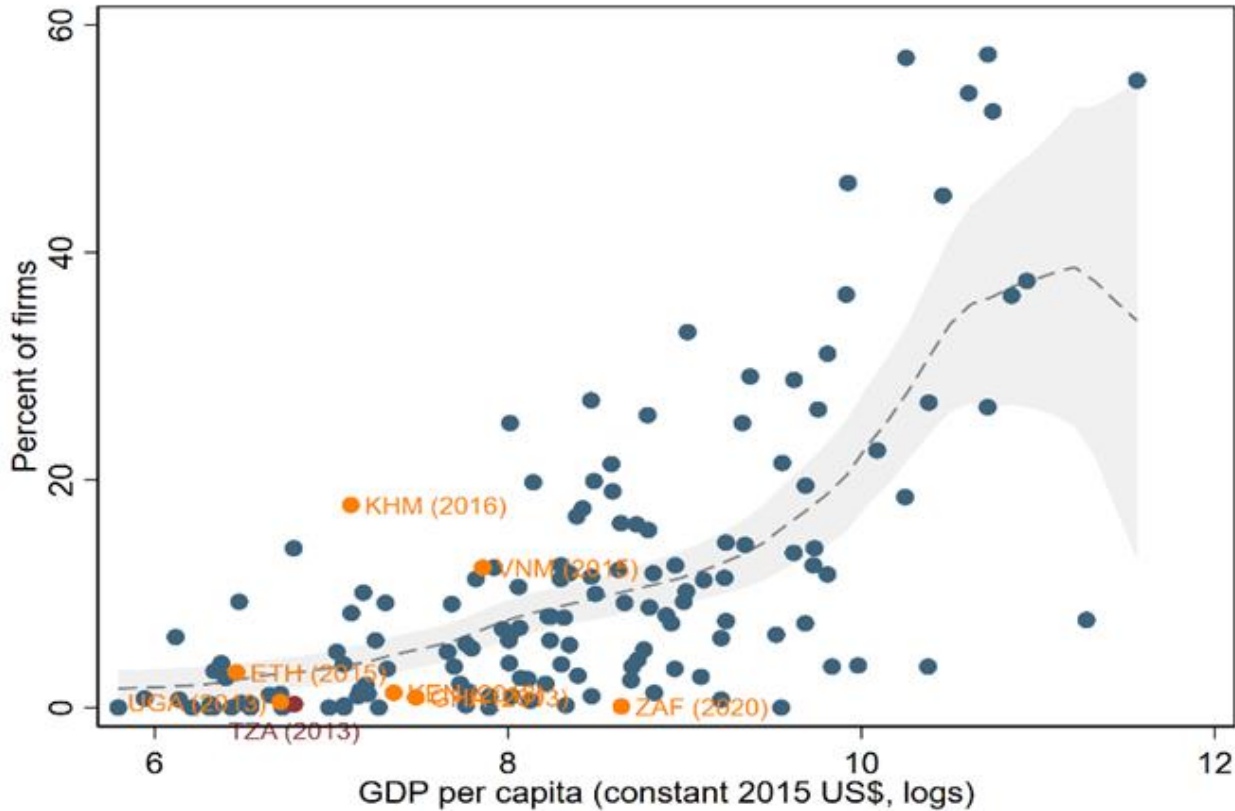


Source: ILFS, 2014 and 2021

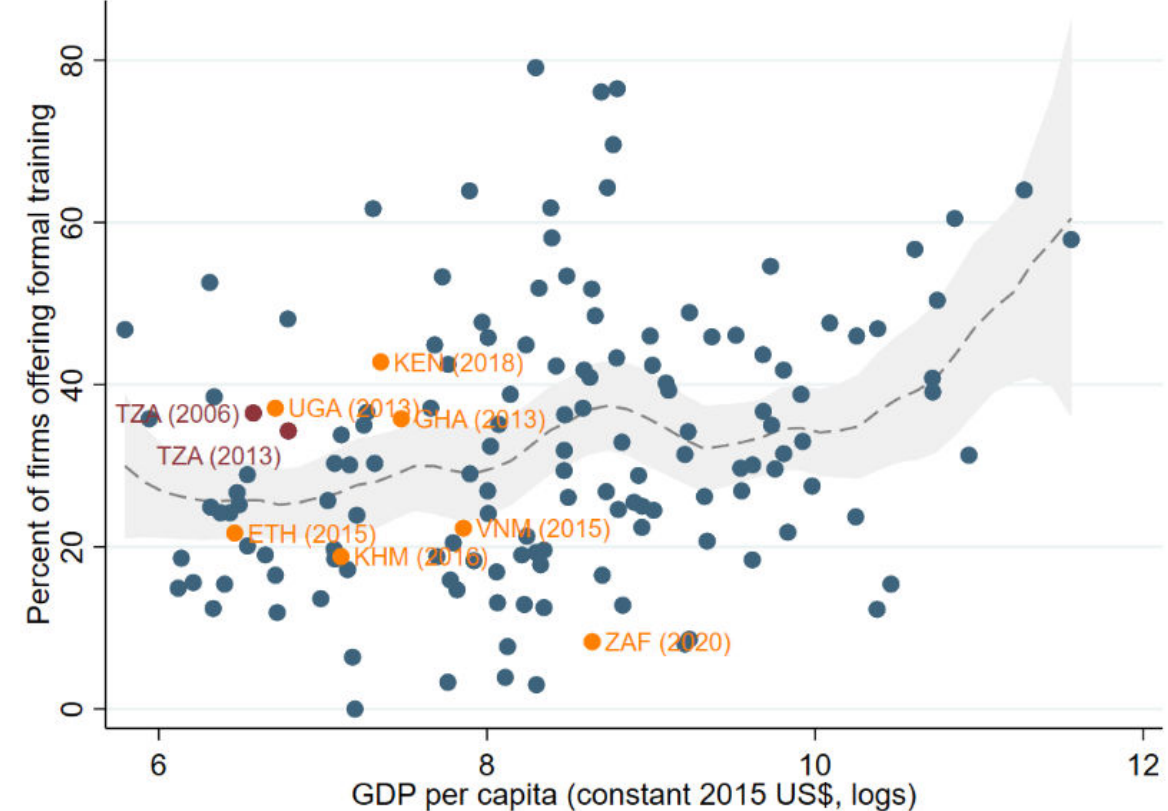
# The proportion of firms identifying human capital as main obstacle is also low and the proportion of firms offering formal training has declined



### Proportion of firms identifying human capital as main obstacle



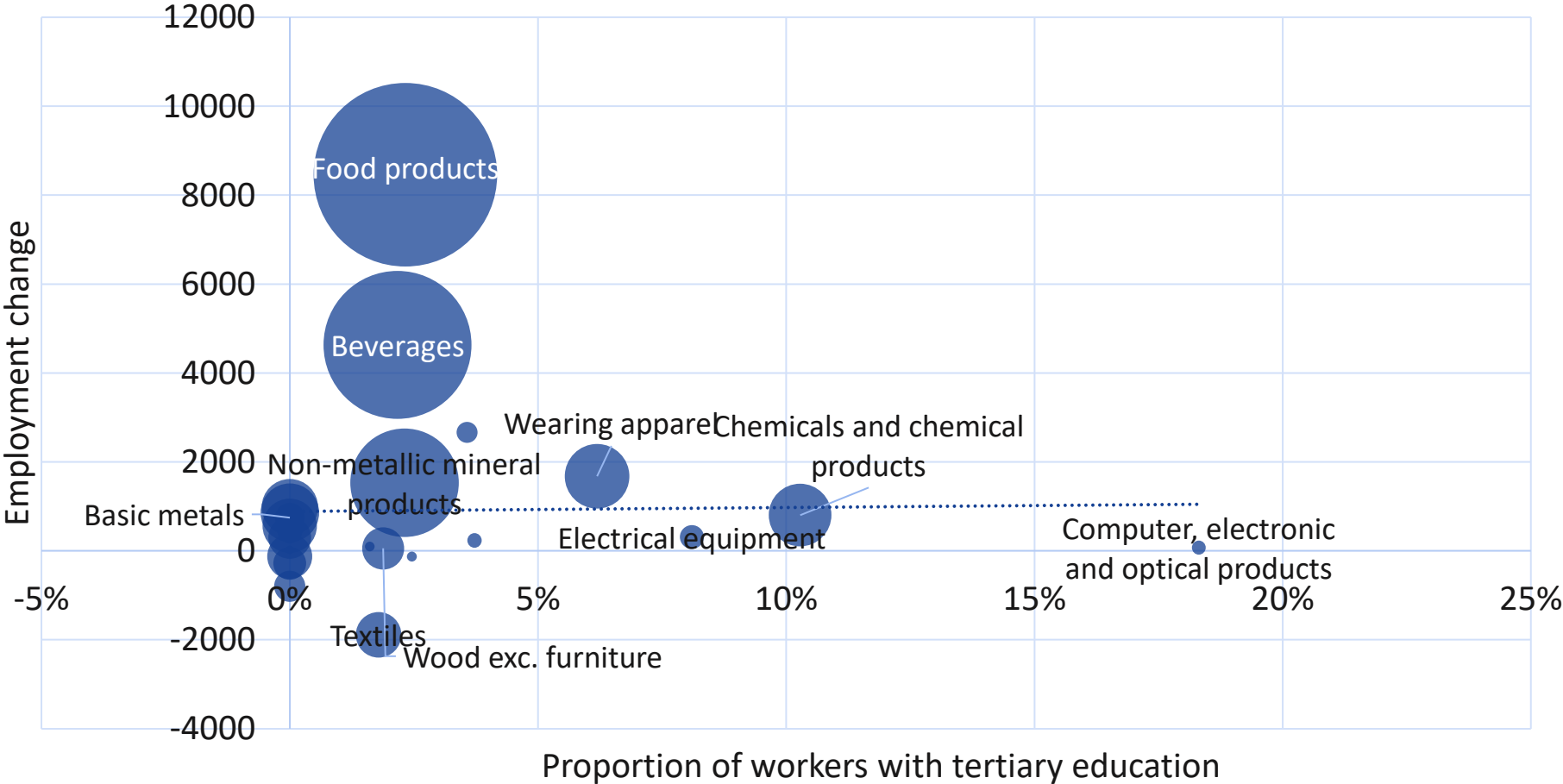
### Firms offering formal training vs. income per capita



Source: WBES data.

# There is no clear relationship between sector growth and human capital intensity

## Employment change, value-added and workers with tertiary education, by subsector



Sources: ILFS 2020/21 and UNIDO ISIC 4 database. Note: The size of the circles represent the value added in 2019

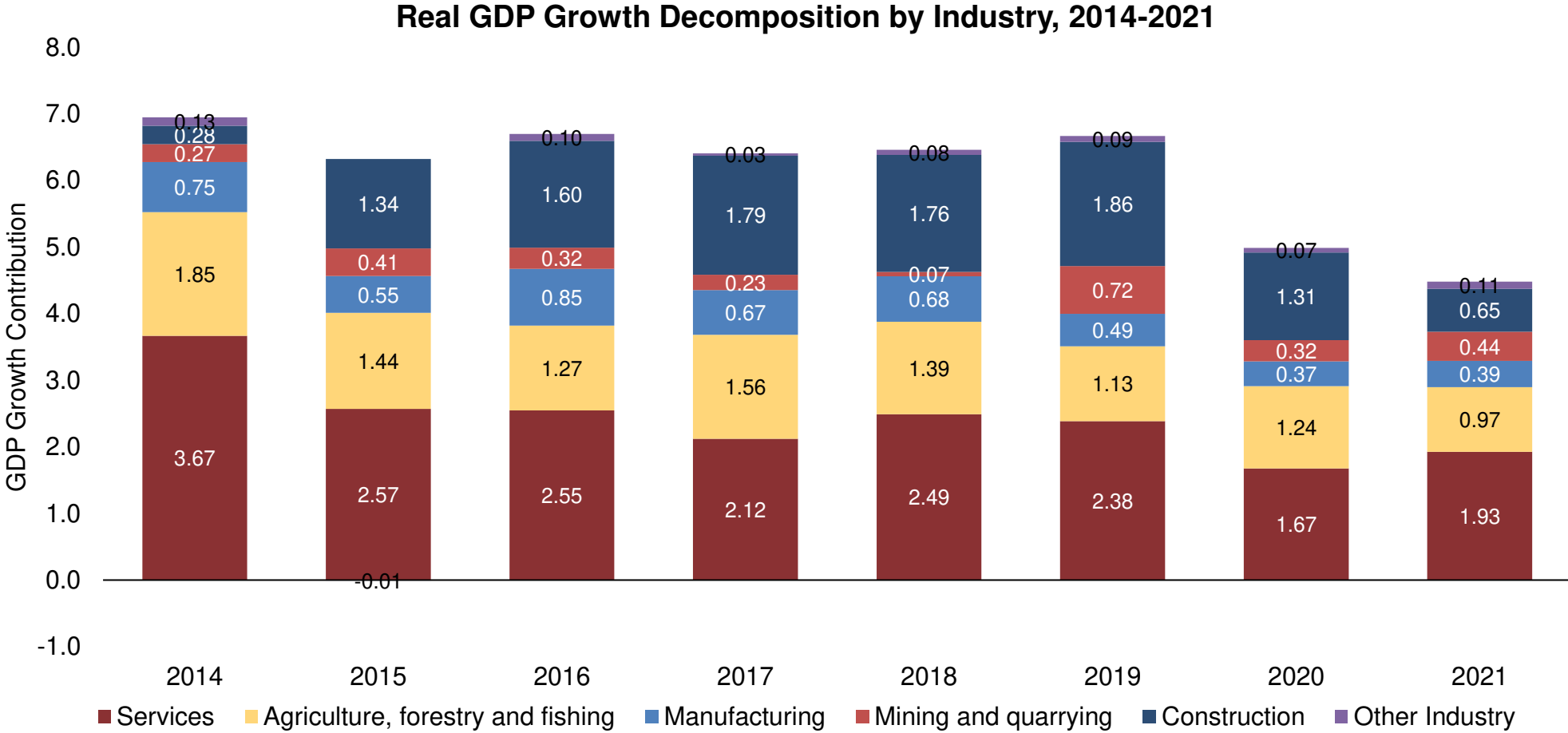
---

# Appendix

---

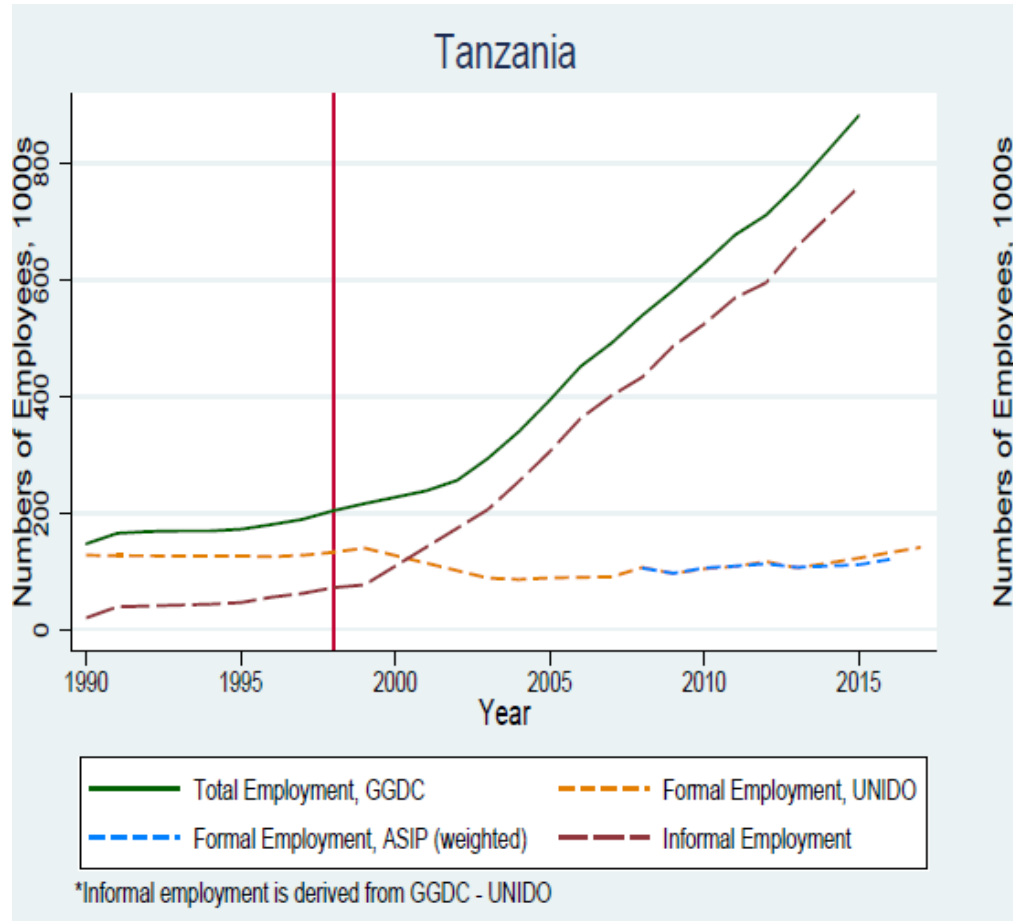
# 1. Growth trajectory and economic complexity

# Economic growth on the supply side has been primarily driven by an expansion of the services sector, agriculture and construction

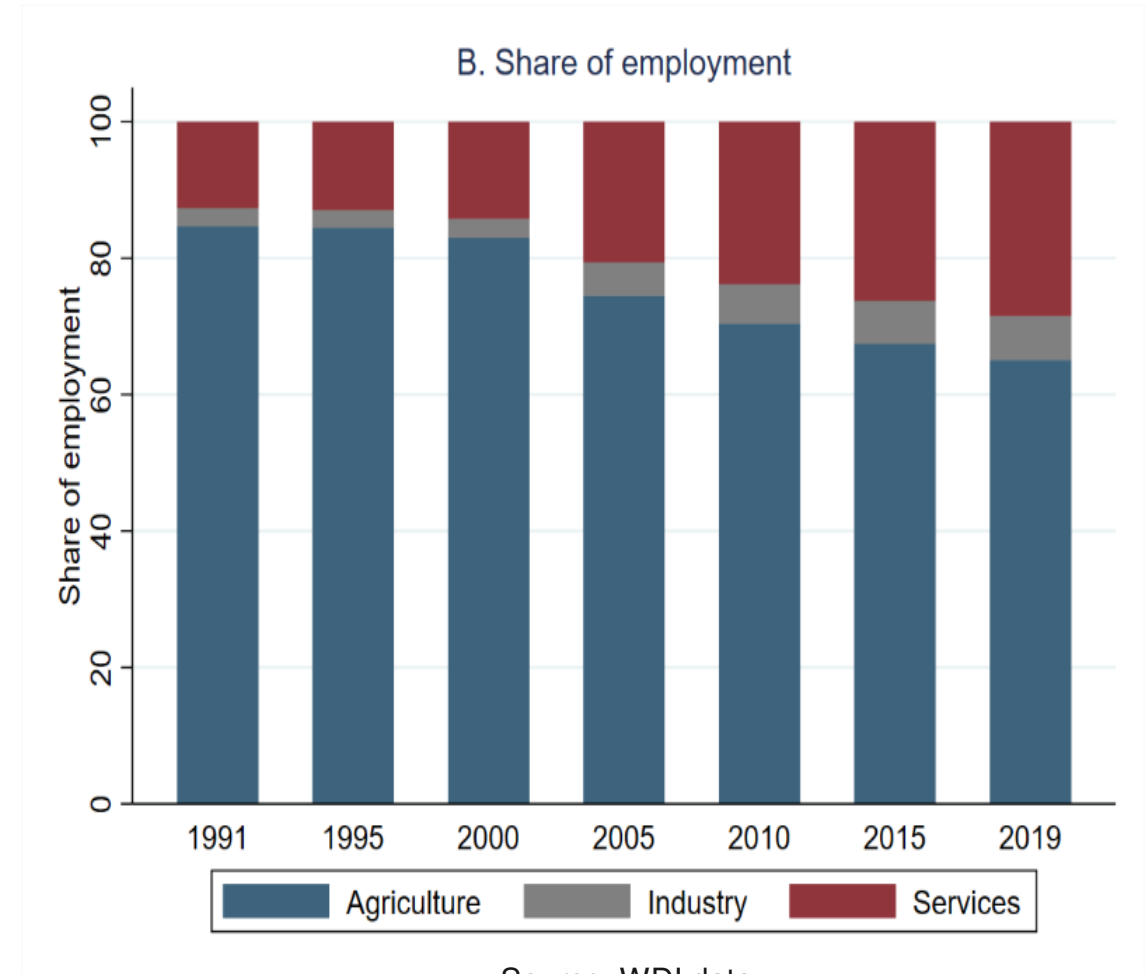


Source: Tanzania National Bureau of Statistics

The formal manufacturing sector is capital-intensive and highly productive but stagnant, while employment in Tanzania remains concentrated in agriculture and – to a lesser degree – services.



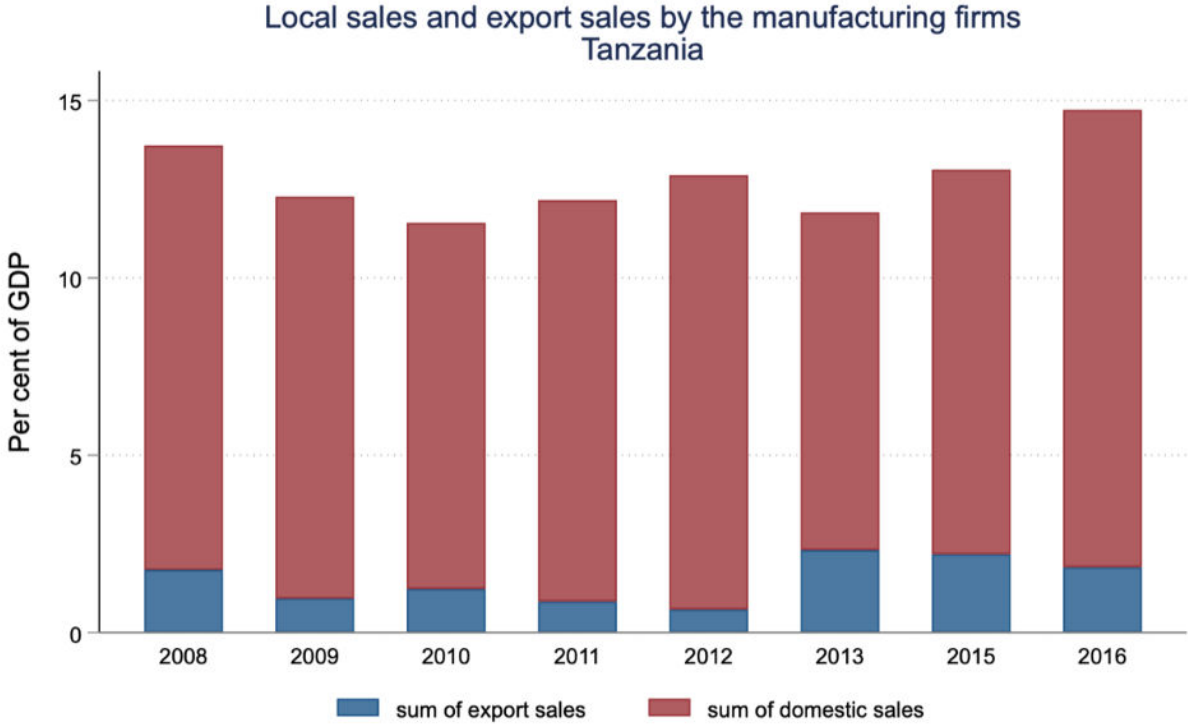
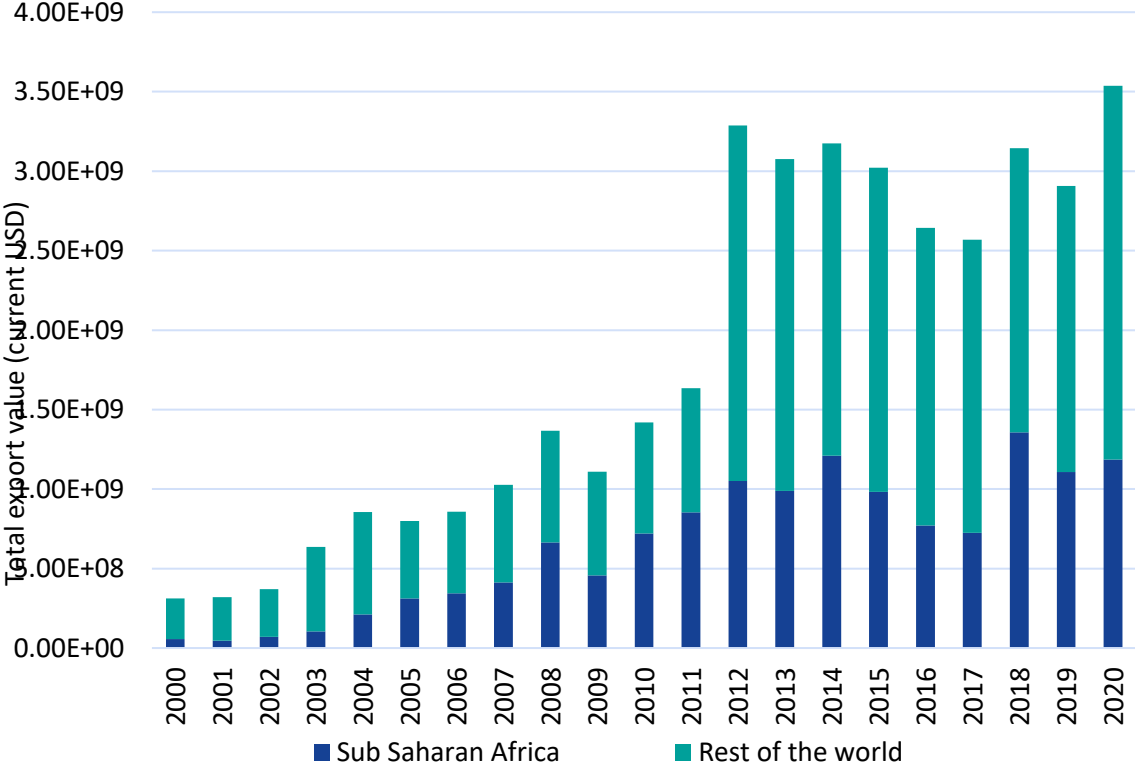
Source: Diao et al .,(2021)



Source: WDI data.



# Manufacturing exports have increased over the last decade, particularly to SSA, yet the vast majority of manufacturing output is sold in the domestic market rather than exported

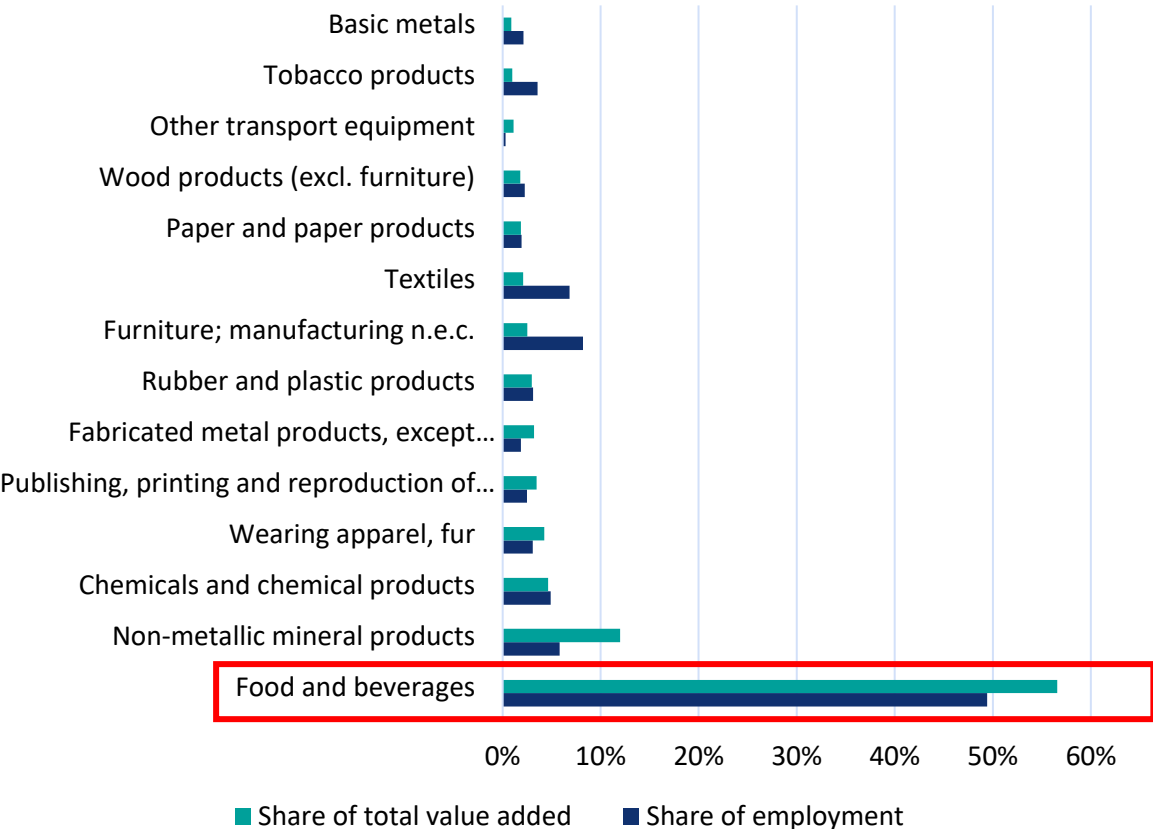


Source: ASIP panel dataset

Source: Self elaboration using UN Comtrade data. Note: The manufacturing sector was defined using ISIC definition. This definition includes basic metals.

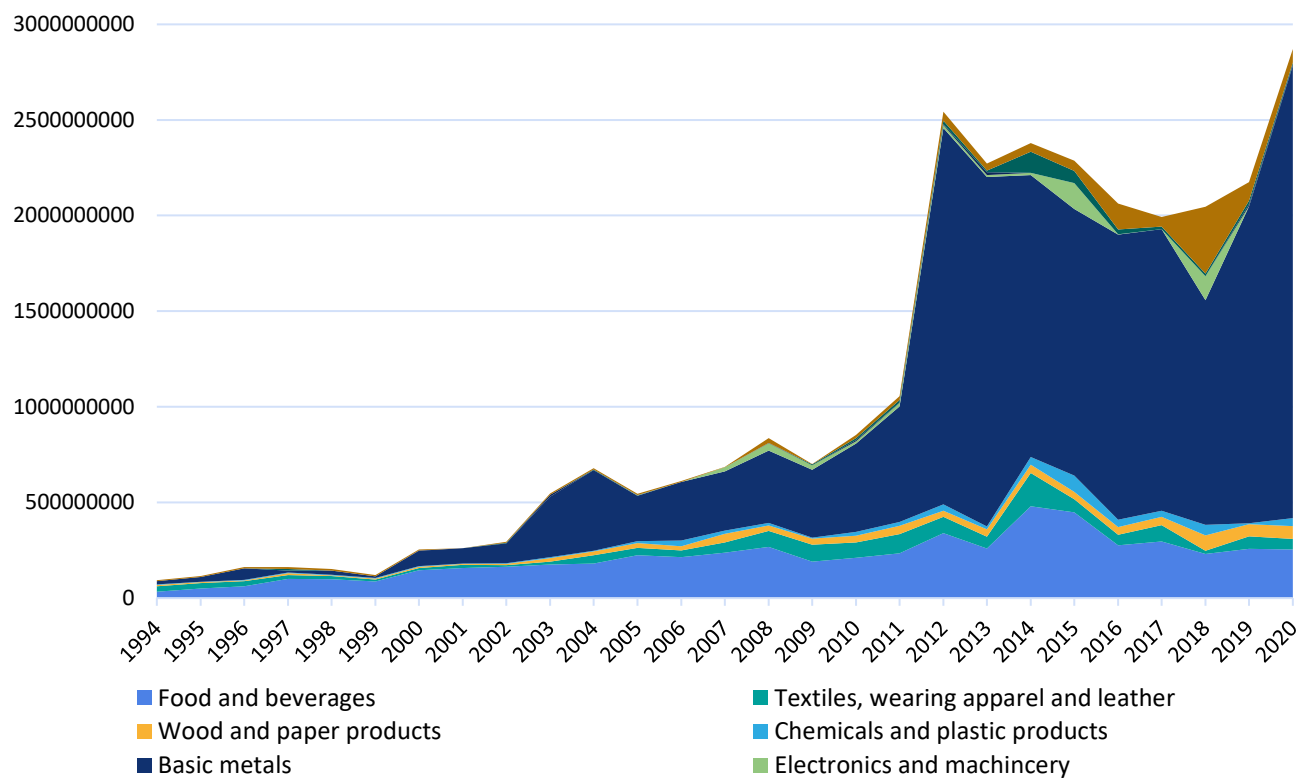
# While F&B makes up the largest share of manufacturing employment and value added, basic metals are the predominant subsector in the export basket

Employment and value added by subsector, 2020



Source: Self elaboration using UNIDO database

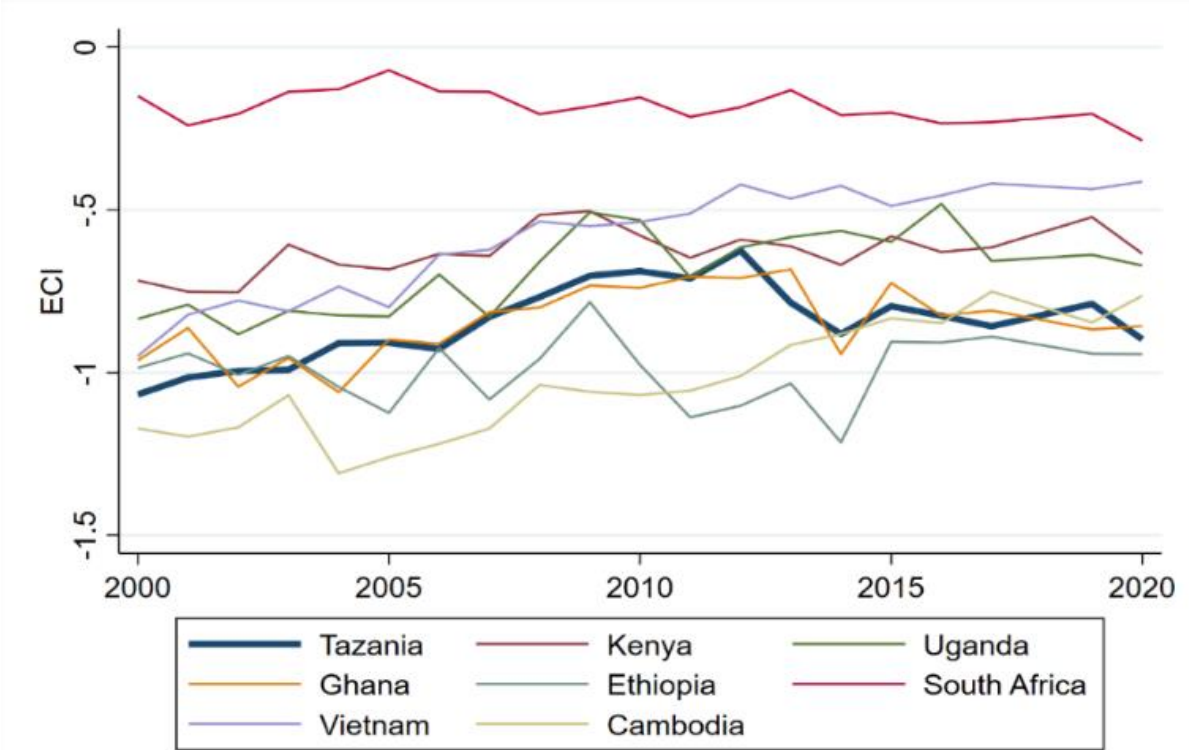
Net export composition, manufacturing sector



Source: Own calculations based on World Bank WDI and the Atlas of Economic Complexity Database

# Tanzania's exports are relatively unsophisticated

## Economic Complexity Index, Tanzania and peers



Source: Atlas of Economic Complexity manufacturing sector, 2020.

# Growth question

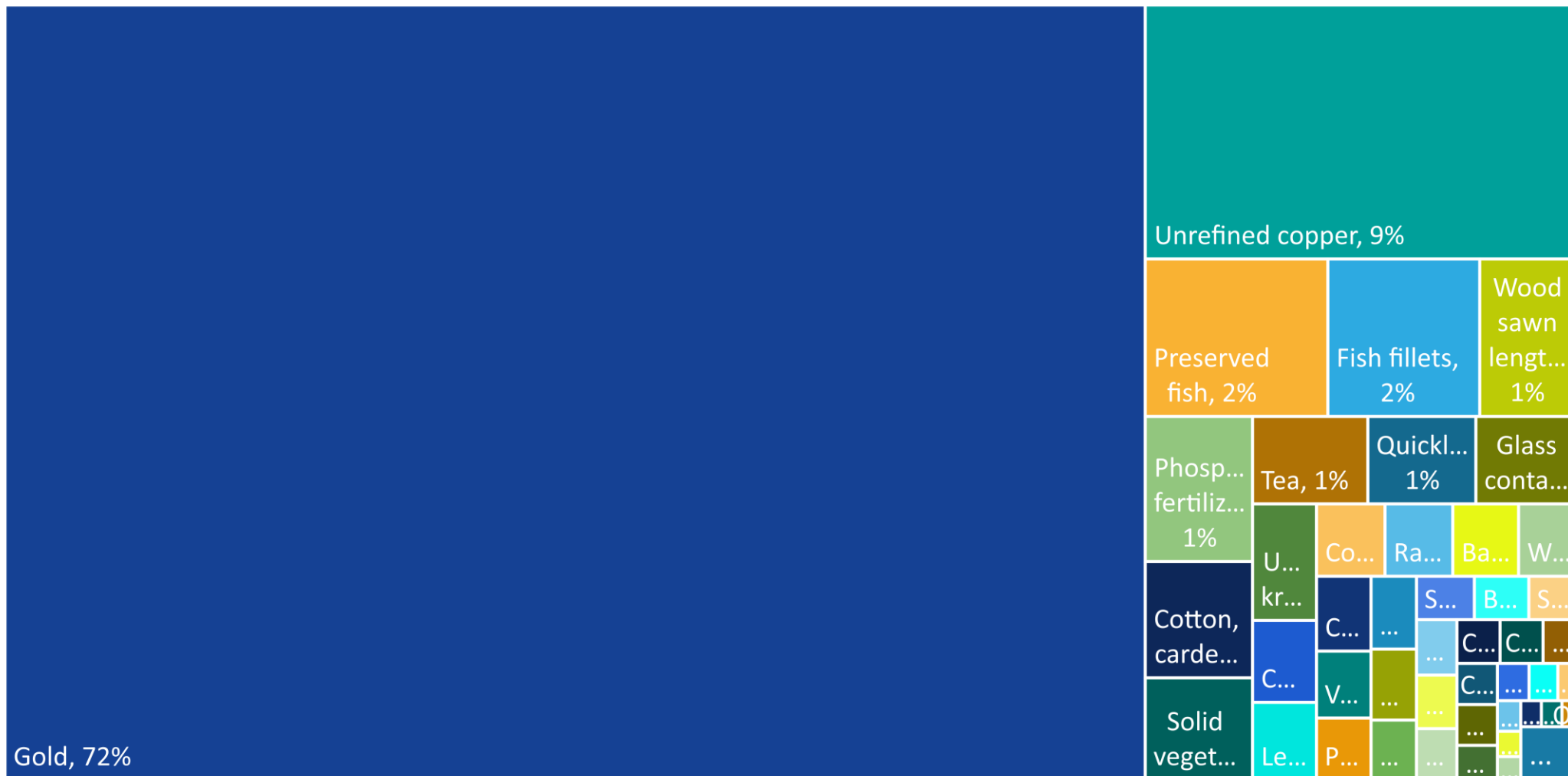
**Despite positive economic performance over recent decades...**

- ✓ Structural transformation has been lagging.
- ✓ High share of agricultural employment.
- ✓ Large and formal firms are productive yet capital-intensive and not noticeably expanding.
- ✓ Informal firms are absorbing the largest share of employment in the sector and lag in productivity.
- ✓ The vast majority of manufacturing output is sold in the domestic market rather than exported.
- ✓ The manufacturing export basket is unsophisticated.



**What is preventing Tanzania's manufacturing sector from thriving and achieving its ambition of becoming an industrialized country?**

# Manufacturing export basket concentrated in basic mining and agricultural products with low value addition



---

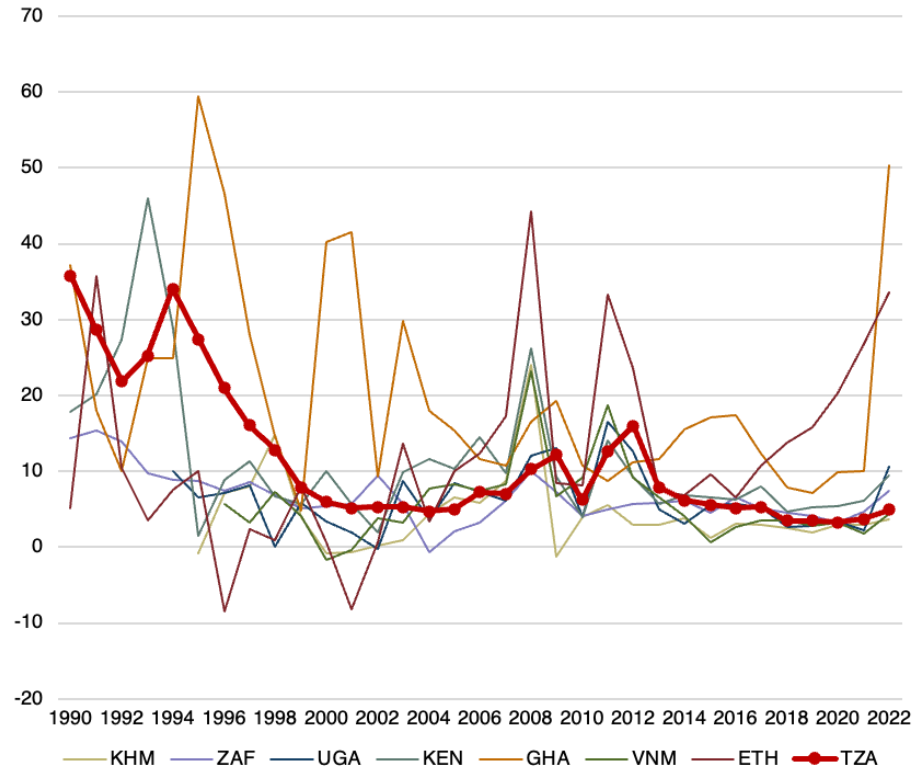
# 2. Growth Diagnostics

---

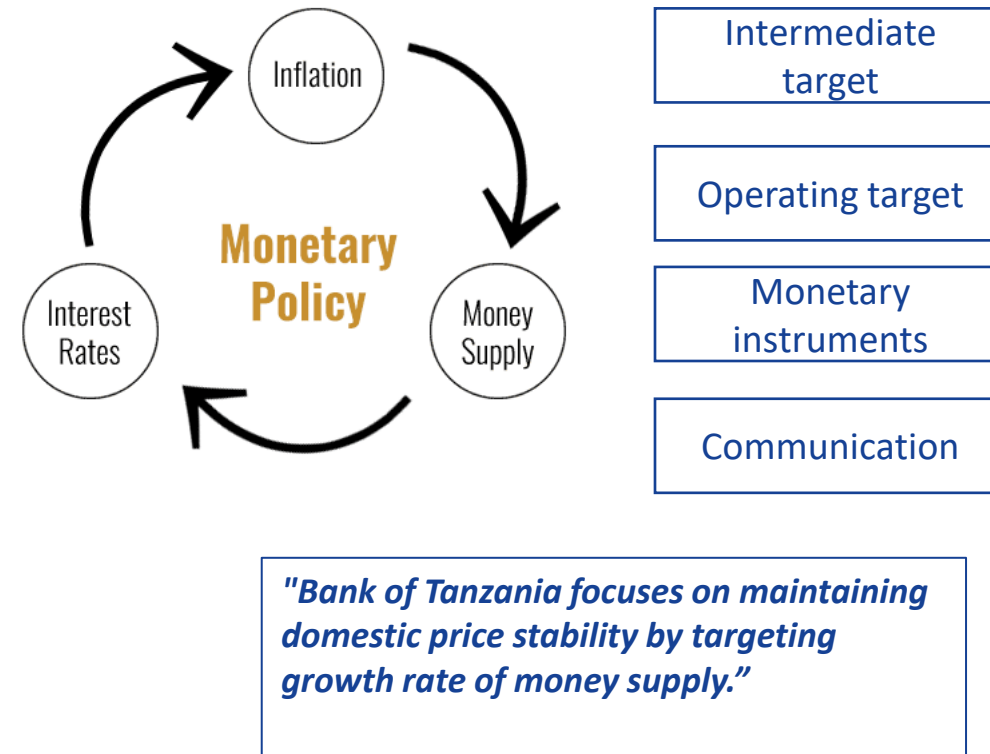
# Macro stability

# The Bank of Tanzania (BoT) outlines the money supply as a monetary policy tool, keeping inflation at its target during the last two decades

Inflation, consumer price (annual change)



Monetary Policy: Bank of Tanzania

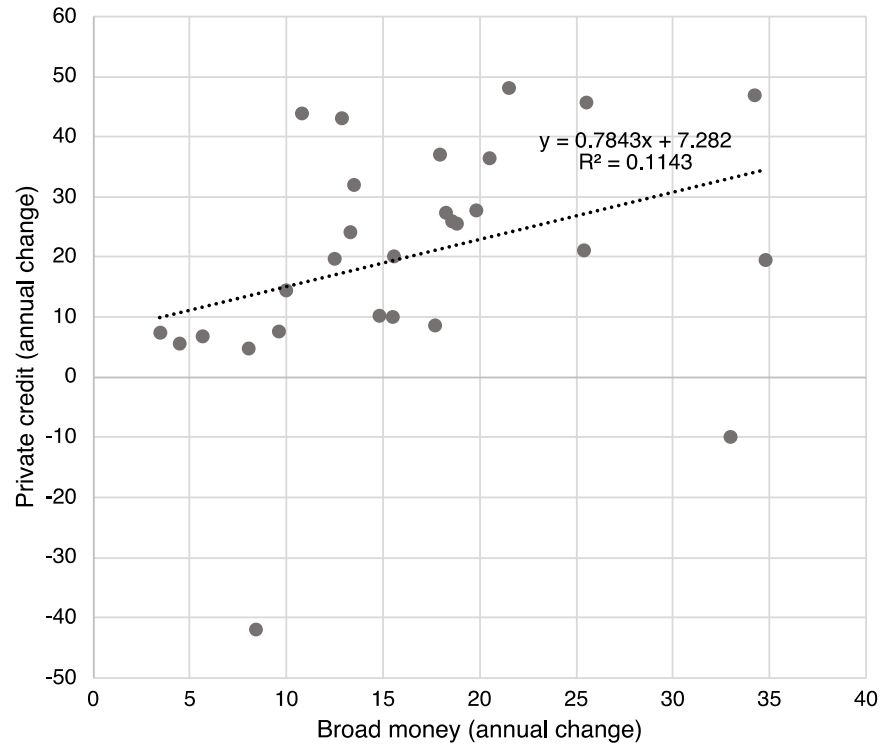


Source: BoT and WDI.

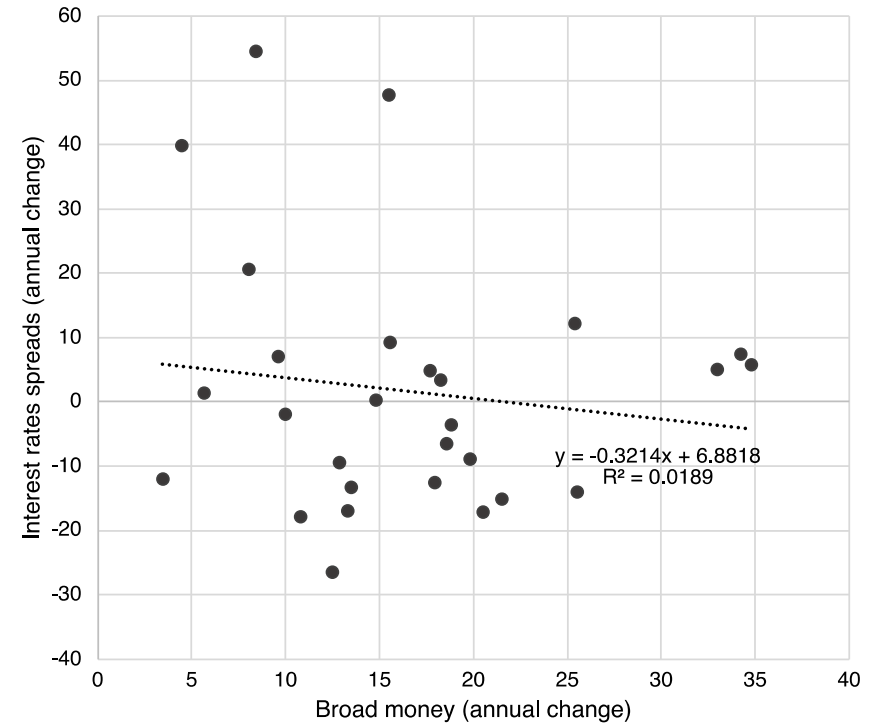


# Monetary policy is consistent with interest rate and private credit dynamics. However, the money supply tool is not sufficiently efficient in the current context

Money supply and private credit growth (annual change)

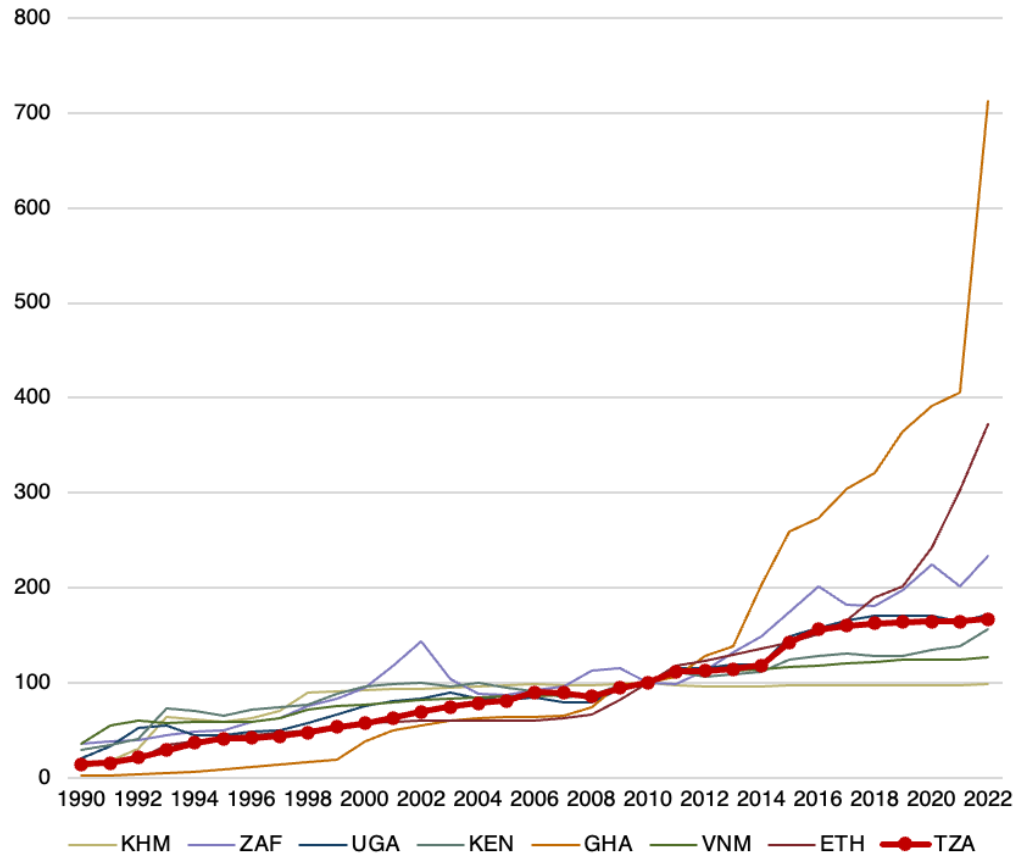


Money supply and interest rate spread (annual change)

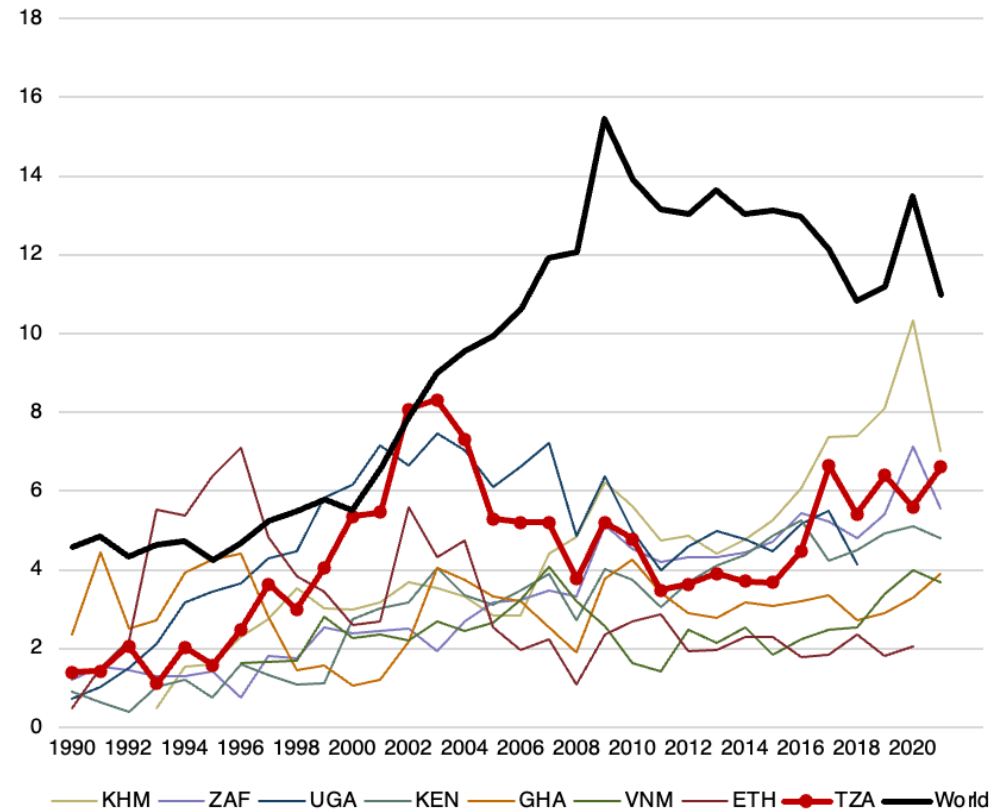


## Tanzania has a flexible but relatively stable exchange rate regime, with minor BoT interventions to reduce currency volatility

Exchange rate (base 100=2010)



Foreign reserves (months of imports)

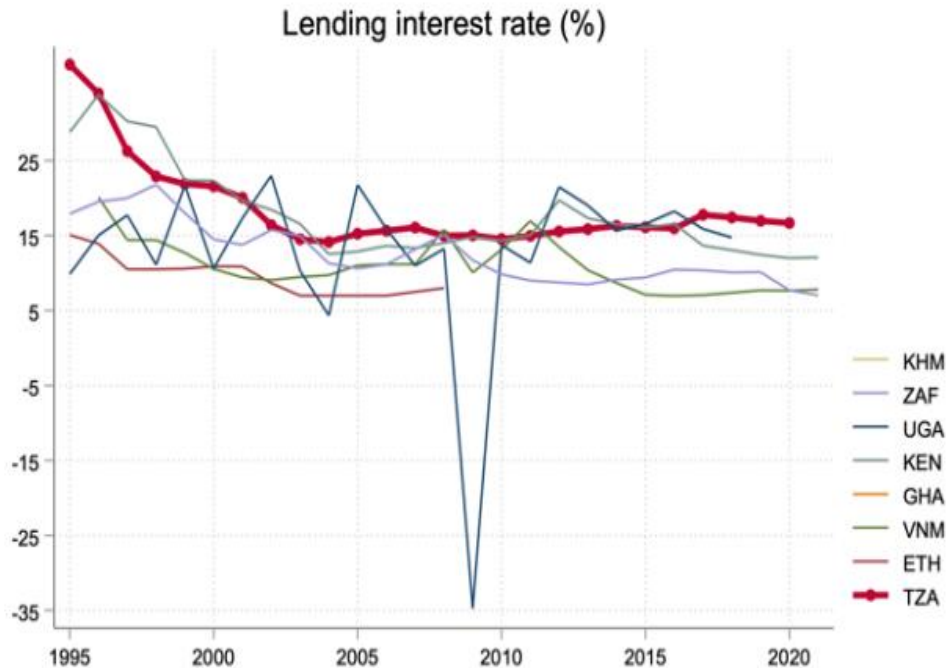


---

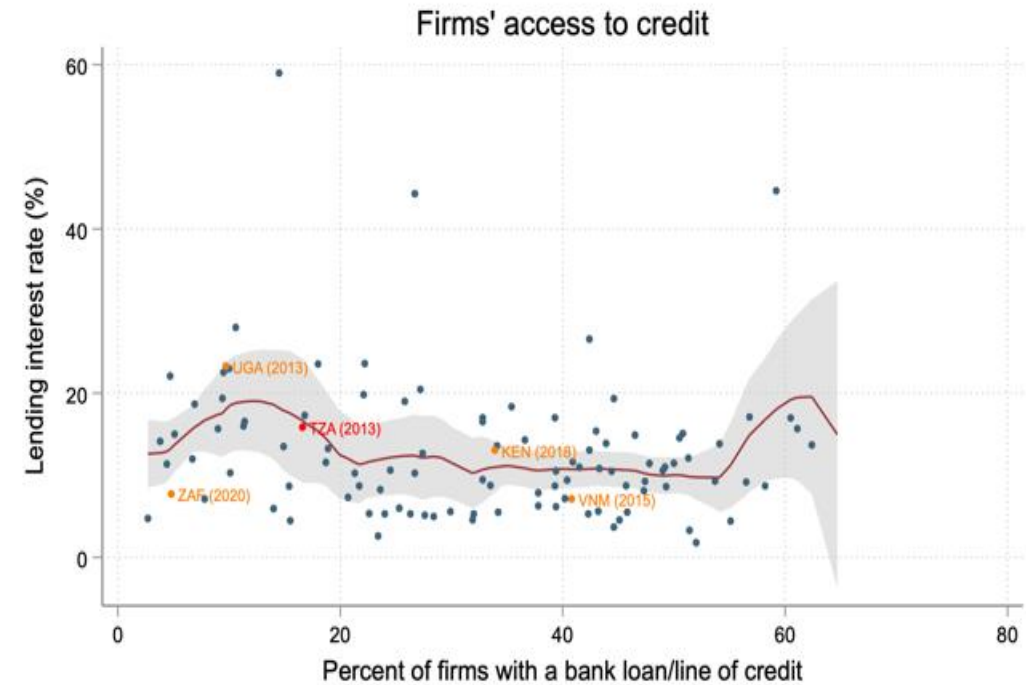
# Finance

[back to the presentation](#)

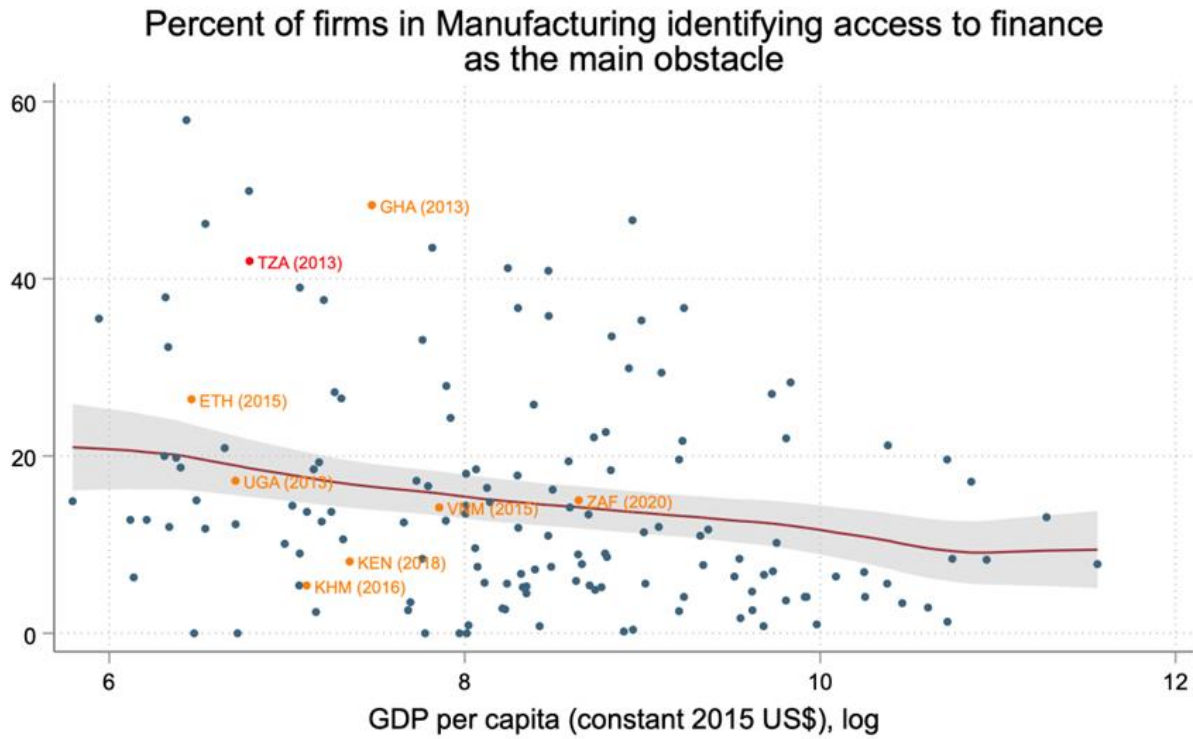
## Price signal: High real lending rates, limiting local firms' access to credit



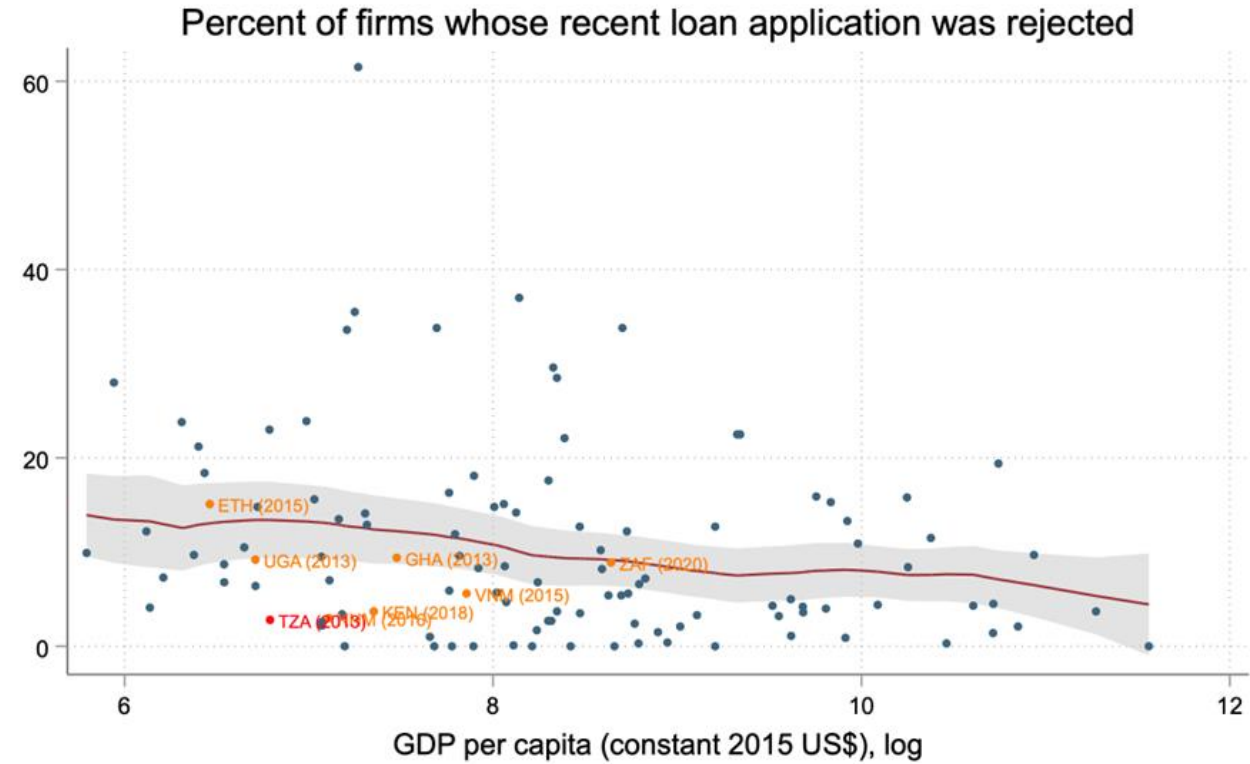
Source: World Bank WDI



Firms do report access to finance as a main obstacle, but at the same time firms in the manufacturing sector do not seem to declare having their credit requests rejected.

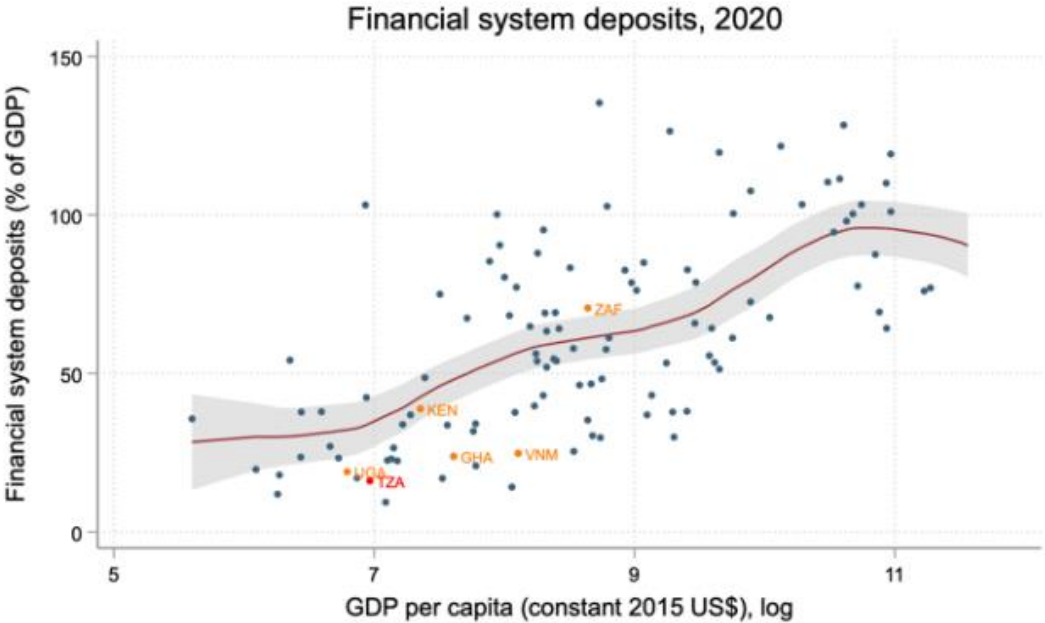


Data source: World Bank Enterprise Surveys & World Development Indicators

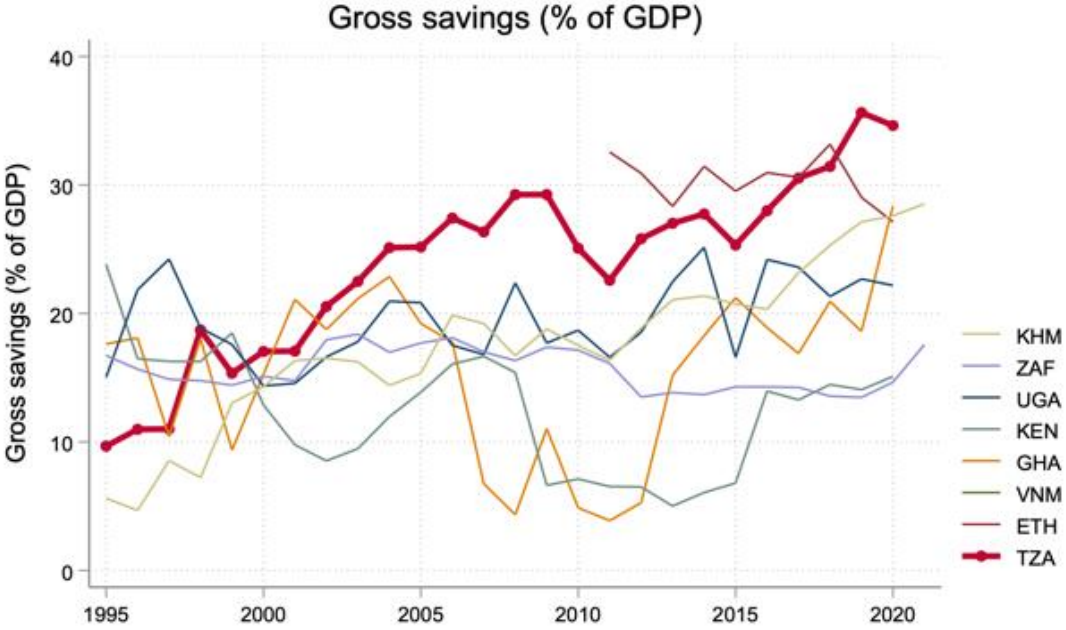


Data source: World Bank Enterprise Surveys & World Development Indicators

Gross domestic savings are among the highest for Tanzania's level of income, but savings (Y-C) do not make into financial system. Prevalence of cash economy is a potential explanation

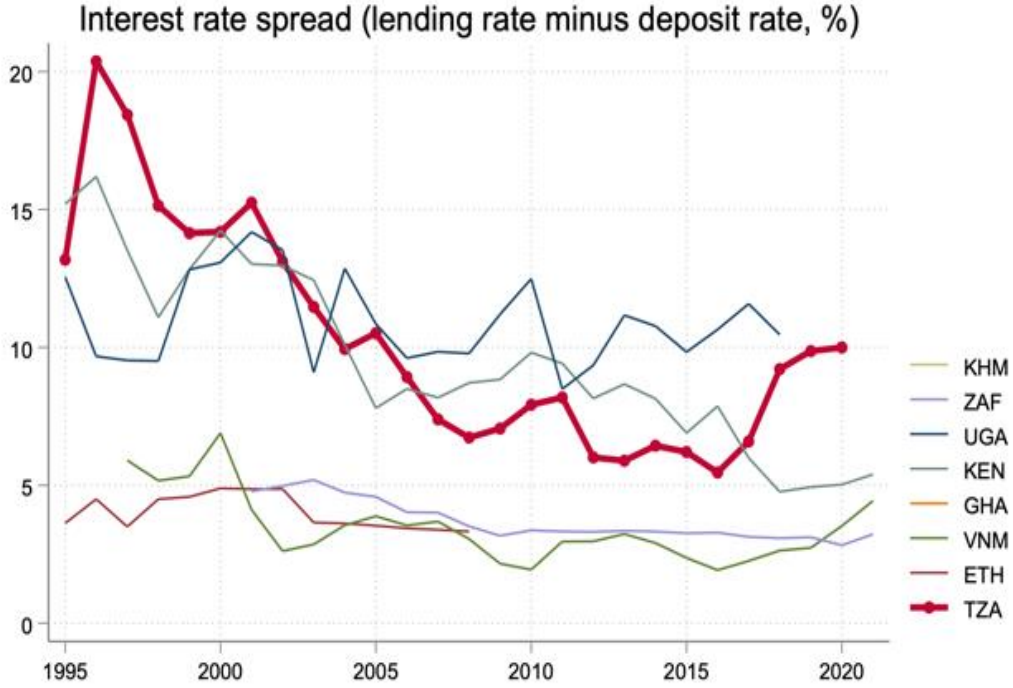


Note: Data winsorized at 5%  
Data source: The Global Economy, WDI

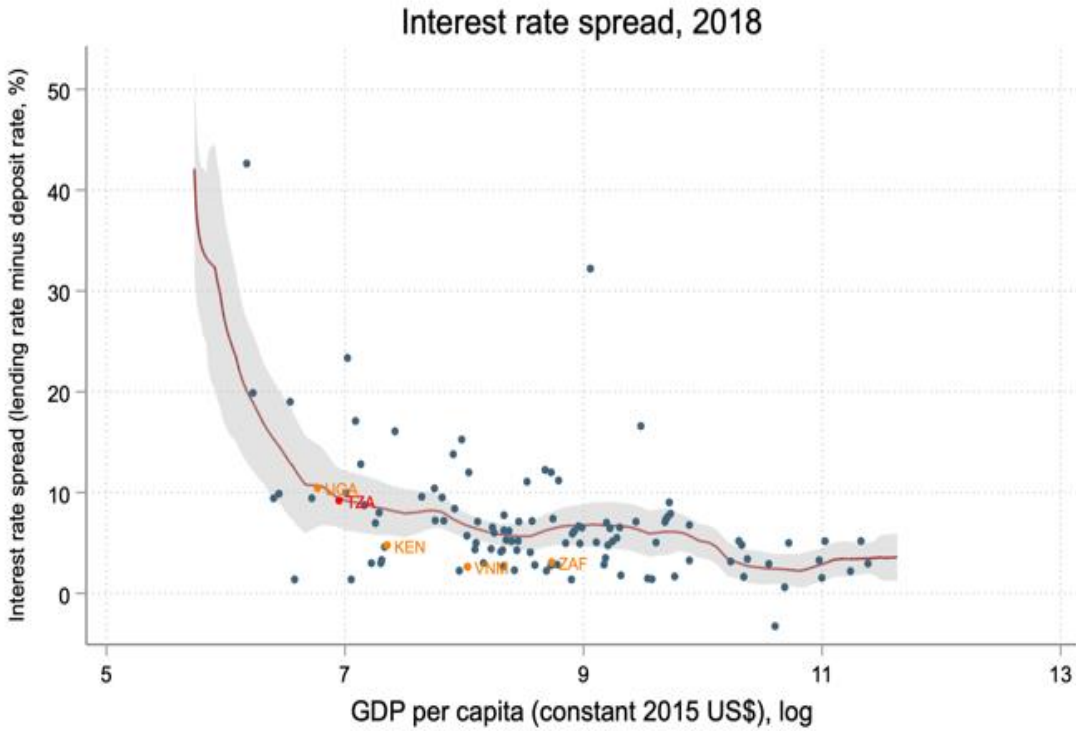


Source: World Bank WDI

# Lending-deposit spreads are among the highest among peers and point to the potential inefficiencies in the banking sector

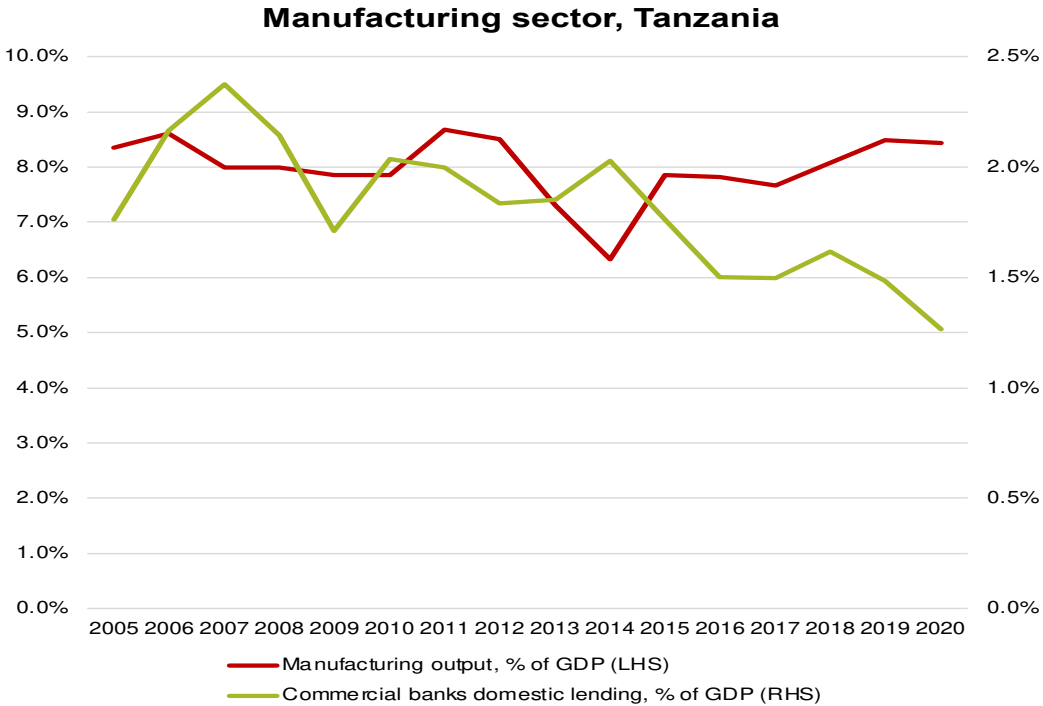
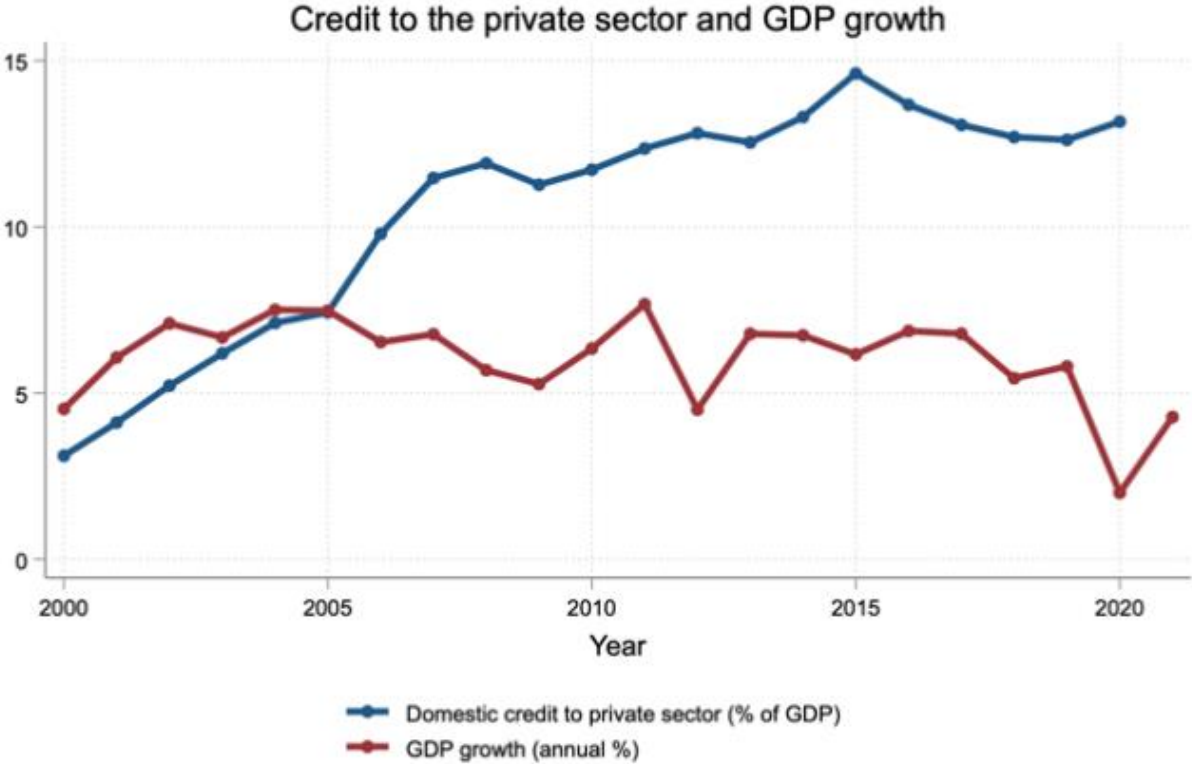


Source: World Bank WDI



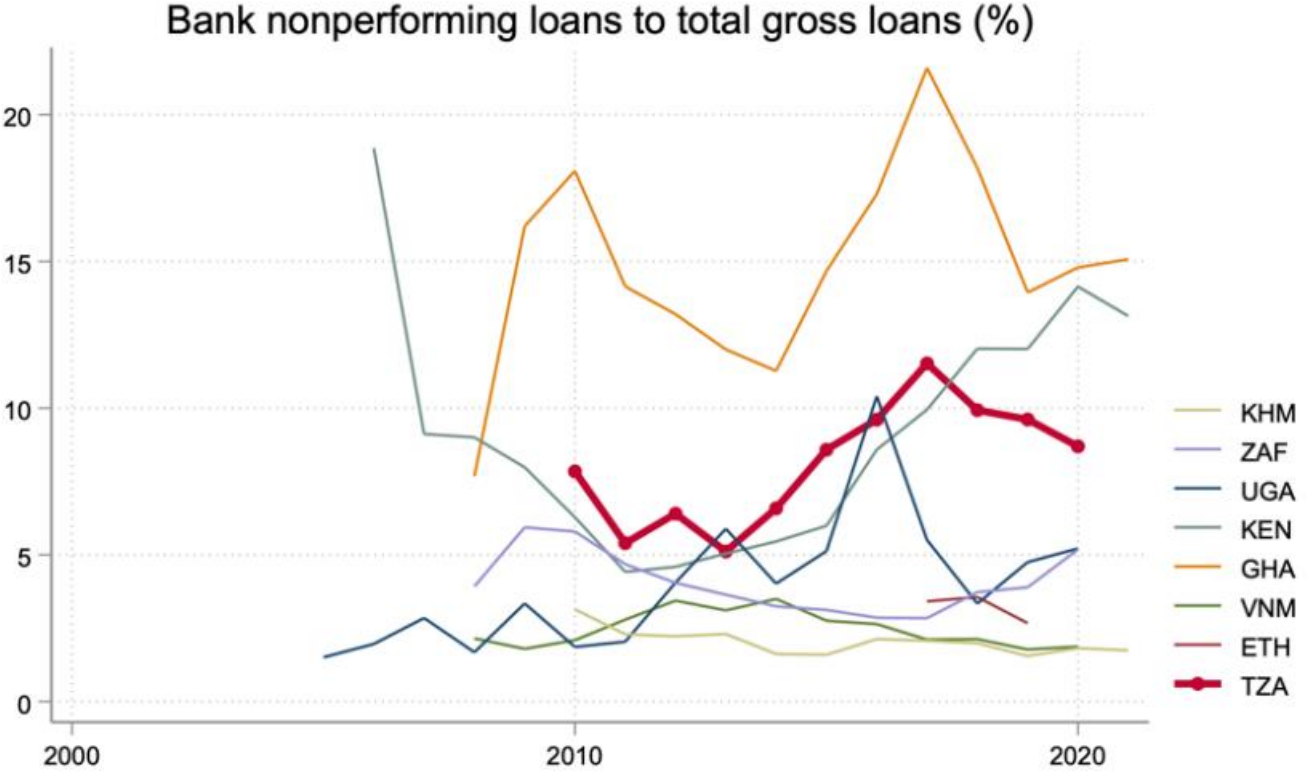
Data source: World Development Indicators

# Mov and movements: Positive changes in credit do not produce positive changes in the manufacturing sector's output



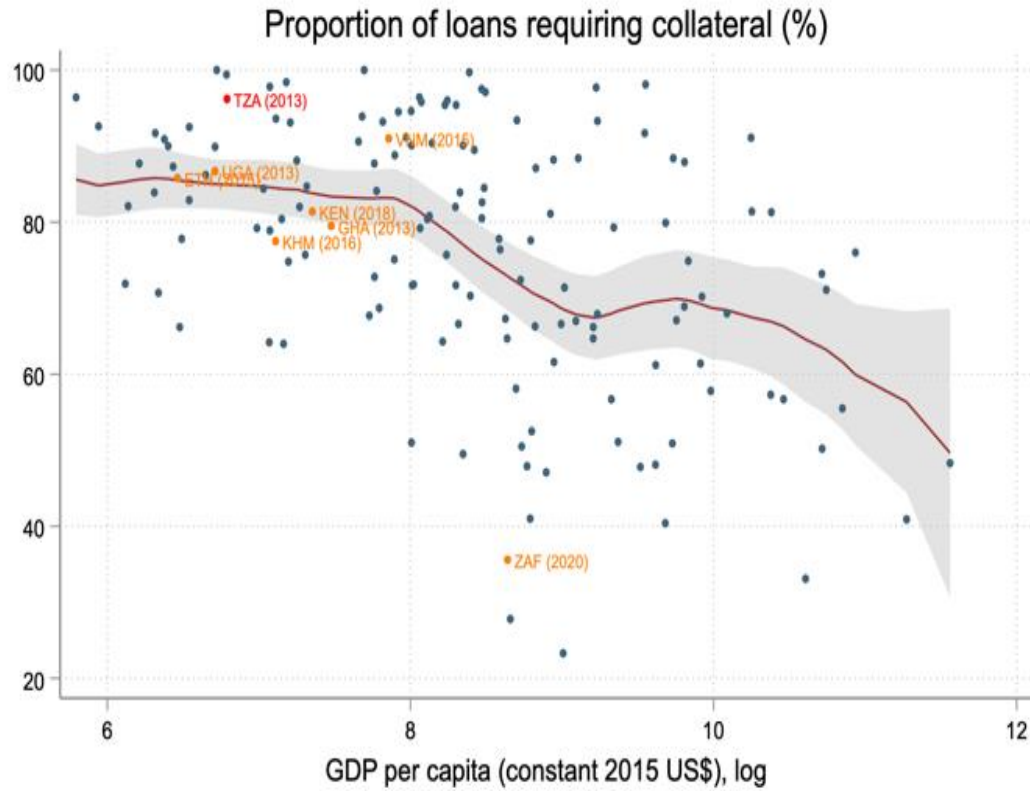


# Non-performing loans seem to have been a major policy issue, especially up until their peak in 2017, and may still have lingering effects in the form of restrictive underwriting and regulatory practices

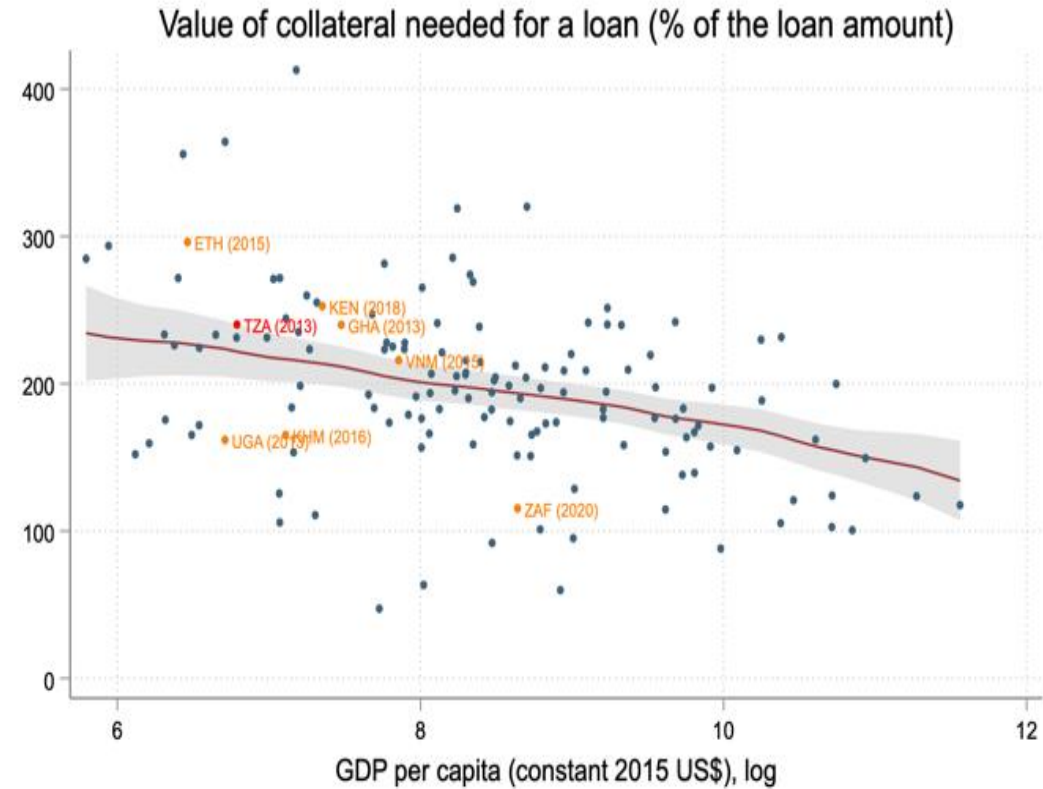


Source: World Bank WDI

# Qualitative interviews with the firms in Tanzania indicate that spillovers from the NPL problem still impact financial intermediation today

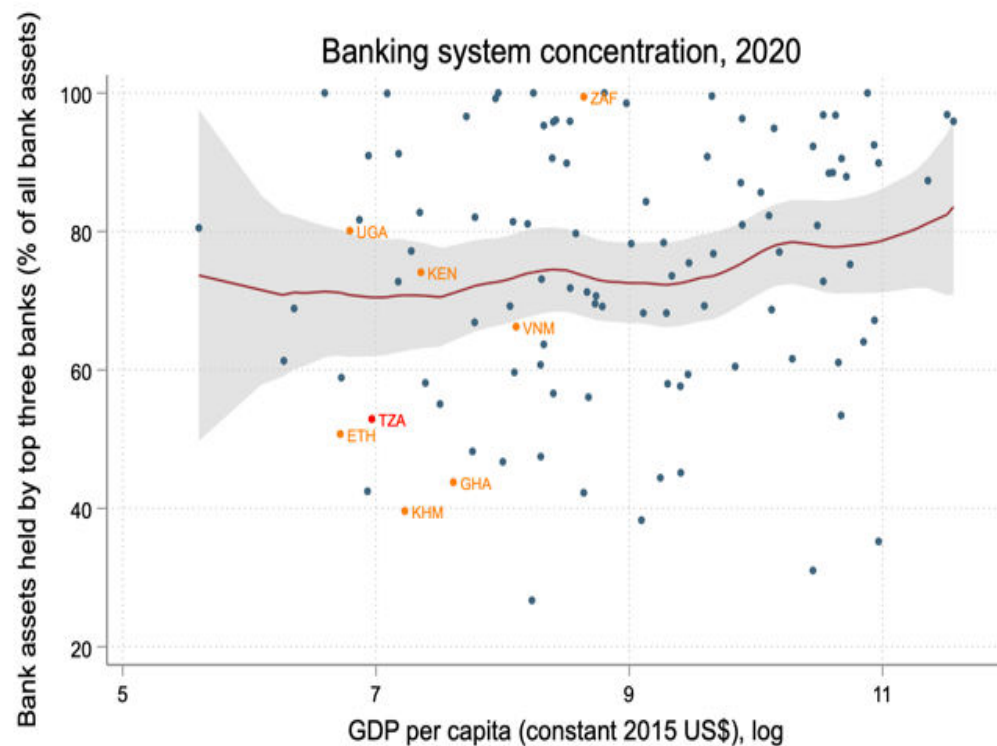


Data source: World Bank Enterprise Surveys & World Development Indicators

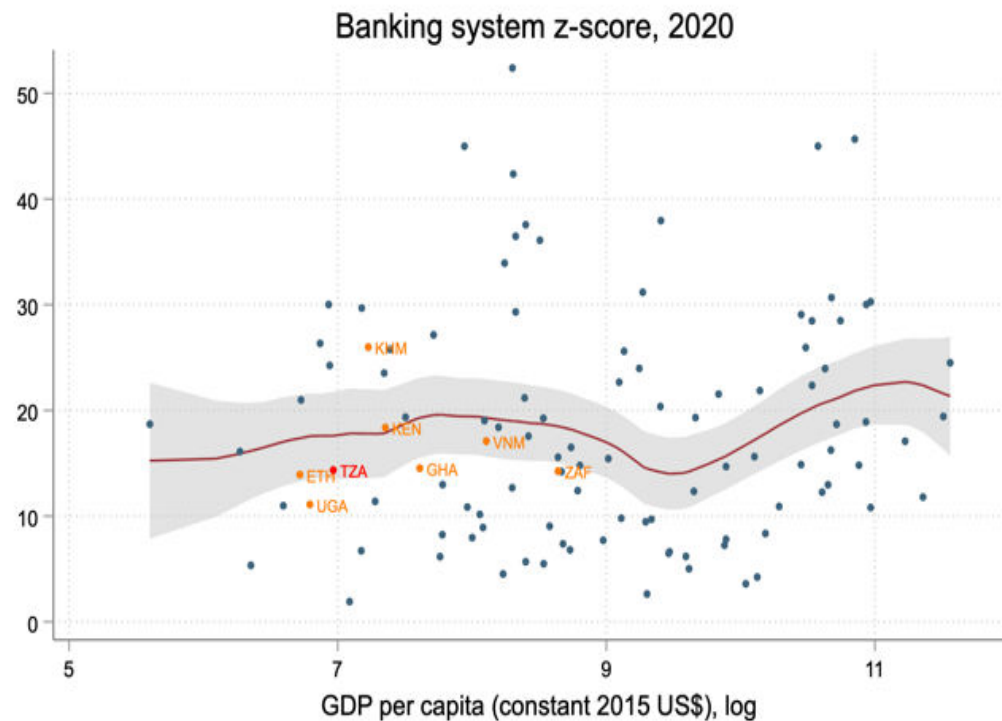


Data source: World Bank Enterprise Surveys & World Development Indicators

# The banking sector's headline indicators suggest that the sector's financial health is better than what one would expect based on per capita income

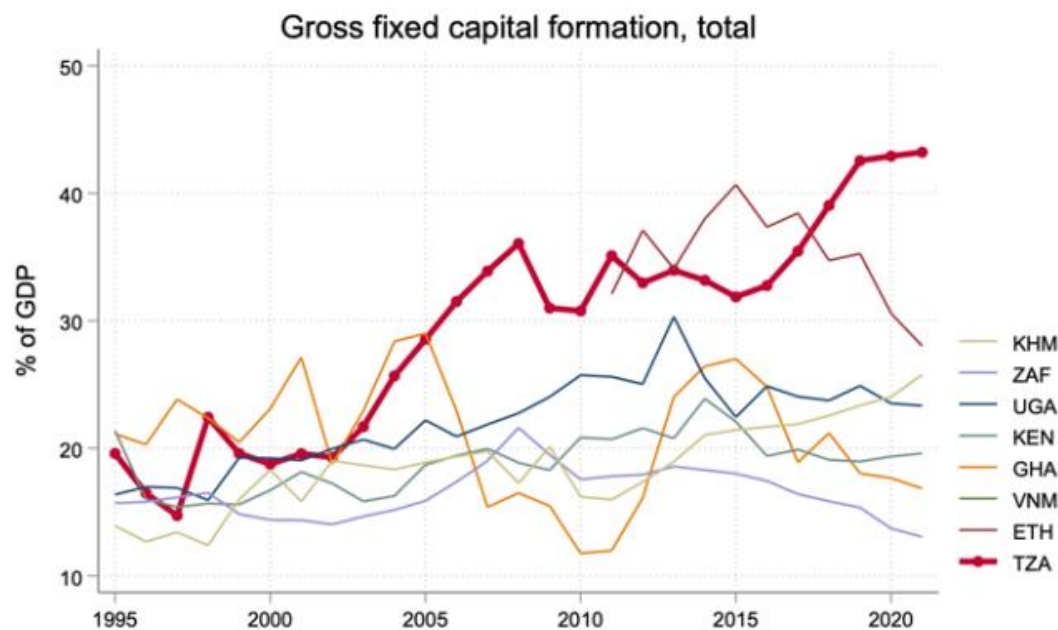


Data source: The Global Economy, WDI

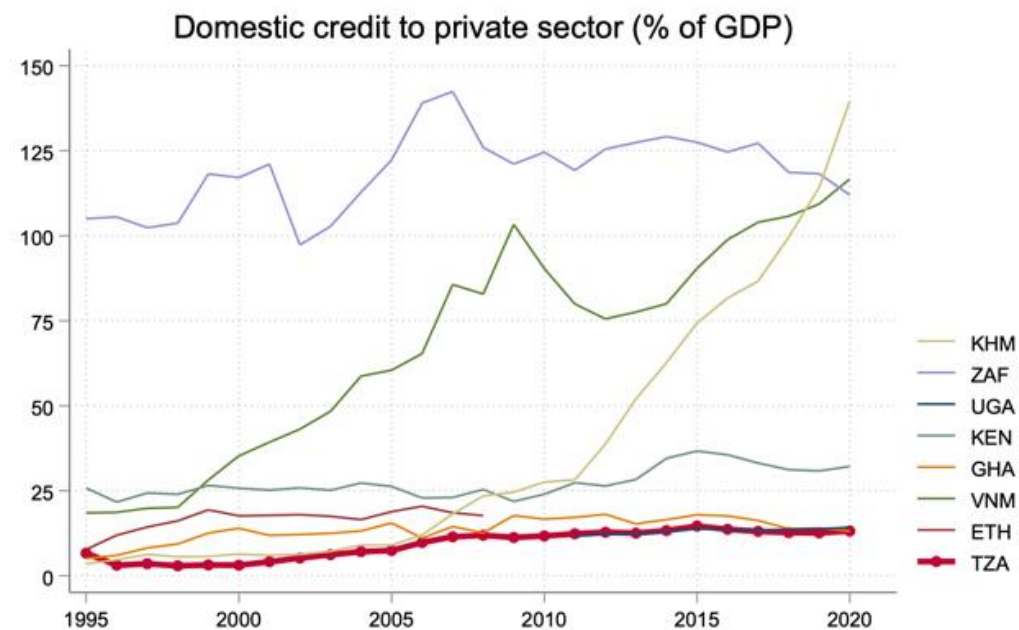


Data source: The Global Economy, WDI

## Puzzle: High relative level of investment and relatively low level of domestic credit to the private sector



Source: World Bank WDI



Source: World Bank WDI

Tanzania's surprisingly high levels of capital formation and capital intensity are also found in the manufacturing sector, as noted in detail in "Africa's Manufacturing Puzzle: Evidence from Tanzanian and Ethiopian Firms" by Diao et al

## This does not mean that all is well in the country's financial system

Improvements to financial intermediation and access to international finance would address what may become a binding constraint in the future

- ✓ High relative level of savings in the economy and a relative low level of domestic credit to the private sector.
- ✓ Savings-deposit mismatch (high gross domestic savings (Y-C), but low deposits) – cash economy as potential explanation
- ✓ High real lending rates are very persistent in Tanzania, and high among peers limiting local firms' access to credit.



**While the banking sector is not in immediate distress, financial intermediation still requires improvements**

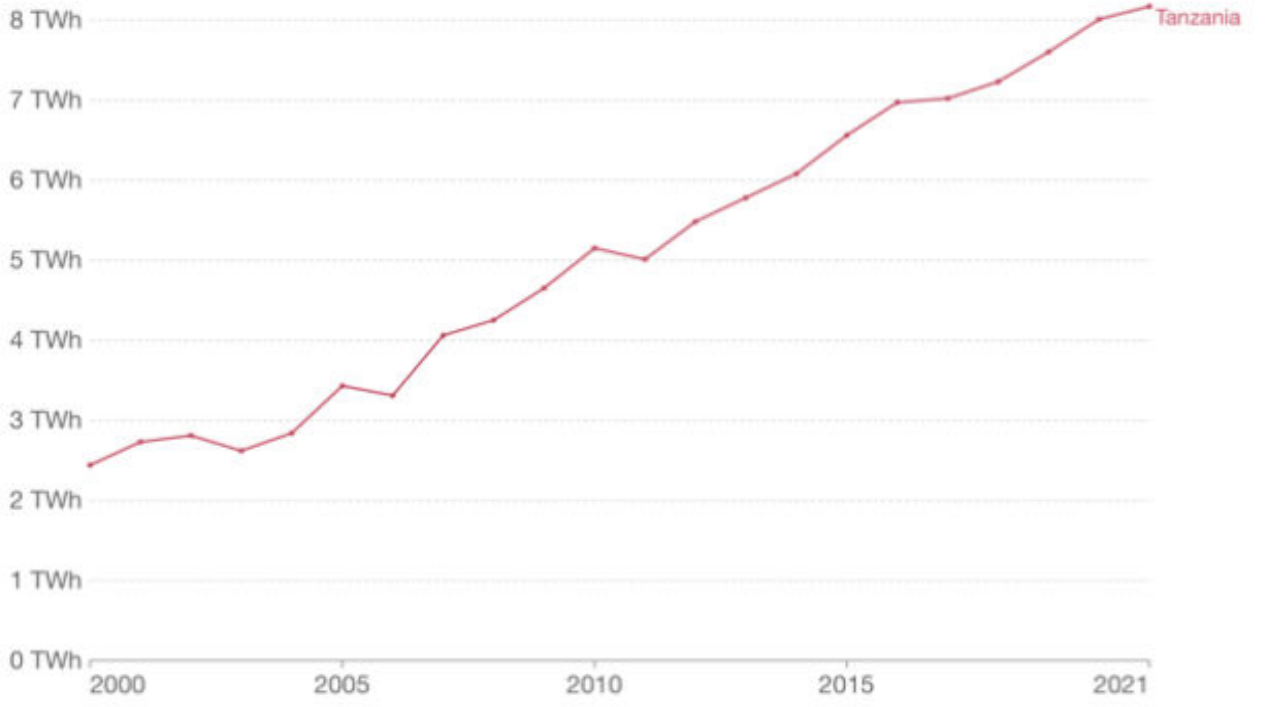
---

# Electricity

[back to the presentation](#)

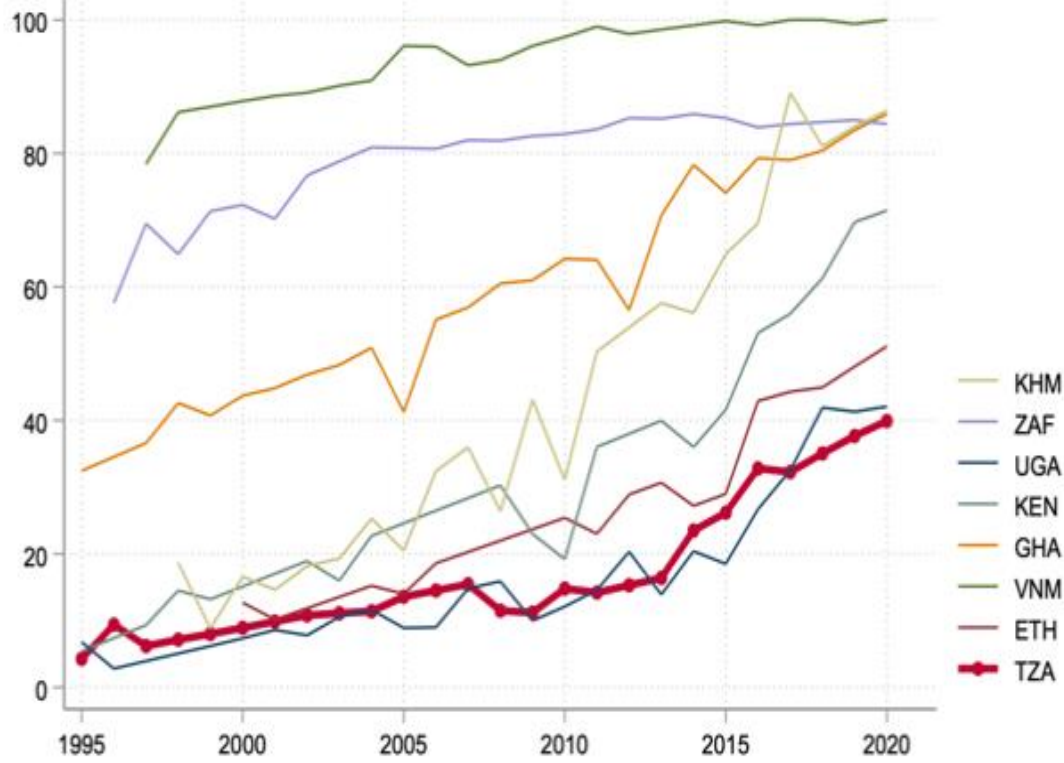
# Even though electrification expanded rapidly over the last 20 years, just below 40% of the total population has access to electricity in 2020

Electricity generation



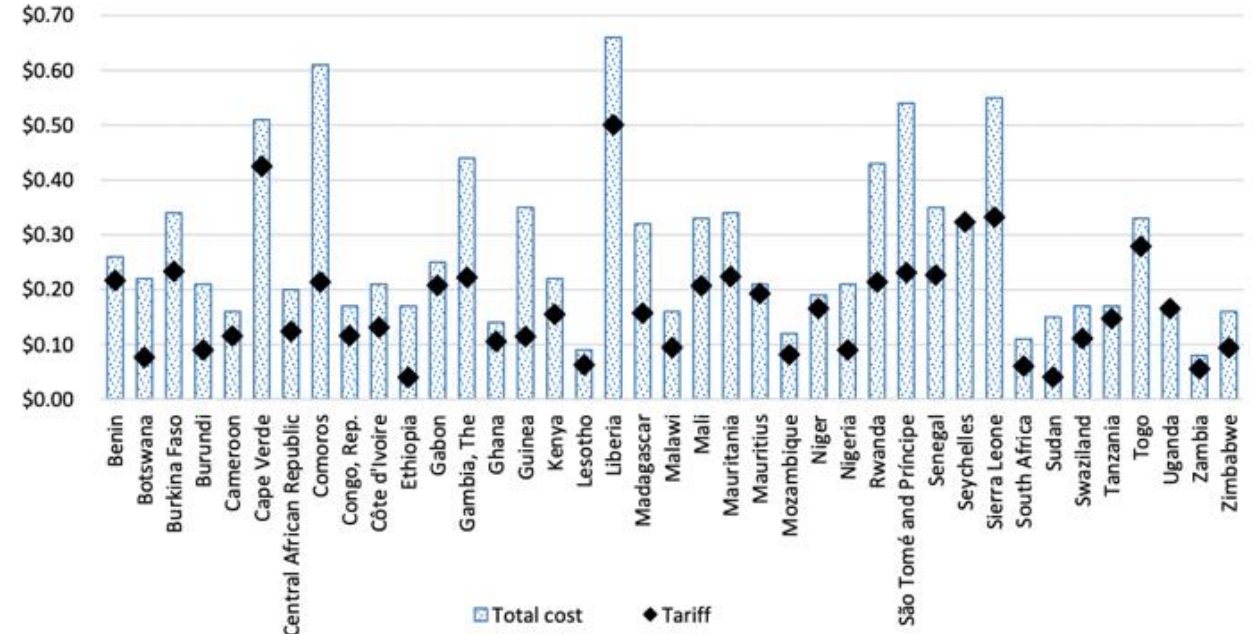
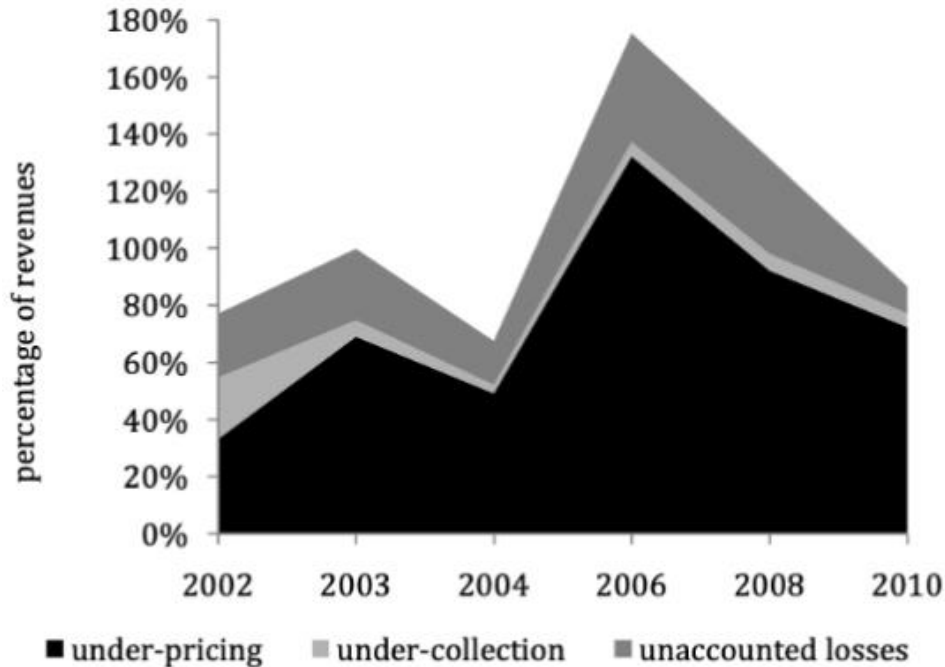
Source: Our World in Data based on BP Statistical Review of World Energy (2022); Our World in Data based on Ember's Yearly Electricity Data (2022); Our World in Data based on Ember's European Electricity Review (2022)  
OurWorldInData.org/energy • CC BY

Access to electricity, total (% of total population)



Source: World Bank WDI

# While electricity prices are low and even falling over time, they do not reflect the true cost of energy

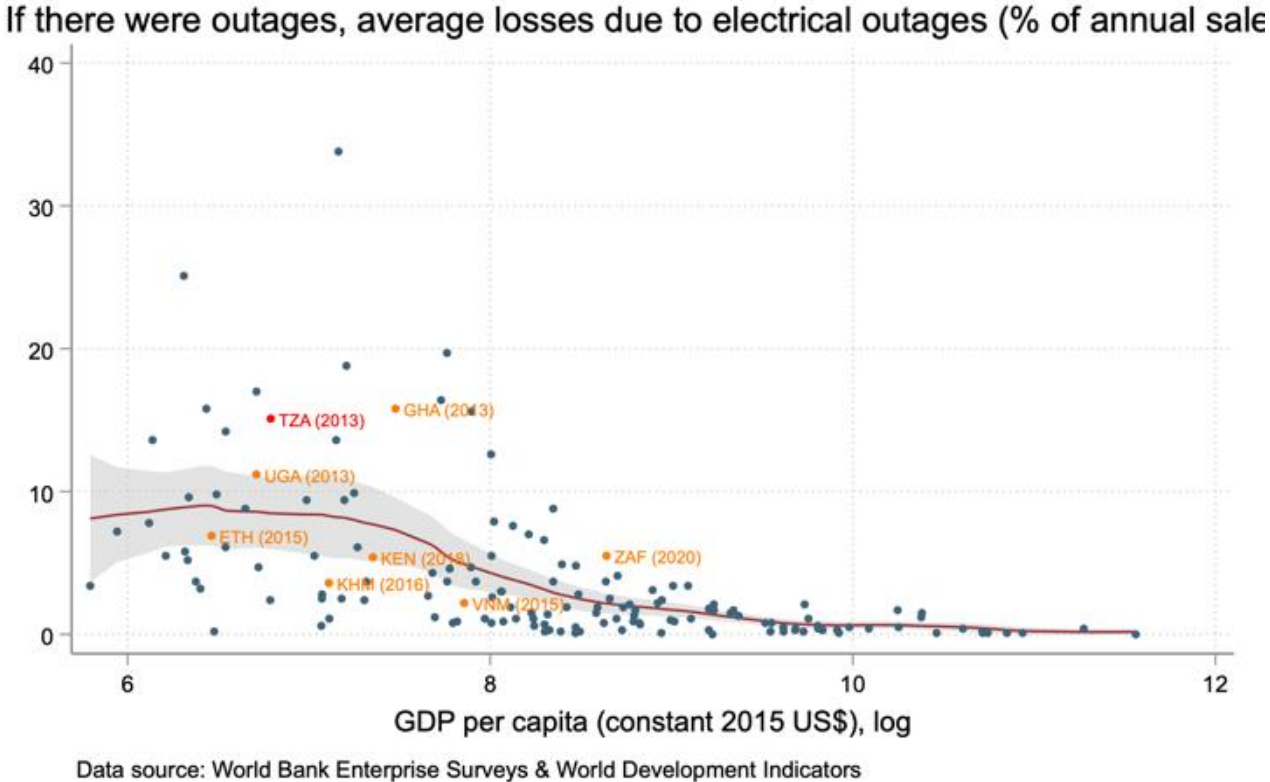
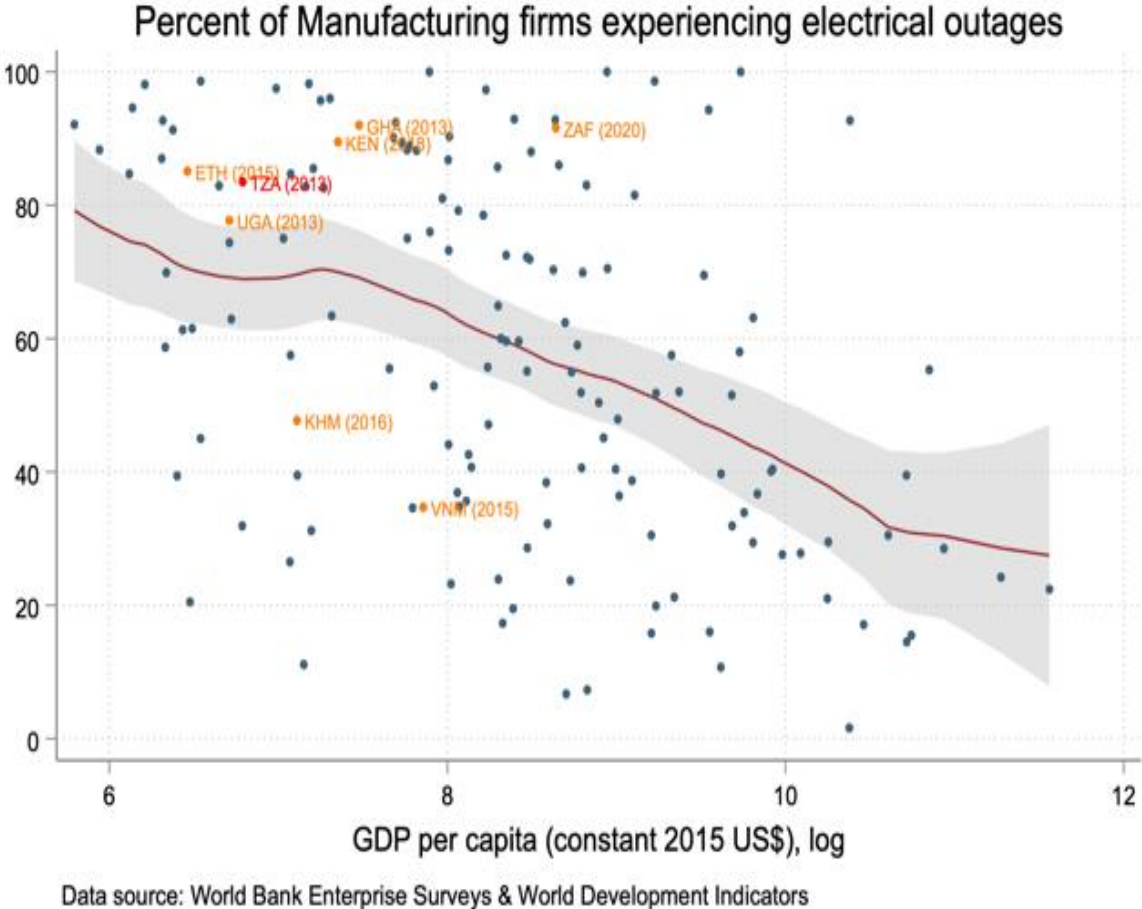


Source: World Bank staff calculations based on utility data.  
 Note: Tariff revenue excludes rebated taxes, such as VAT.

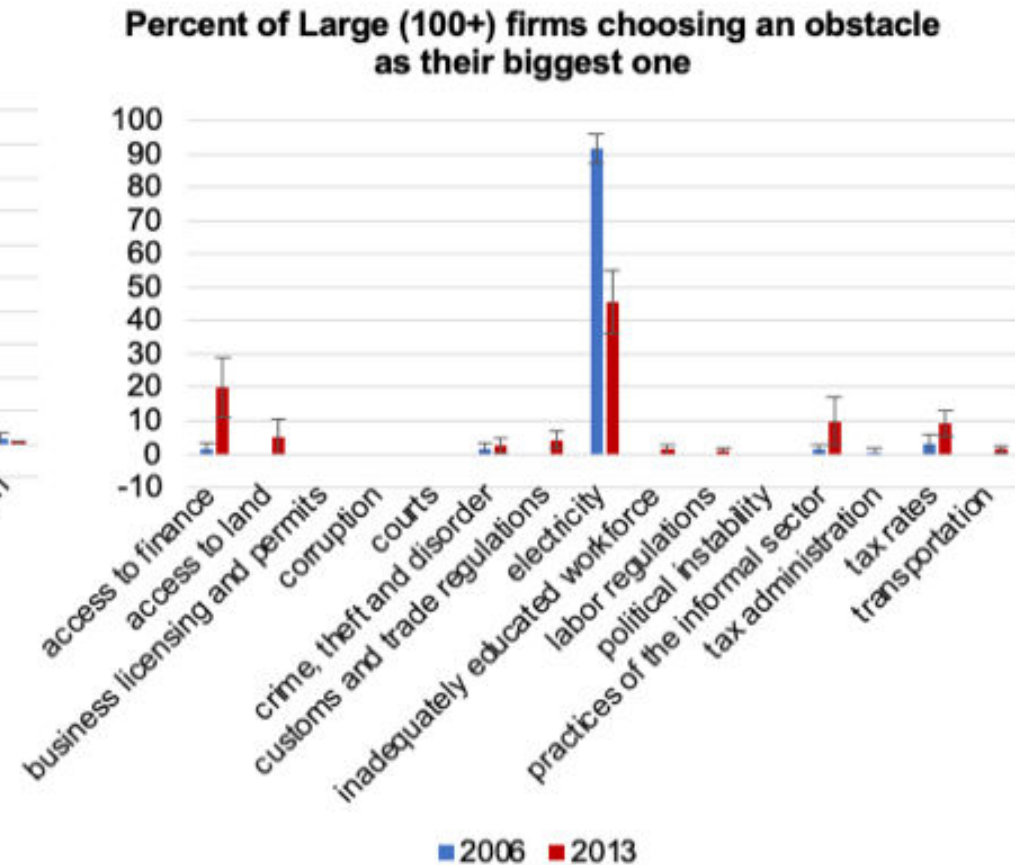
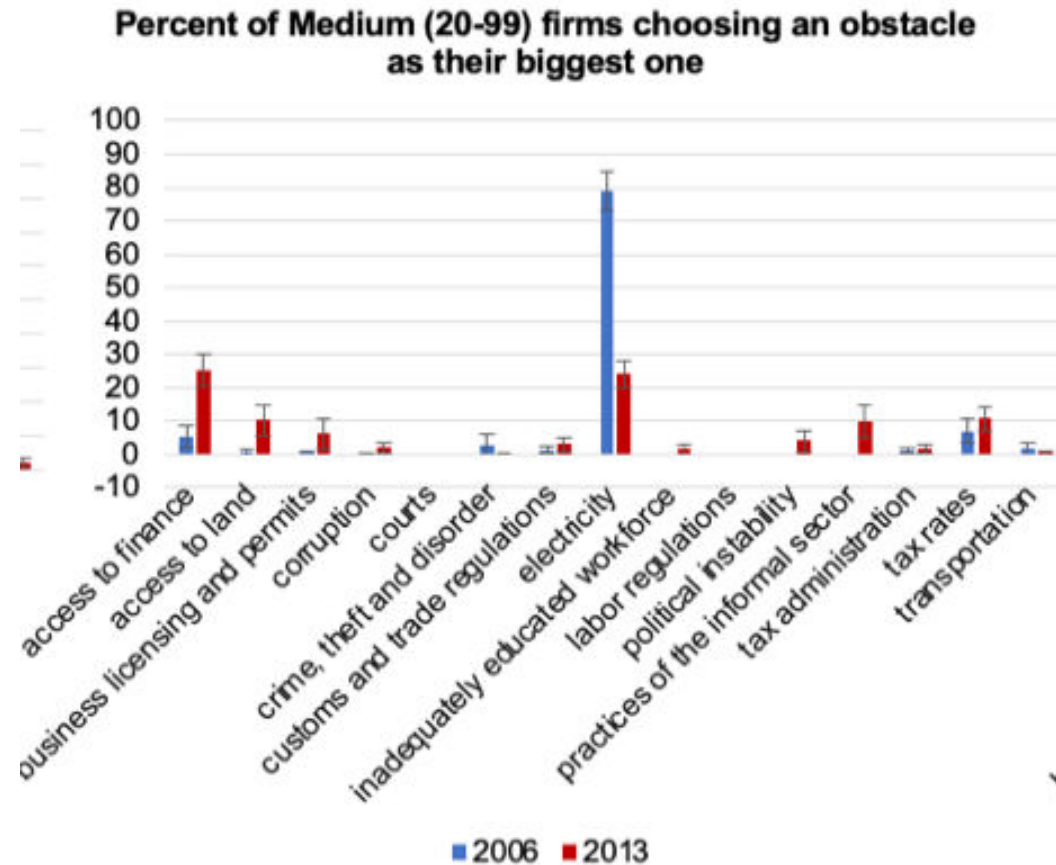
Source: Maria Shkaratan, 2012. Tanzania's Infrastructure: A Continental Perspective. World Bank Policy Research Working Paper 5962; Trimble et al., 2016. Financial Viability of Electricity Sectors in Sub-Saharan Africa. Policy Research Working Paper 7788.



# More than 80% of the firms experience outages, leading to some of the highest sales losses compared peers

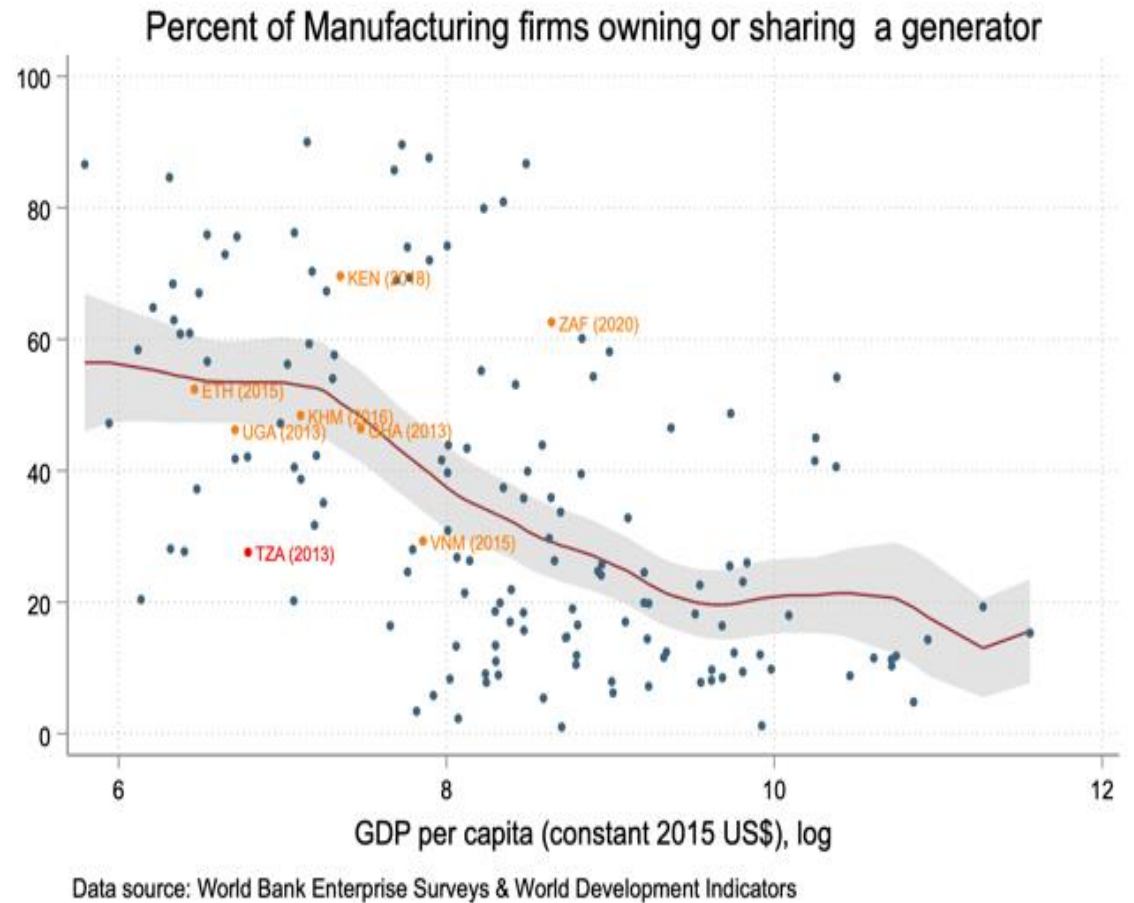
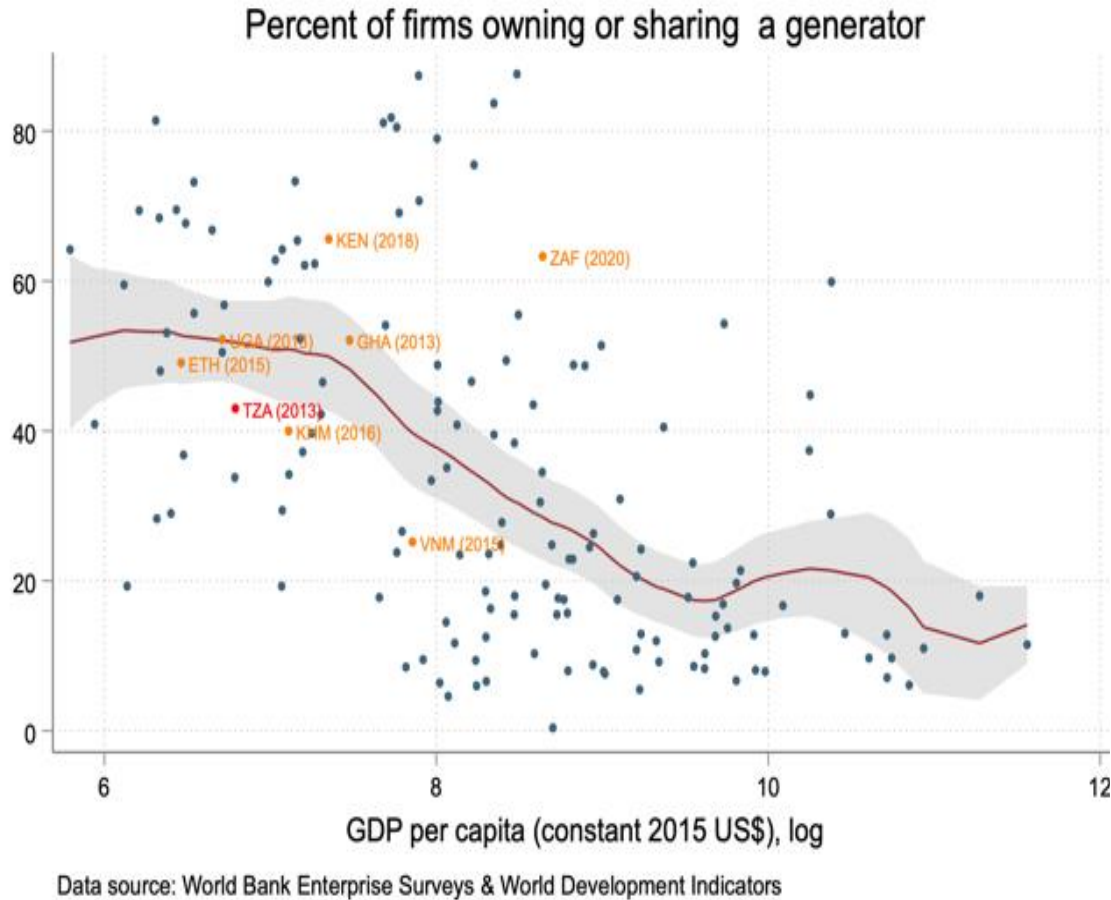


## When prices per kWh are not informative, firms' complaints in surveys can be used as an alternative price signal: Electricity is the number one challenge identified by large firms



Source: Own calculations based on the World Bank Enterprise Survey data.

# While firms complain about electricity, they do not seem to be trying to overcome the constraint by buying a generator



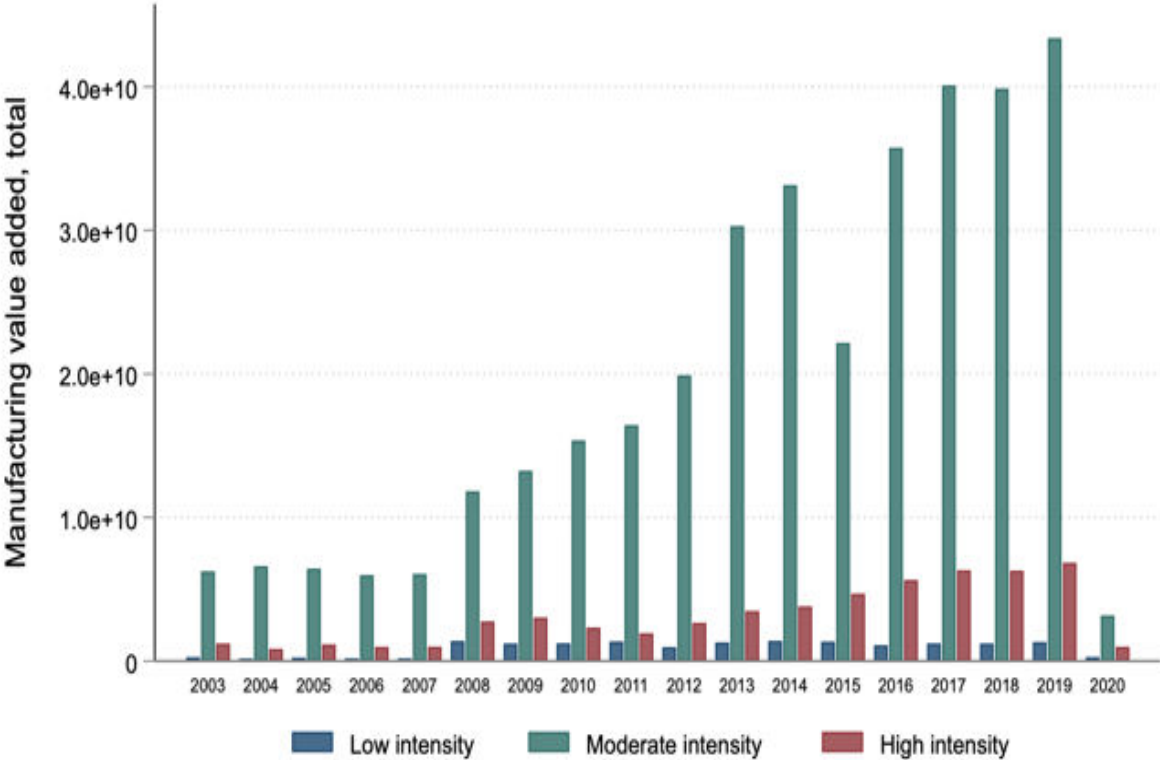
## Qualitative interviews with firms in Tanzania suggest that they are making their location decisions within the country based on electricity availability and quality, which varies by region



Adil Khan et. al (2018) illustrate how much residential electricity access varies by geography in Tanzania, from 75.2% in Dar es Salaam to just below 40% in Arusha and 24.3% in Morogoro.

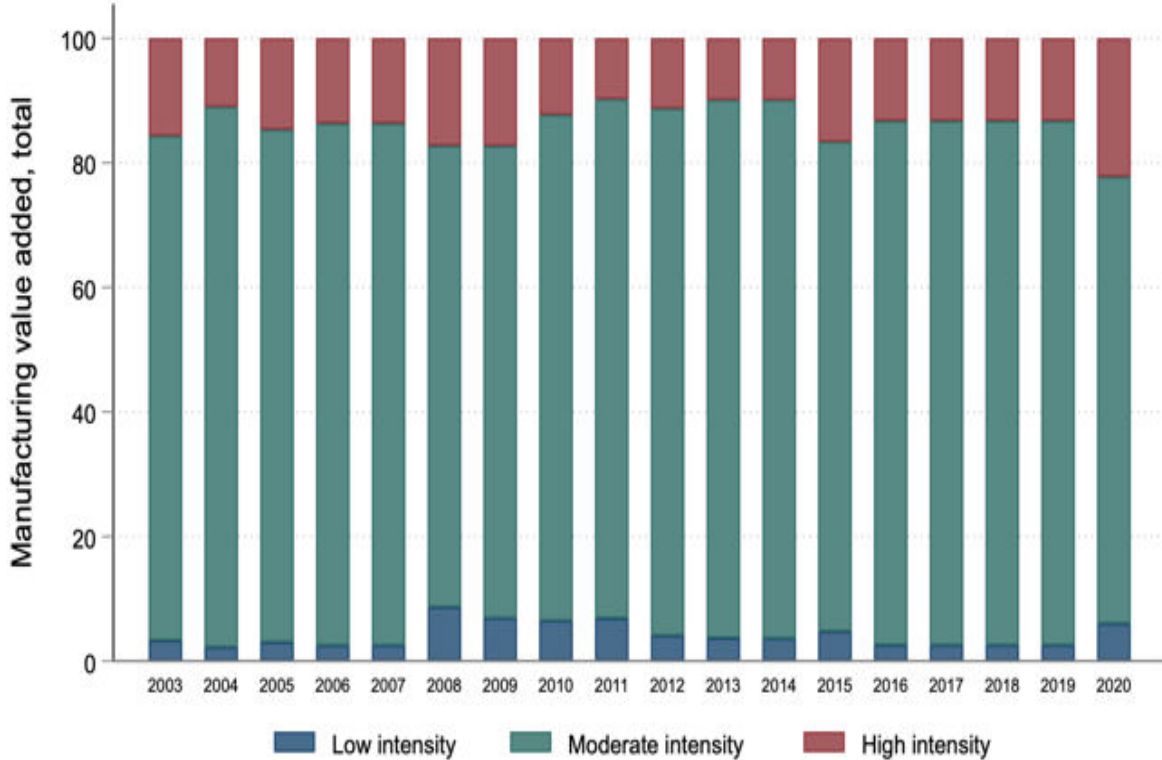
# Tanzania's domestic production is dominated by industries of moderate energy-intensiveness, whose value added seems to be growing the most over the last 20 years

Manufacturing value added by energy intensity  
Tanzania



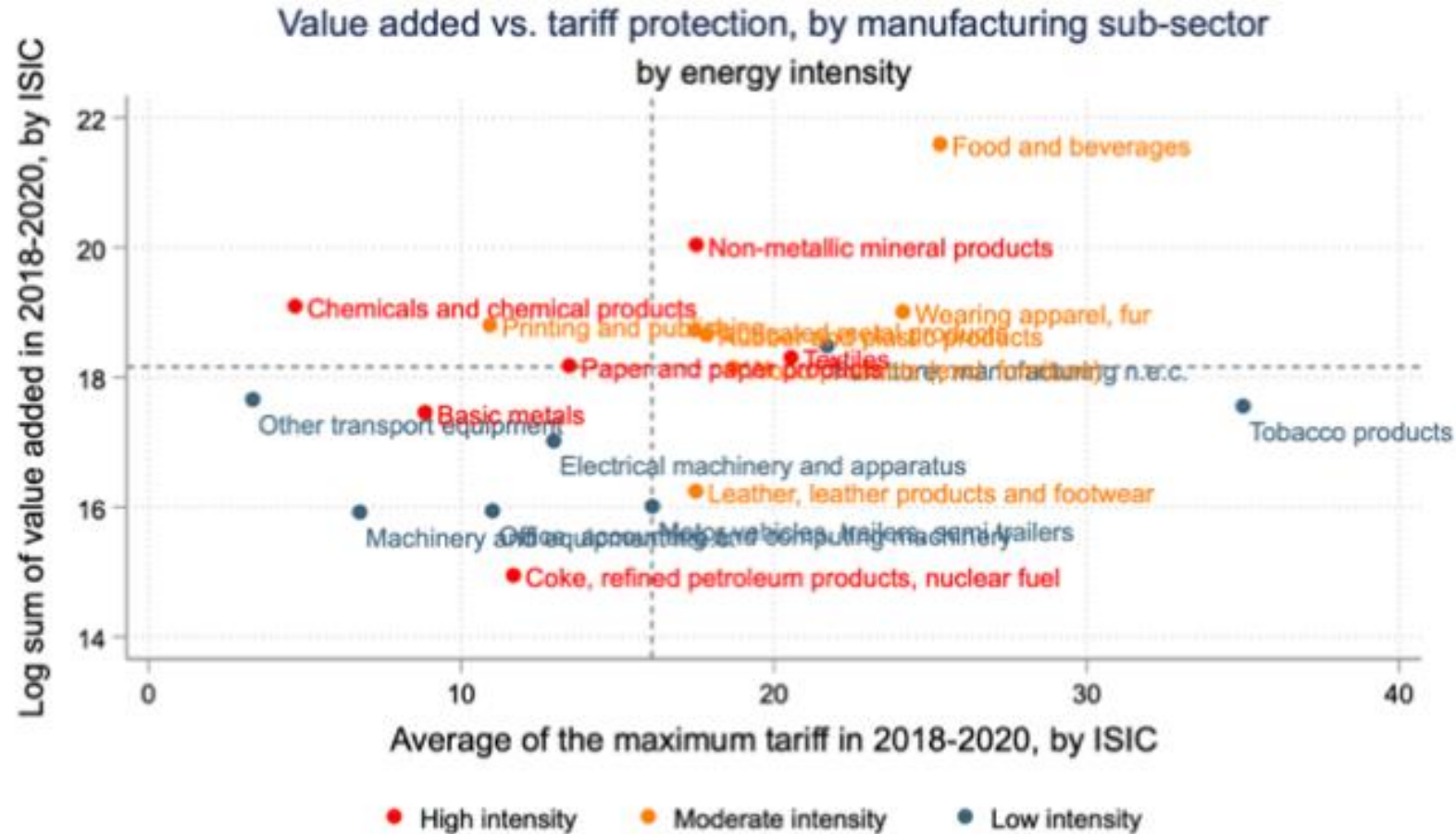
Source: UNIDO, UNIDO's Compilation of Energy Statistics for Economic Analysis (2010)

Manufacturing value added by energy intensity  
Tanzania



Source: UNIDO, UNIDO's Compilation of Energy Statistics for Economic Analysis (2010)

# The country has specialized in manufacturing subsectors more intensive in the use of electricity because tax and trade policy have been used to partially offset the infrastructure challenges

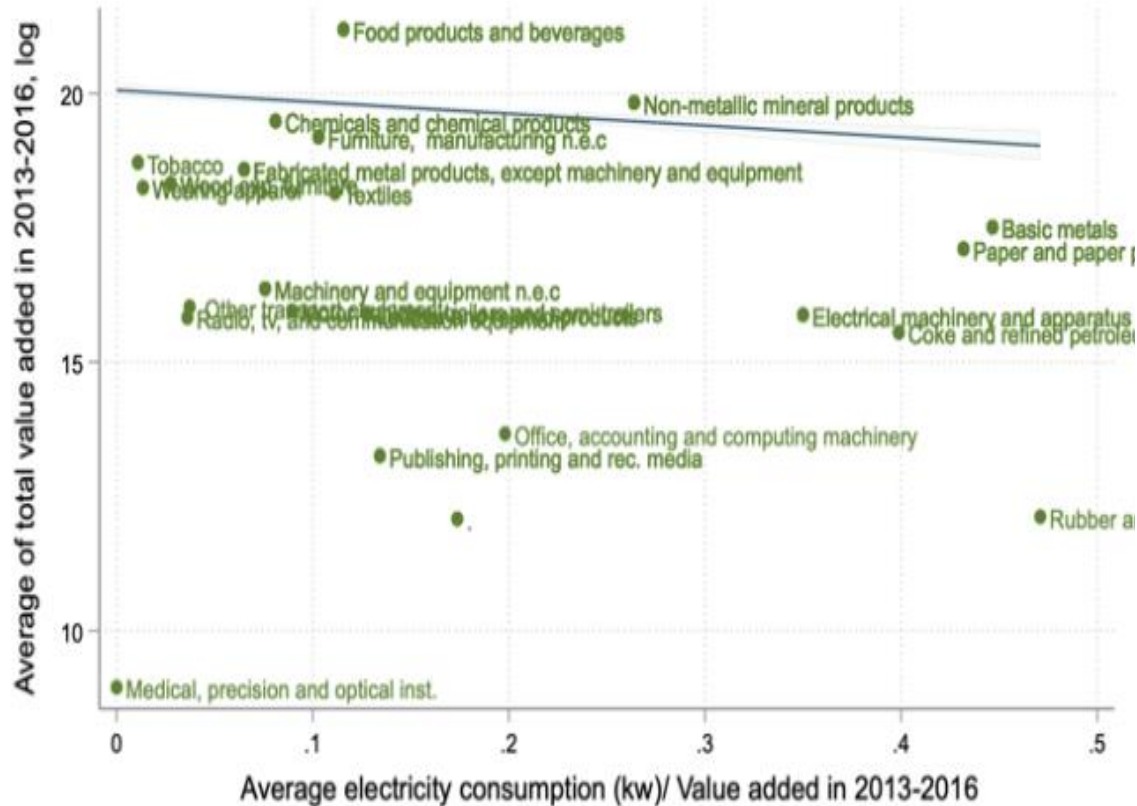


Source: WTO, UNIDO

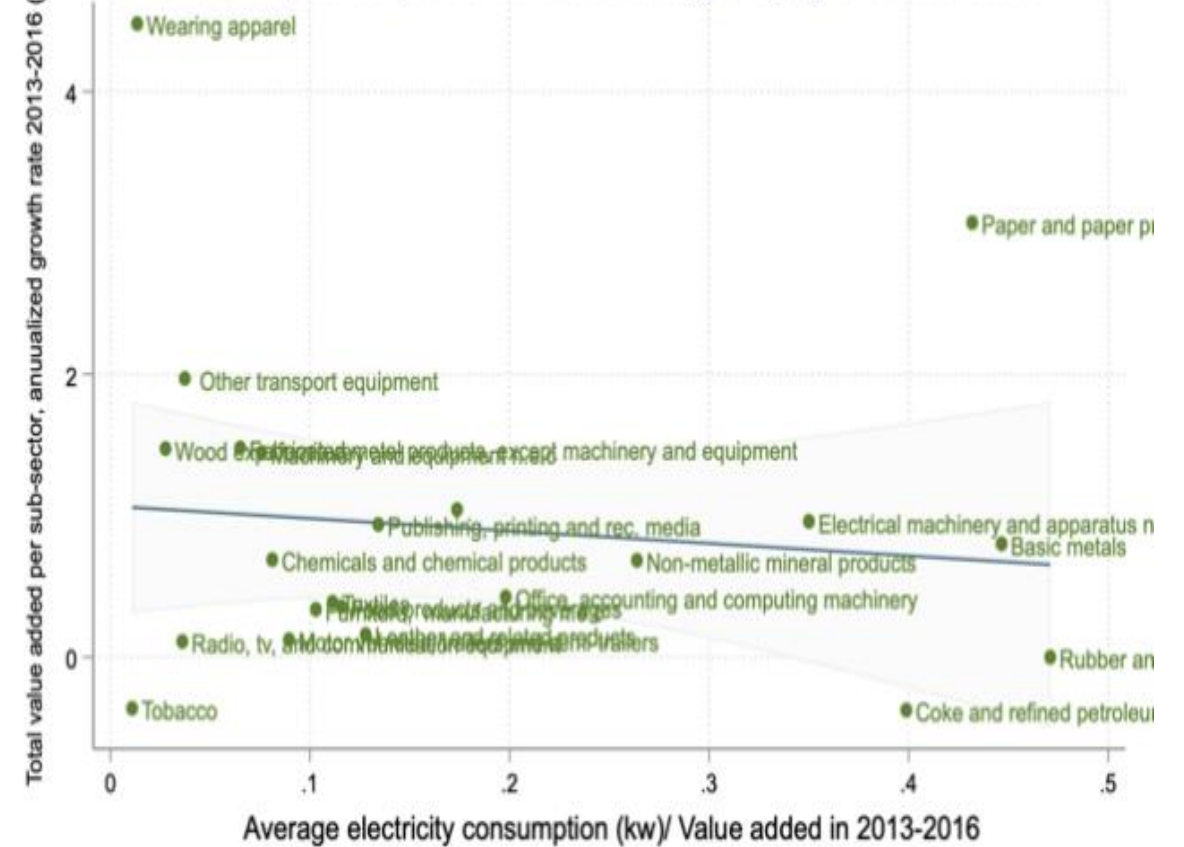
Note: dotted lines represent median values for the respective axes' variables

# Evidence, based on firm-level data available for 2013-2016, also suggests that electricity poses a binding constraint to firms in the manufacturing sector

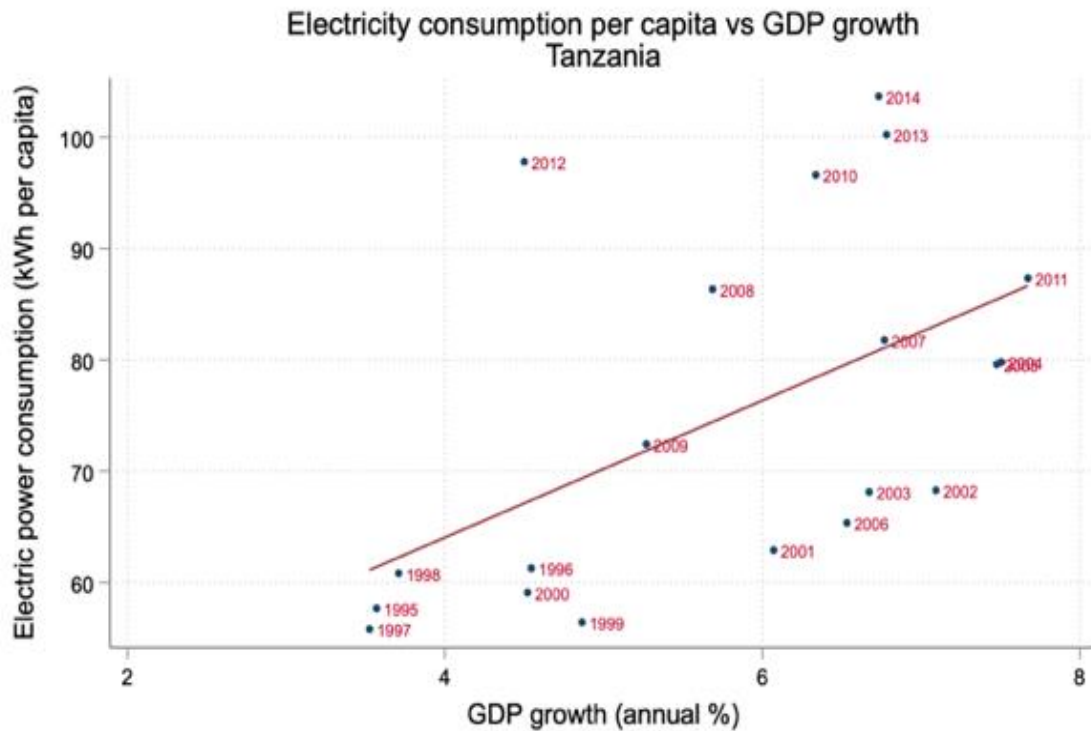
Electricity consumption and value added, by ISIC3 sub-sector



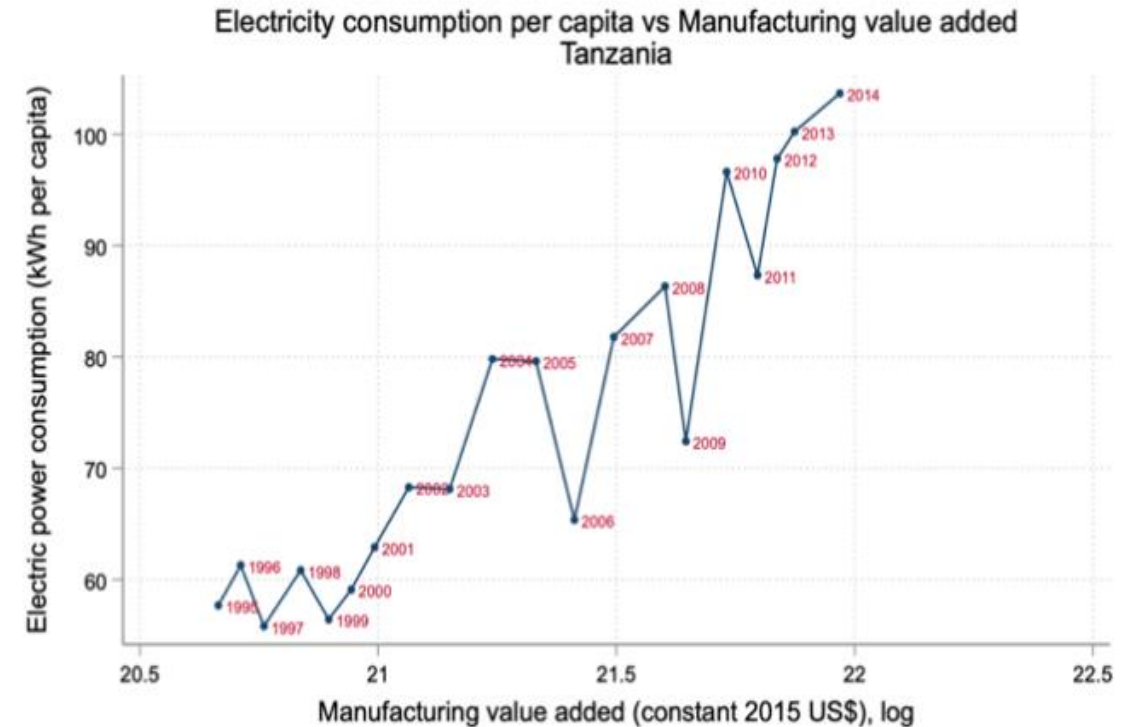
Electricity consumption and value added growth, by ISIC3 sub-sector



# Relaxing electricity as a constraint would likely translate into higher GDP growth and the value added of the manufacturing sector, as was the case in the last decades



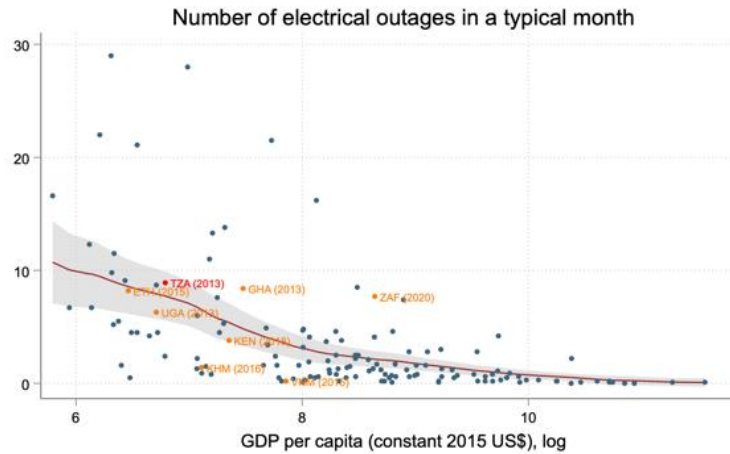
Source: World Bank WDI



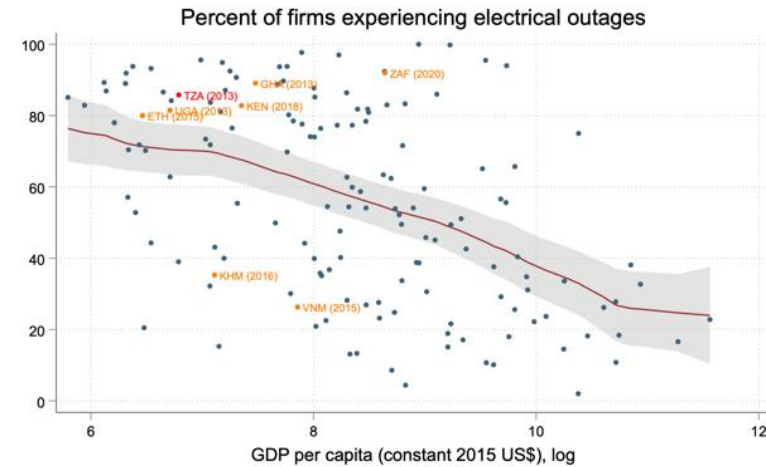
Source: World Bank WDI



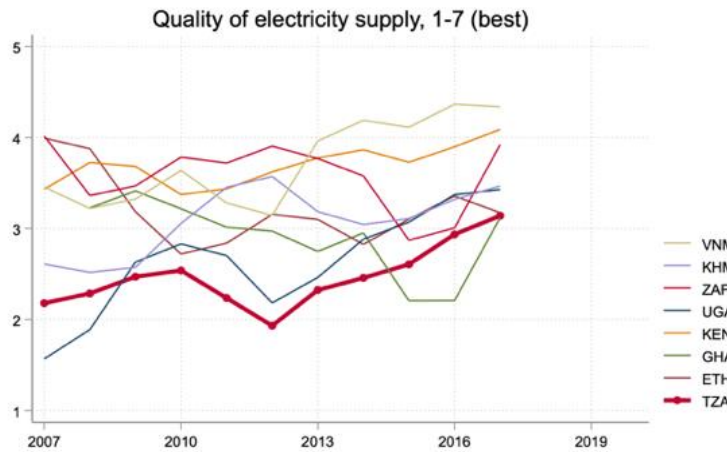
# Tanzania still underperforms its peer group in many electricity-related metrics



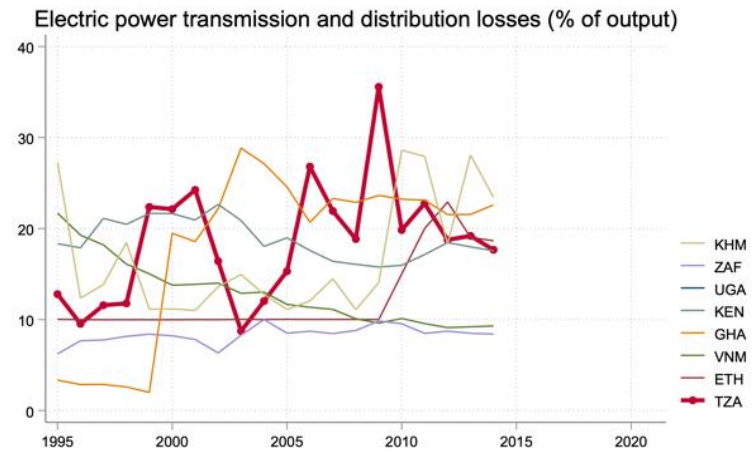
Data source: World Bank Enterprise Surveys & World Development Indicators  
Note: The values for y-axis are capped at 30 outages per month



Data source: World Bank Enterprise Surveys & World Development Indicators

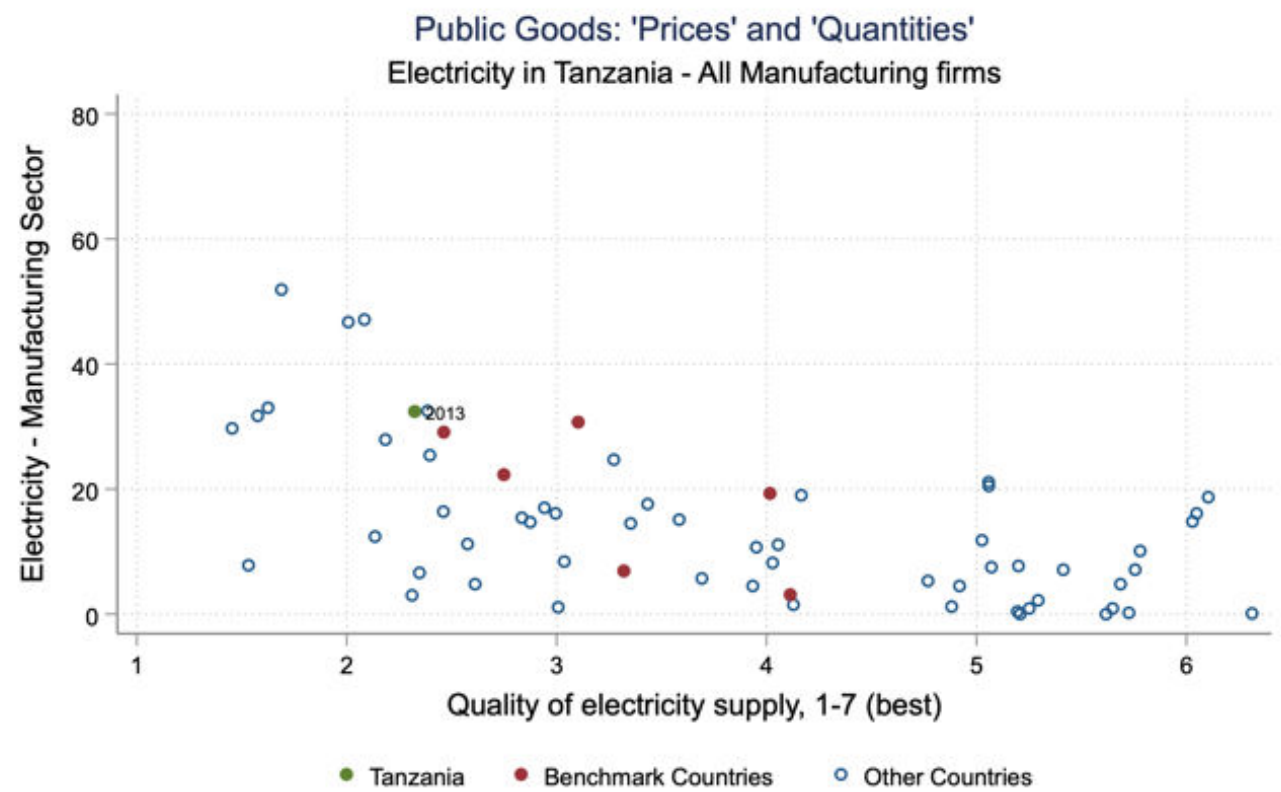


Source: World Economic Forum



Source: World Bank WDI

# Tanzania's manufacturing sector has one of the highest rates of electricity problems and one of the highest "costs" of outages



Note: Y-axis marks relative relevance of Electricity for All Manufacturing firms in the Enterprise Survey. Showing latest result for all countries other than Tanzania.

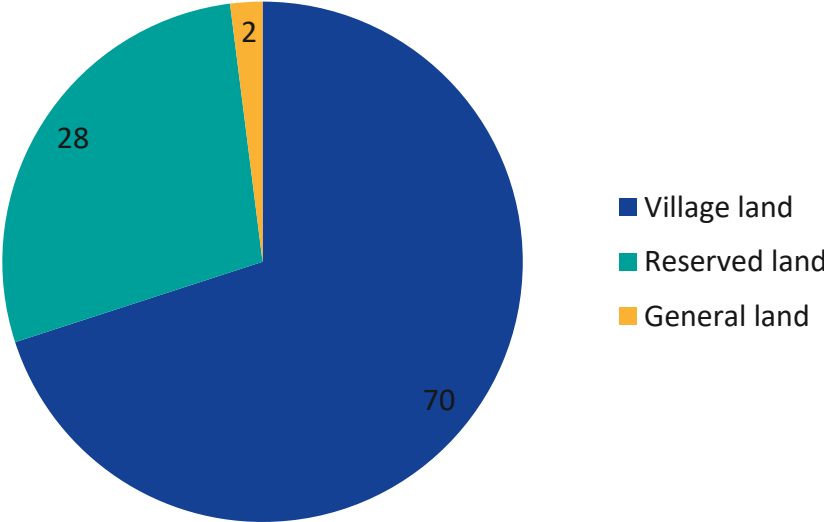
# Microeconomic Failures

[back to the presentation](#)

# The current land property regime does not make access to land for investment easy

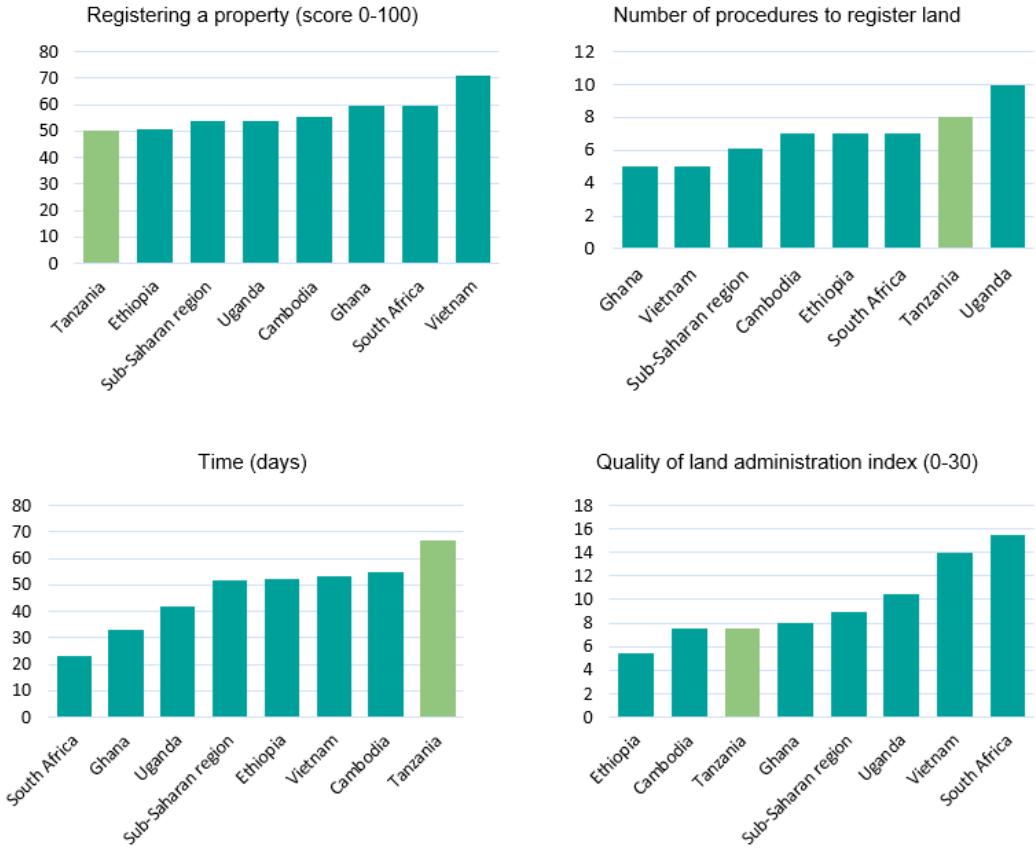
Land acquisition is particularly complicated for foreign investors, as current legislation does not allow for direct ownership

Land in Tanzania, by type (%)



Source: TIC

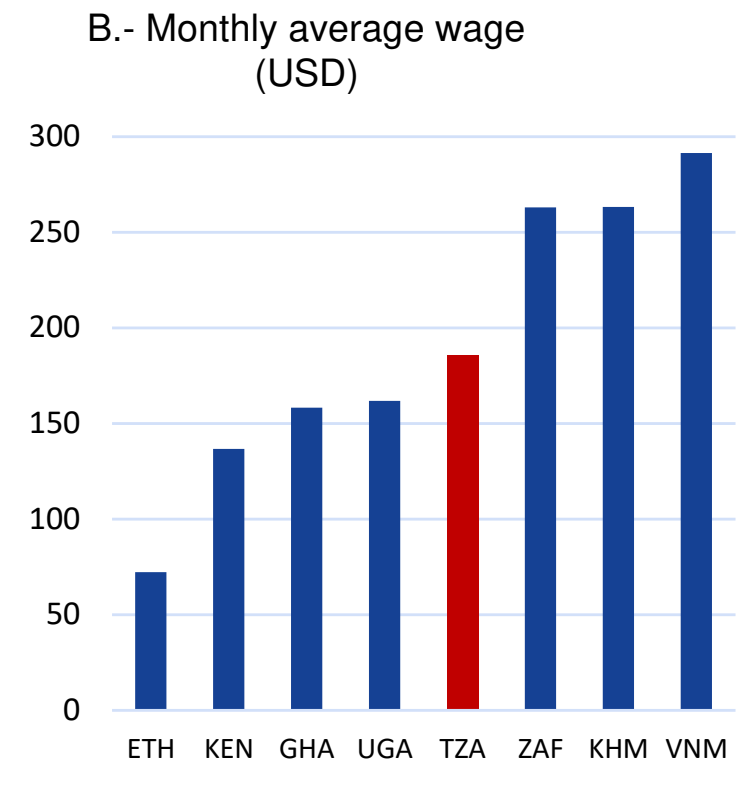
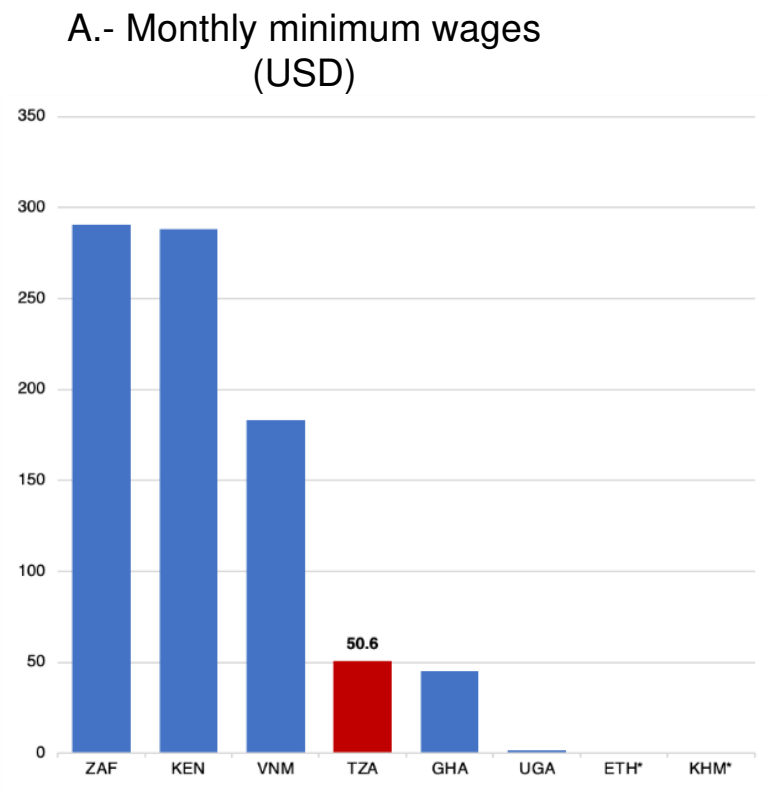
## Registering a property indices



Source: WDI data.

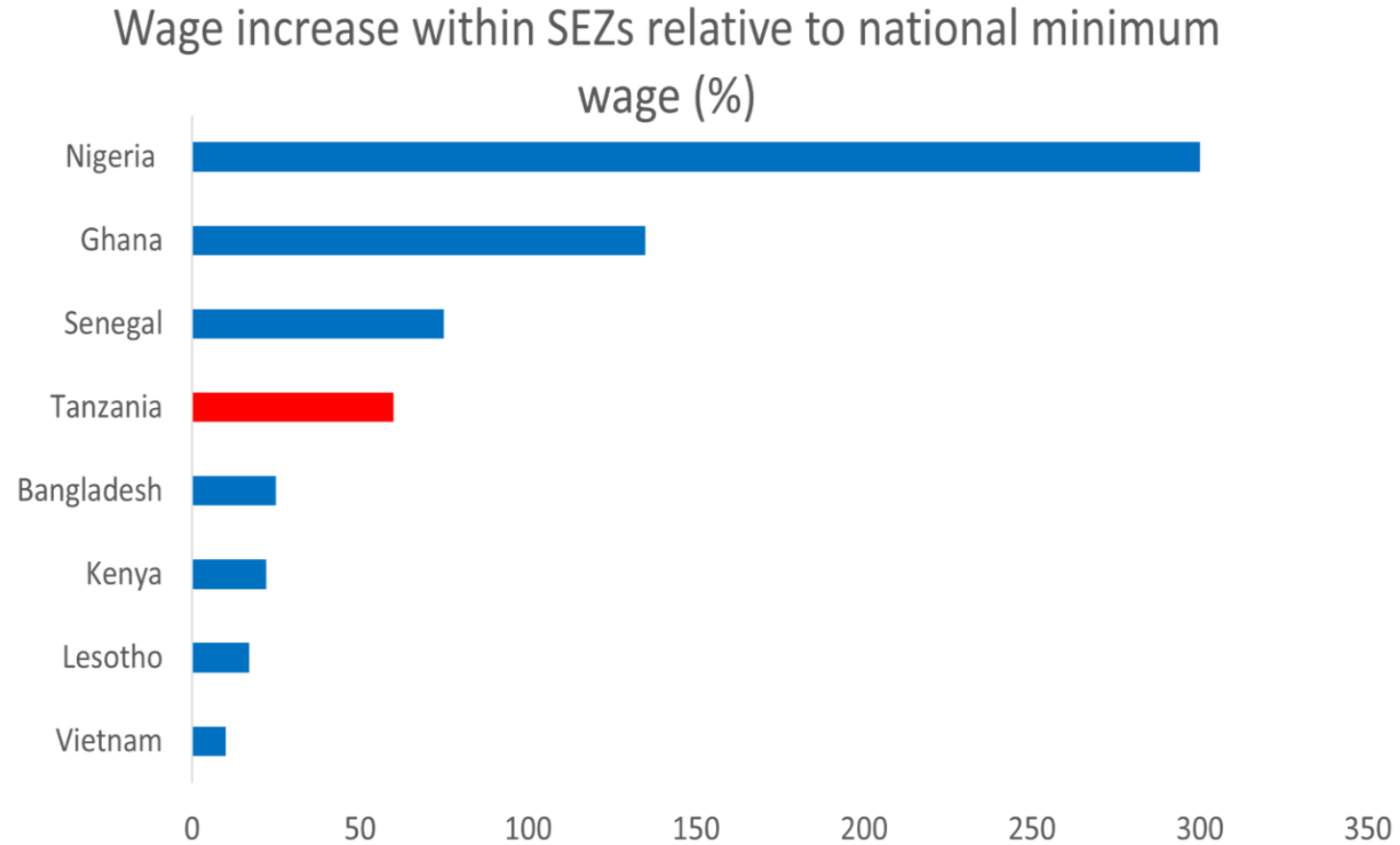
# Despite low level of income, formal wage levels in Tanzania are not a competitive advantage to attract international investment.

In terms of attracting foreign investment to manufacturing, formal wage levels in Tanzania don't seem to be a competitive advantage



Source: ILO. Last data available for each country.

## Export bias is exacerbated by labour distortions within SEZs with a relatively high wage premium relative to national minimum wage (of 60%)



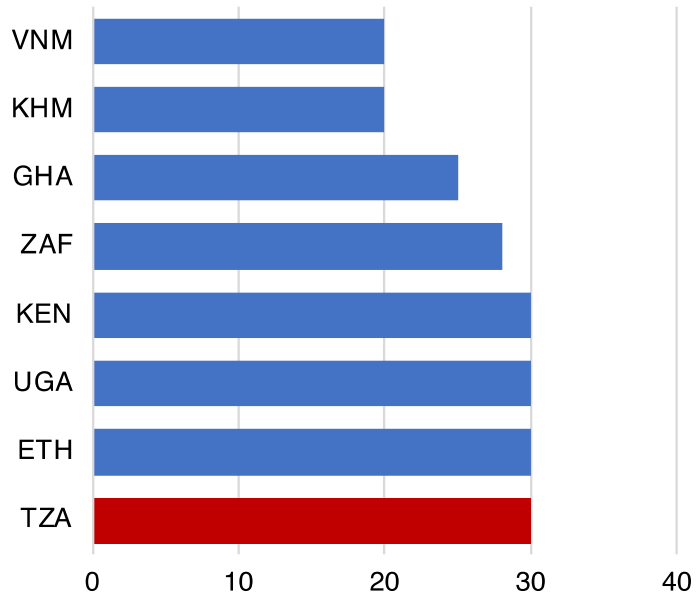
Source: Own elaboration from Farole 2011

# The taxation system is stuck in an equilibrium with relatively higher tax rates, a plethora of exemptions, and an overall low tax collection

Corporate and personal income rates are high relative with their peers, but collections are the lowest in the benchmark group

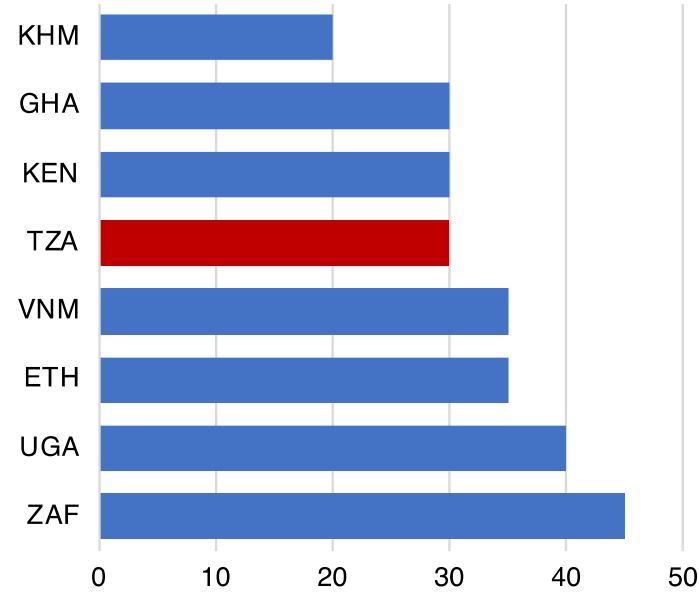
**Tax rates (2022)**  
(percentage of GDP)

**Corporate Tax**



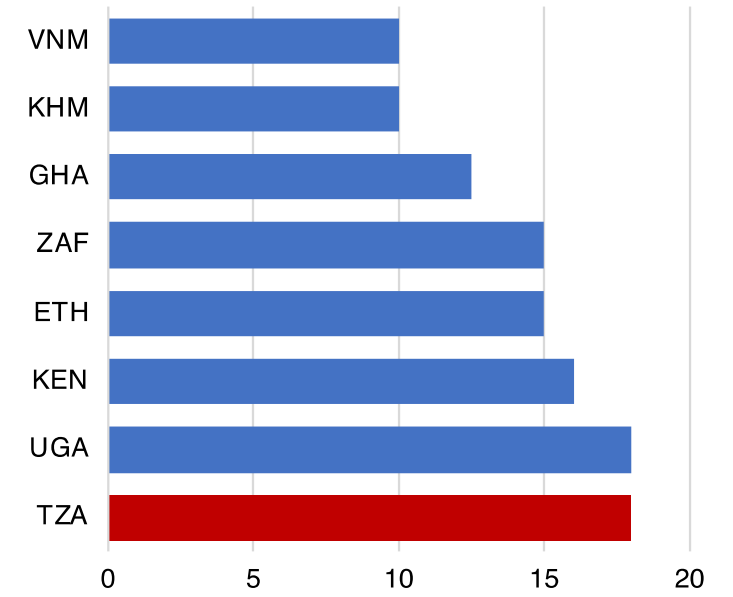
Source: OECD, WB and PWC

**Personal Income Tax**



Source: OECD, WB and PWC

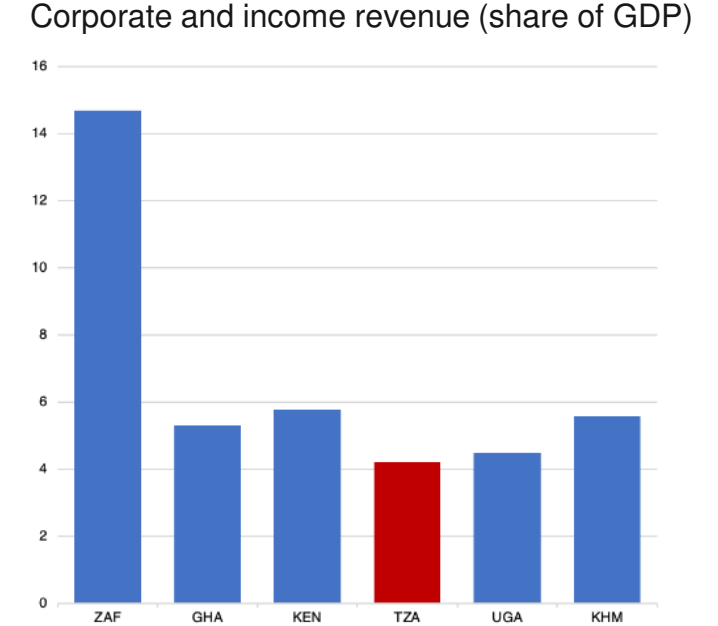
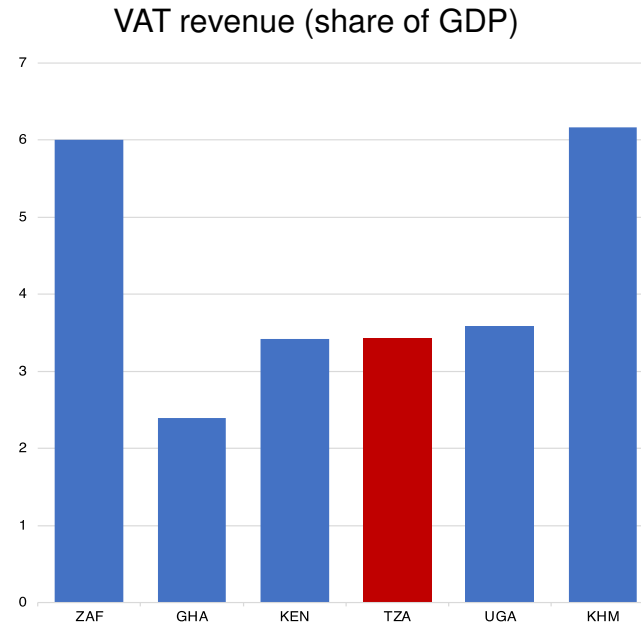
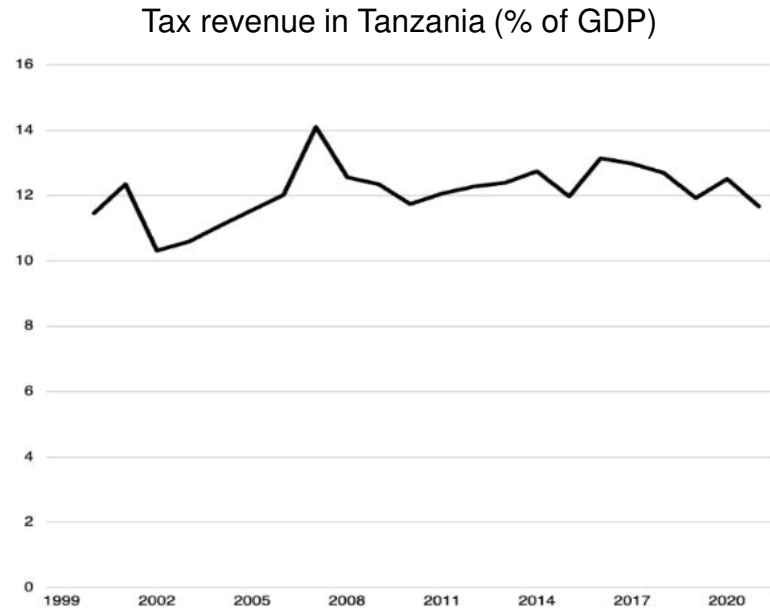
**VAT/Sales tax rate (%)**



Source: OECD, WB and PWC

# The taxation system is stuck in an equilibrium with relatively higher tax rates, a plethora of exemptions, and an overall low tax collection

Tanzania's tax revenues have been relatively stable at 12% of GDP for two decades, which is low by international standards

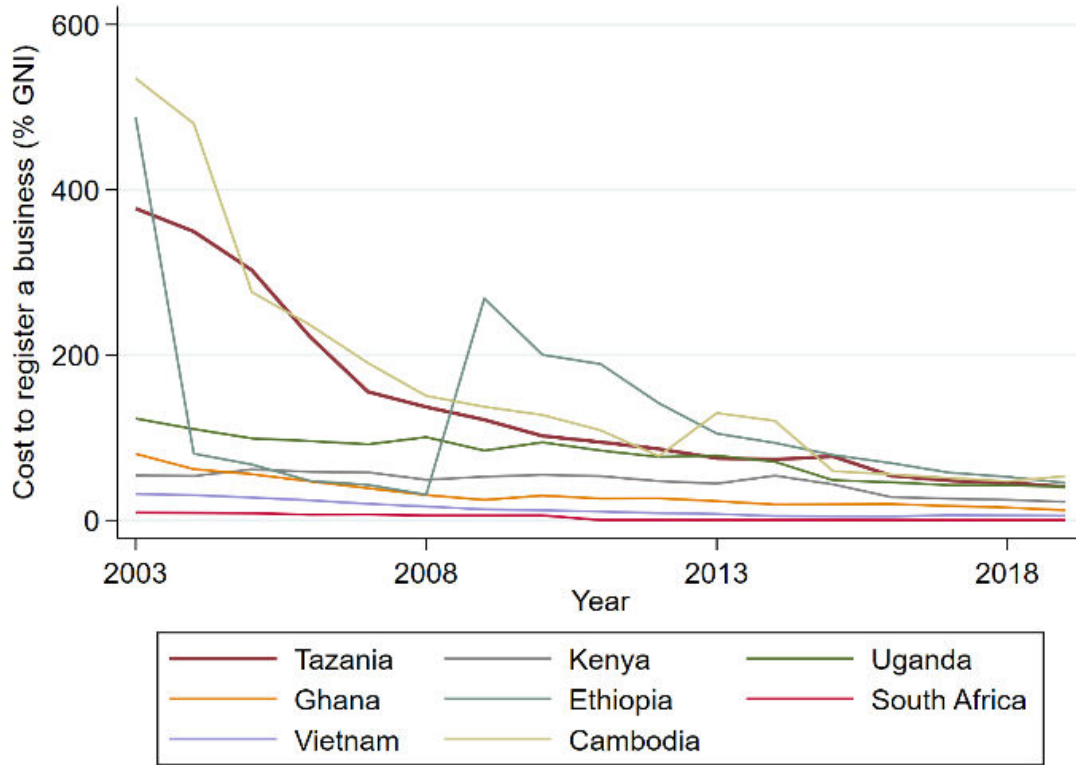


Source: WDI, BoT, and PWC



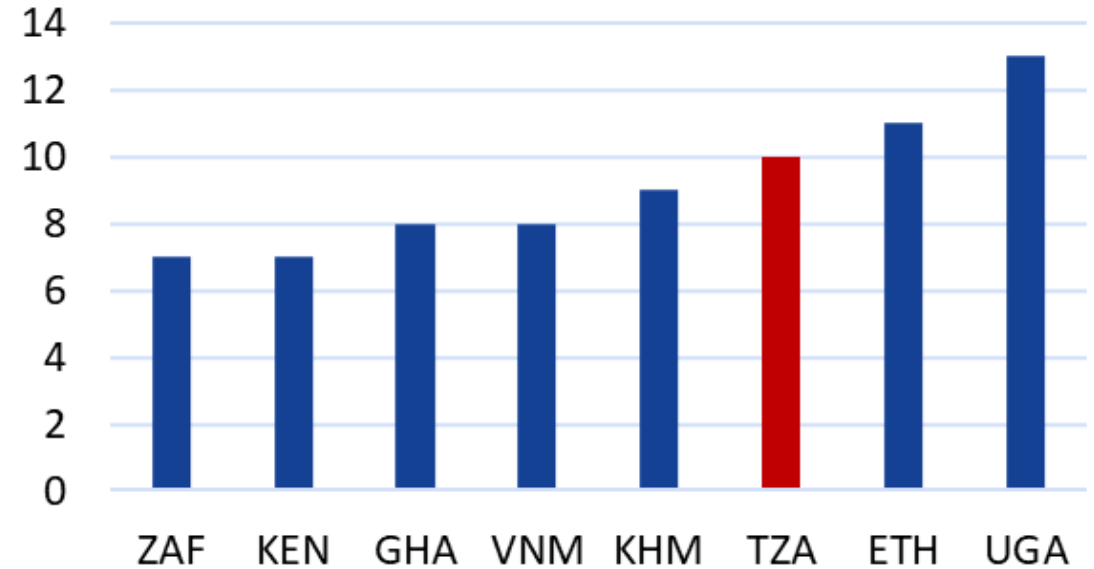
# Cost of registering a business has declined dramatically since early 2000s but is still high compared to peers and red tape particularly hard for exporters

Cost of registering a business



Source: Doing Business Indicator, 2020

Number of procedures required to open a business



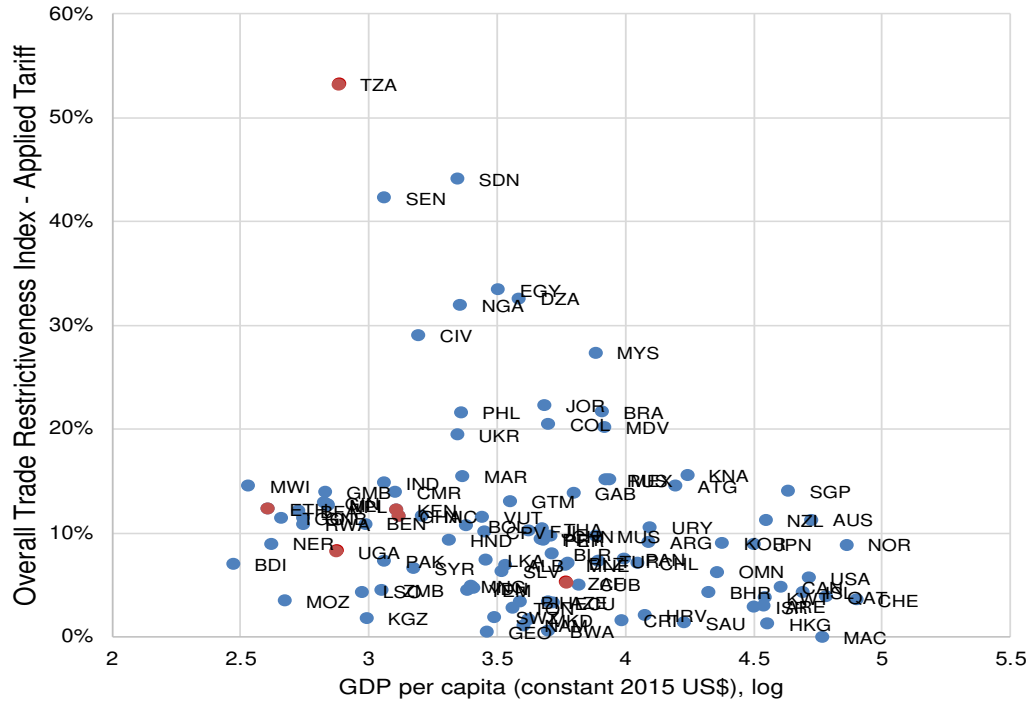
Source: Doing Business Indicator, 2020

# Trade Policy

[back to the presentation](#)

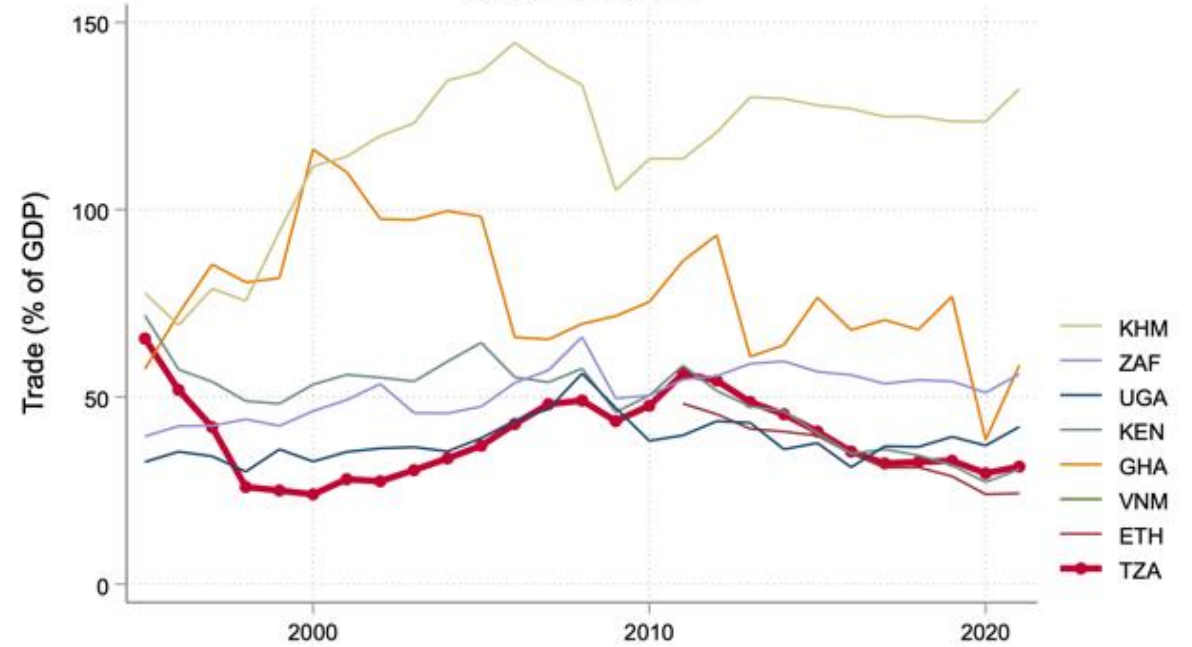
# Tanzania is a trade-restricted country, even though it has been pursuing an export-led strategy being a part of many free trade agreements and being part of the Eastern African Community (EAC) customs union

Trade restrictiveness index vs. GDP per capita, 2009



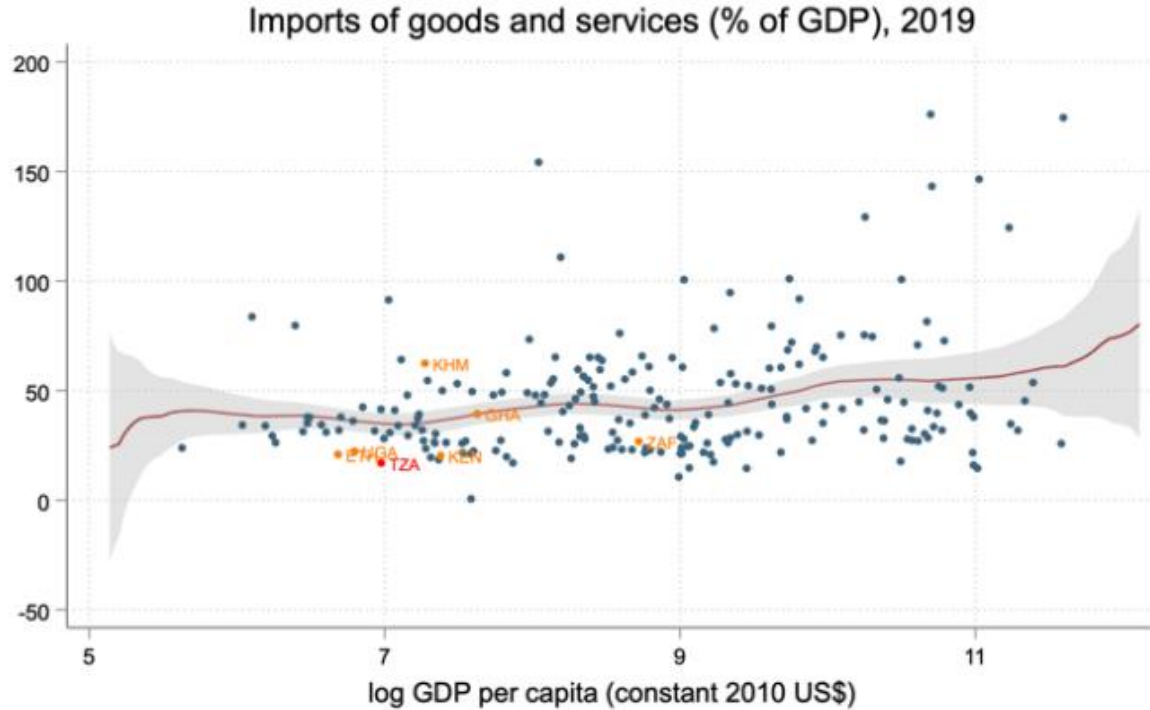
Source: Own elaboration using WDI data.

Trade openness

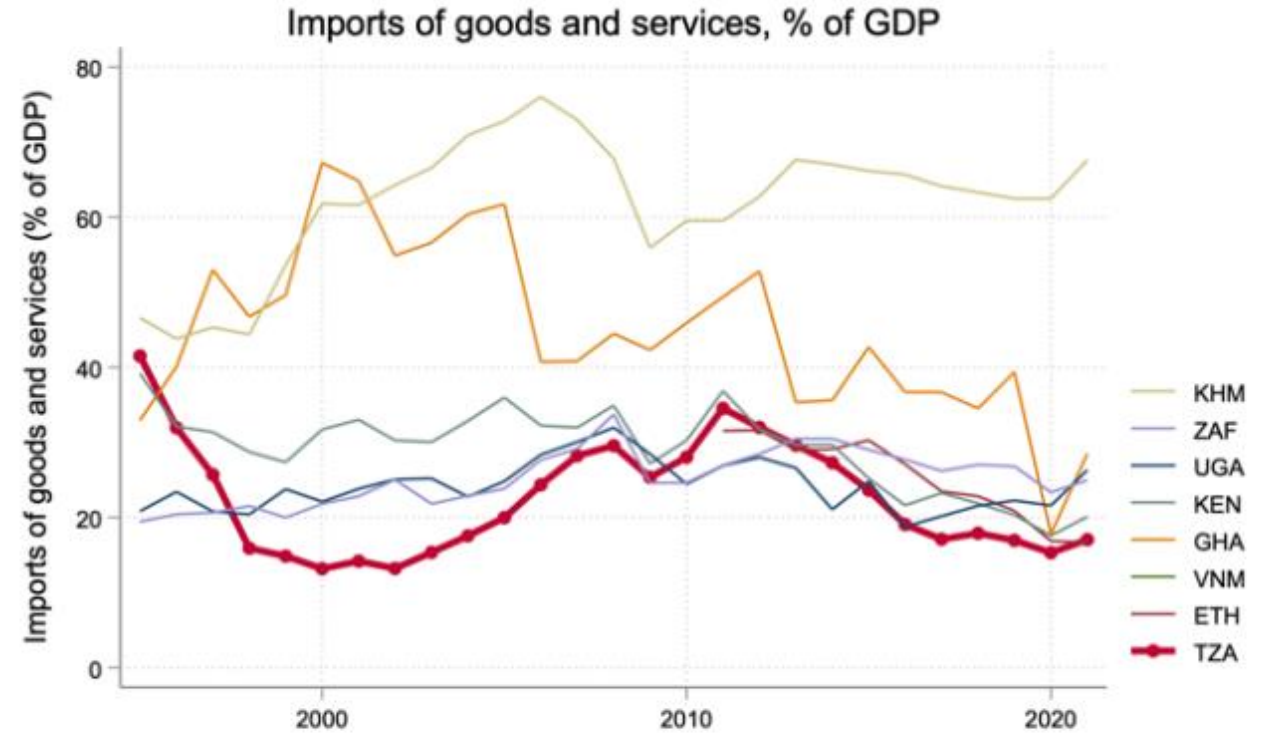


Source: World Bank WDI

Tanzania's imports of goods and services are among the lowest in the sample and one of the lowest in the world, which limits any opportunities for further import substitution industrialisation (ISI) and localization

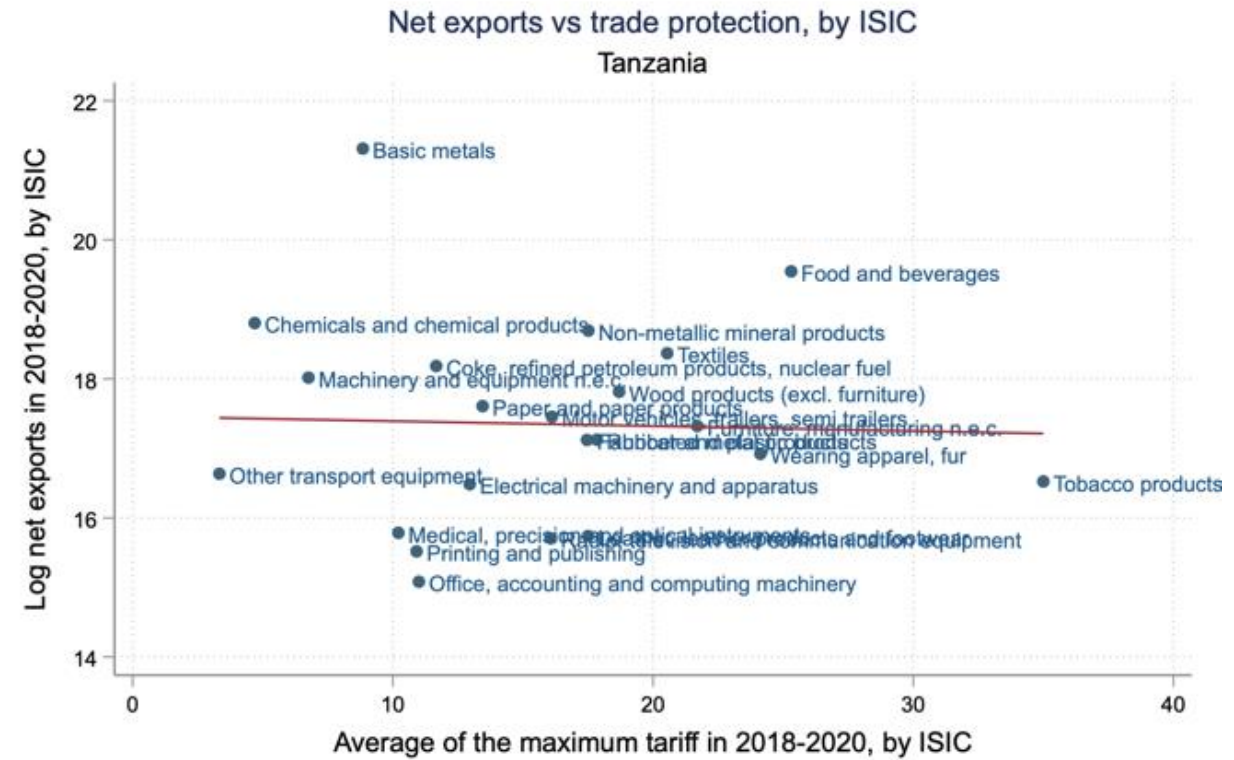
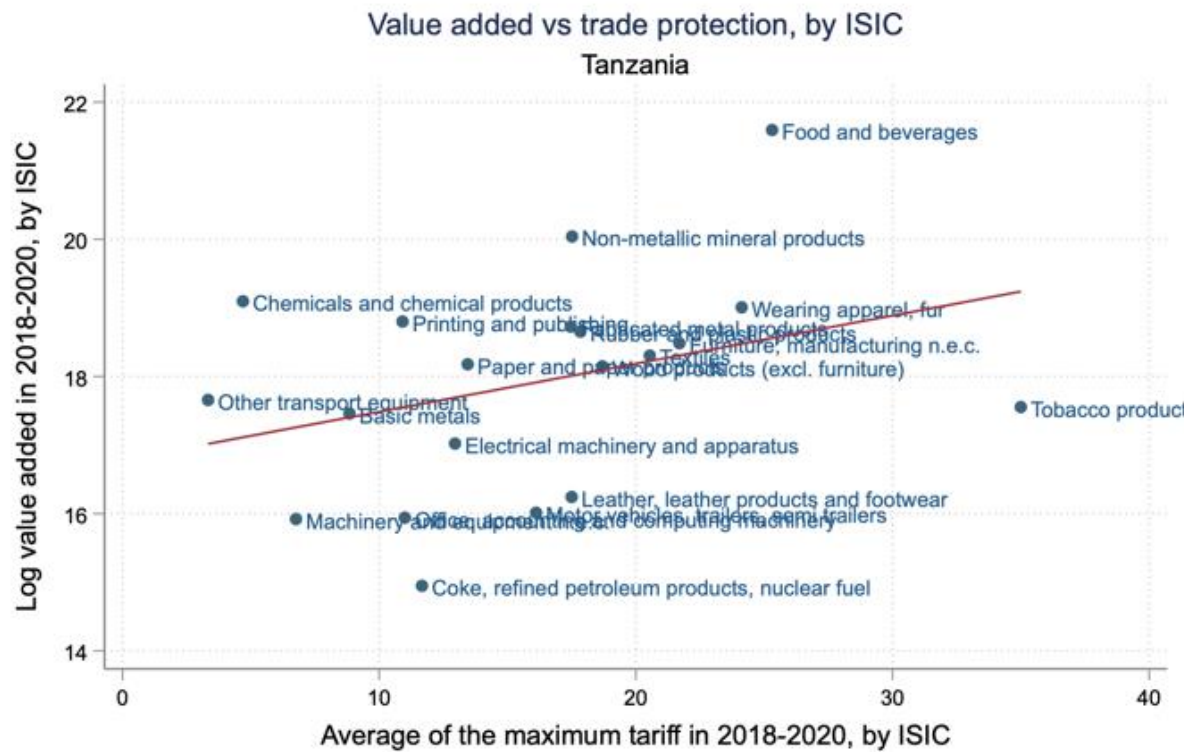


Data source: World Development Indicators



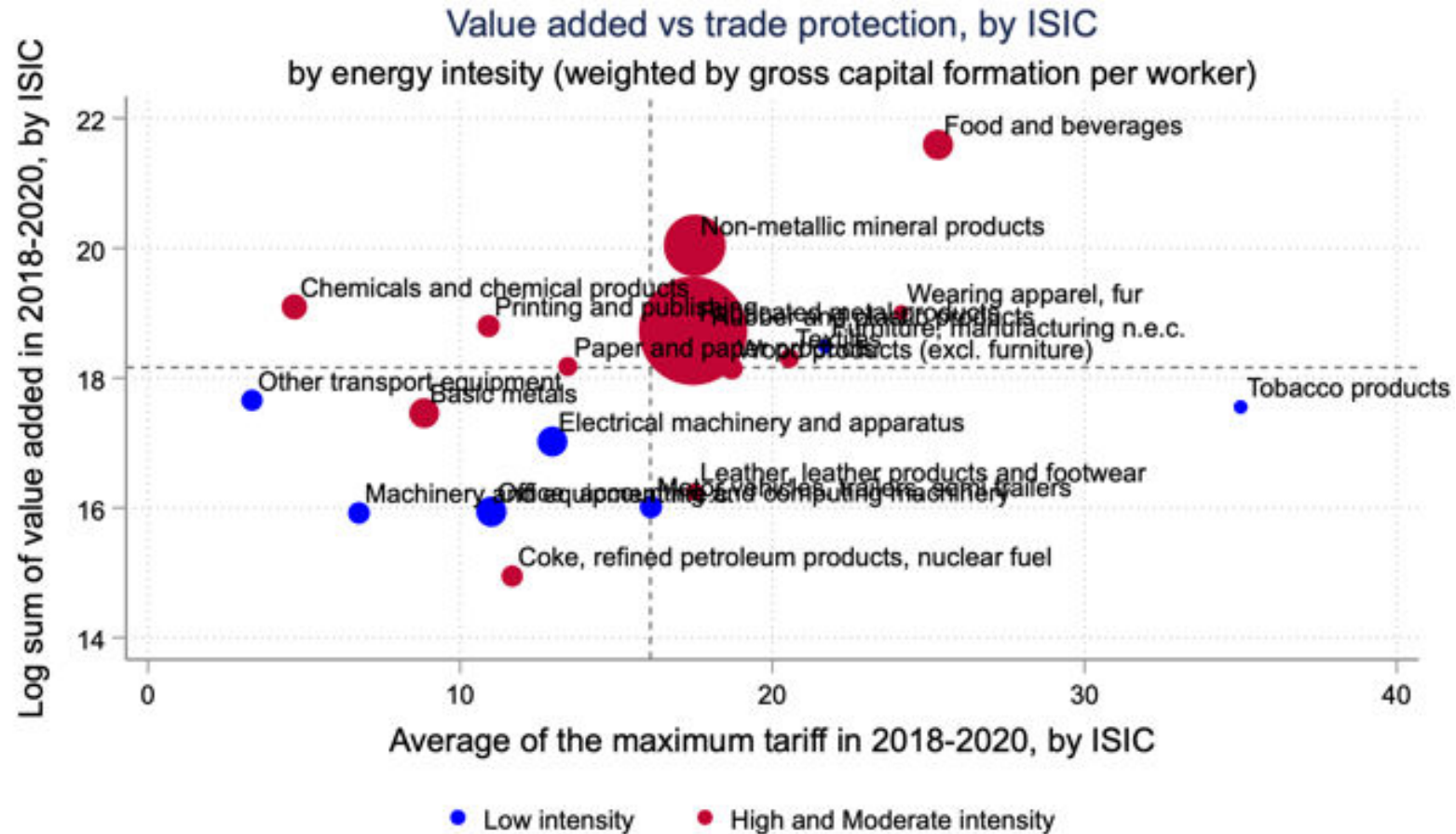
Source: World Bank WDI

# In Tanzania's manufacturing sector, a higher degree of protection seems to be associated with a larger share of the industry in value added and a lower share of net exports



Source: Own elaboration based on WTO, UNIDO.

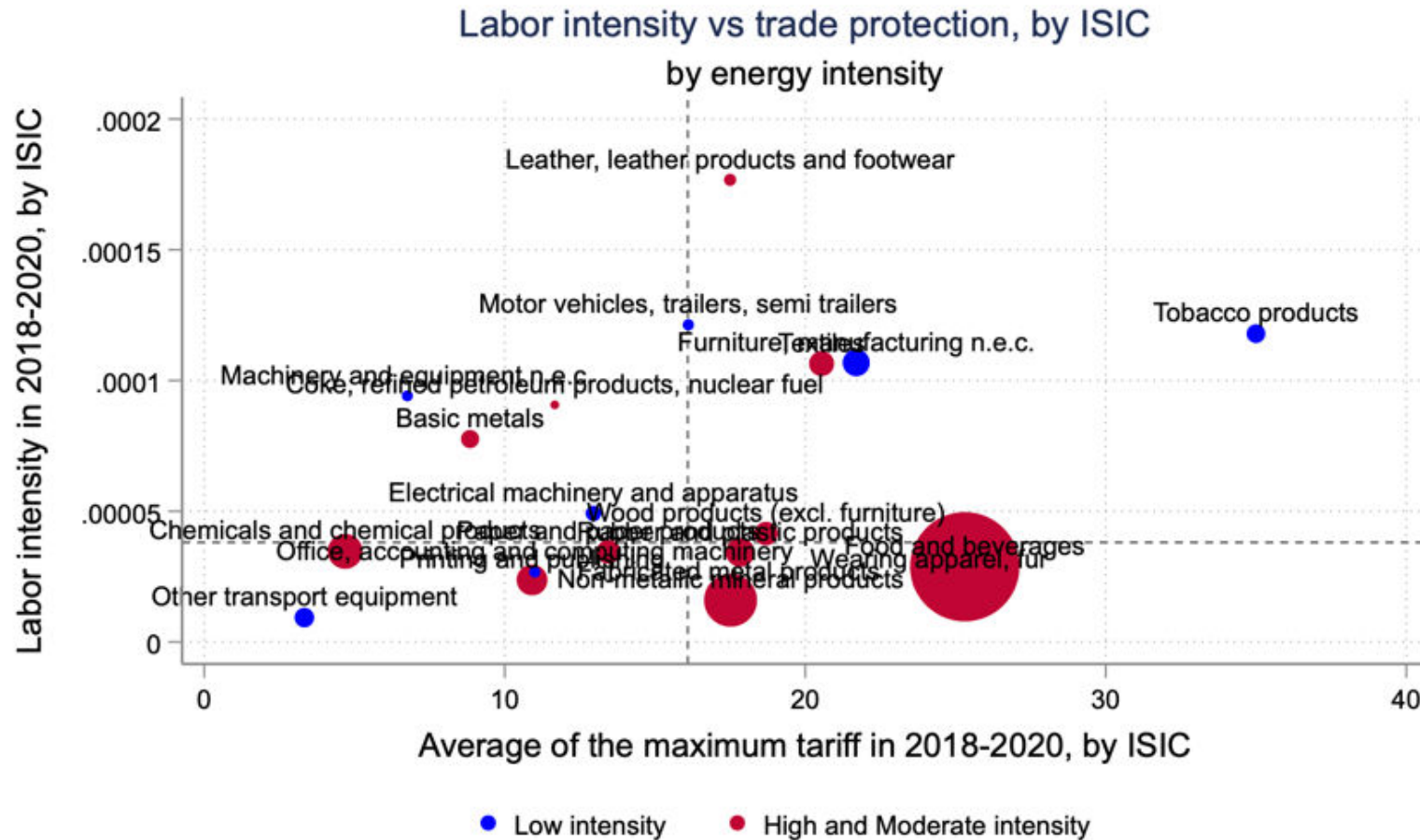
## Sectors that tend to be intensive in the use of electricity and finance seem to add the most domestic value while being the most protected via local trade policies



Source: WTO, UNIDO

Note: dotted lines represent median values for the respective axes' variables

# Sectors that represent large shares of value added and are intensive in electricity tend to be less labour-intensive and more trade-protected



Source: WTO, UNIDO

Note: dotted lines represent median values for the respective axes' variables

---

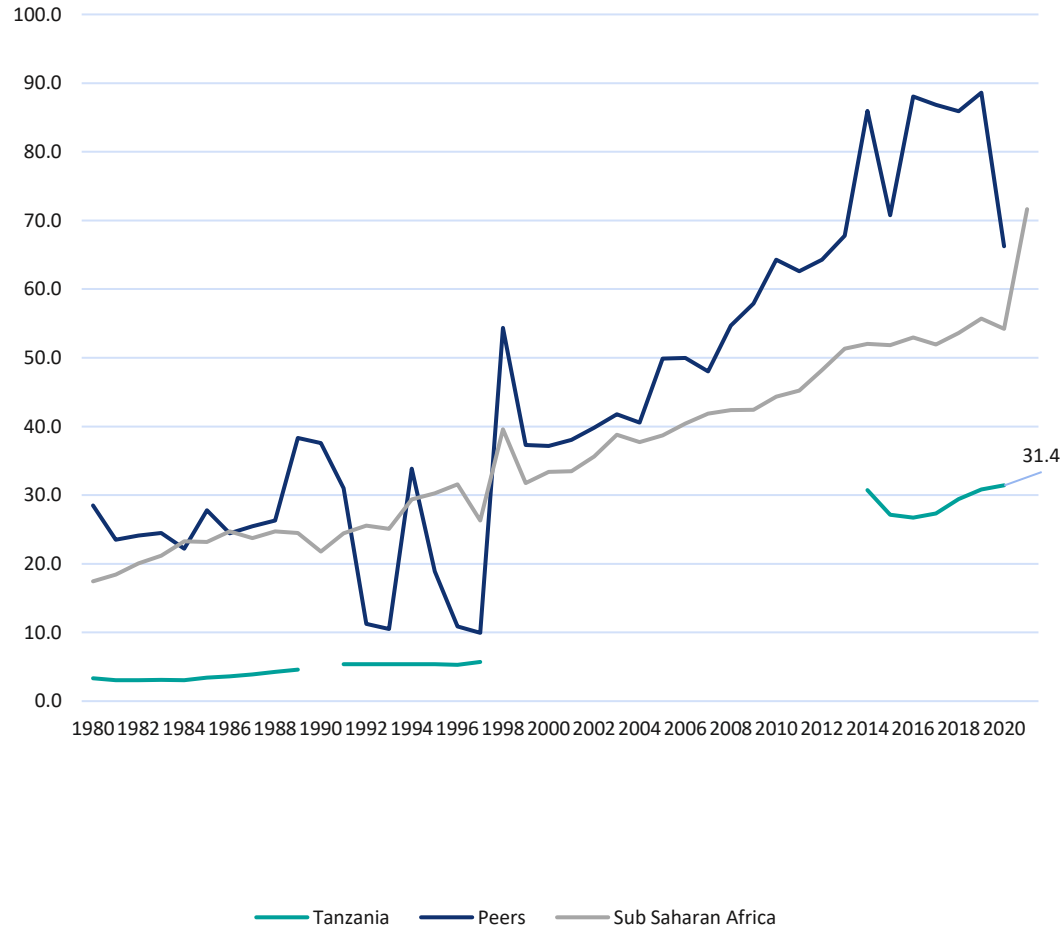
# Human capital

[back to the presentation](#)

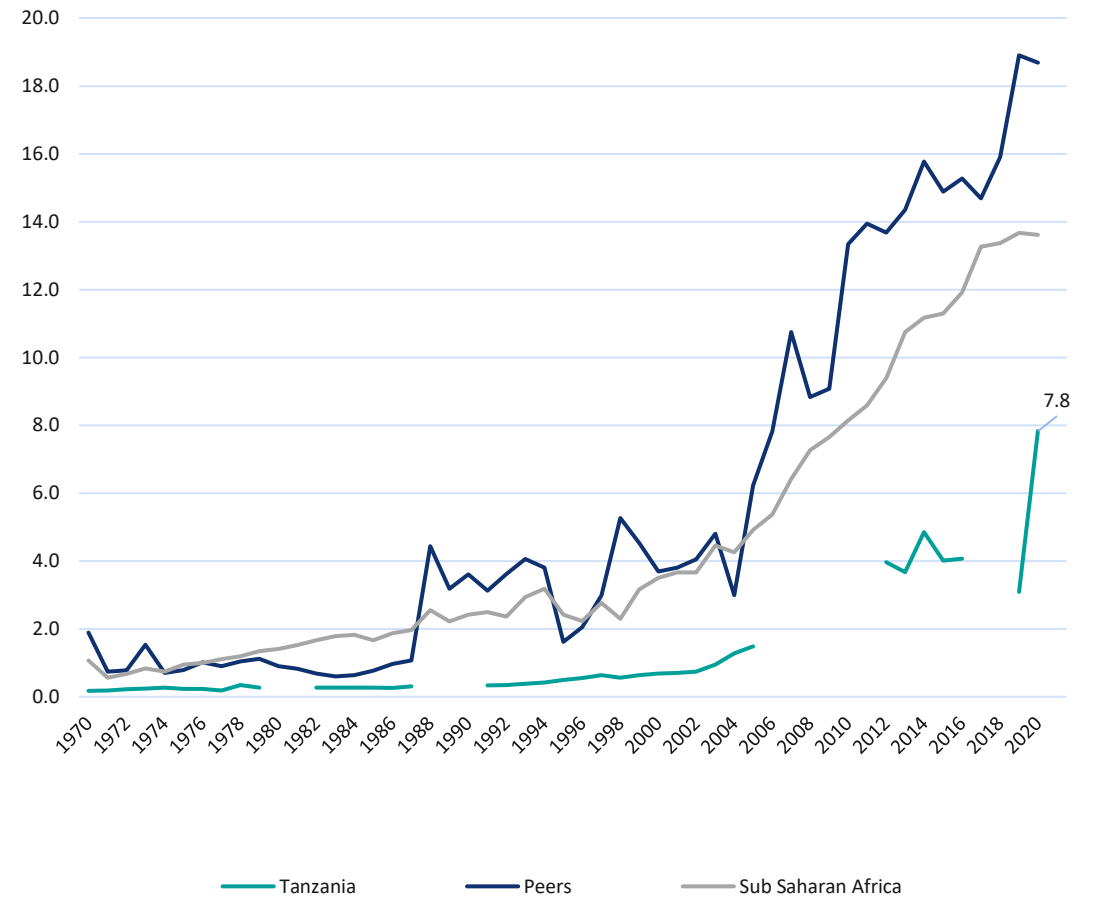


# Despite important educational improvements in the country, enrollment rates for secondary and tertiary education are very low compared to peers and countries in the region

A. Secondary enrollment rate



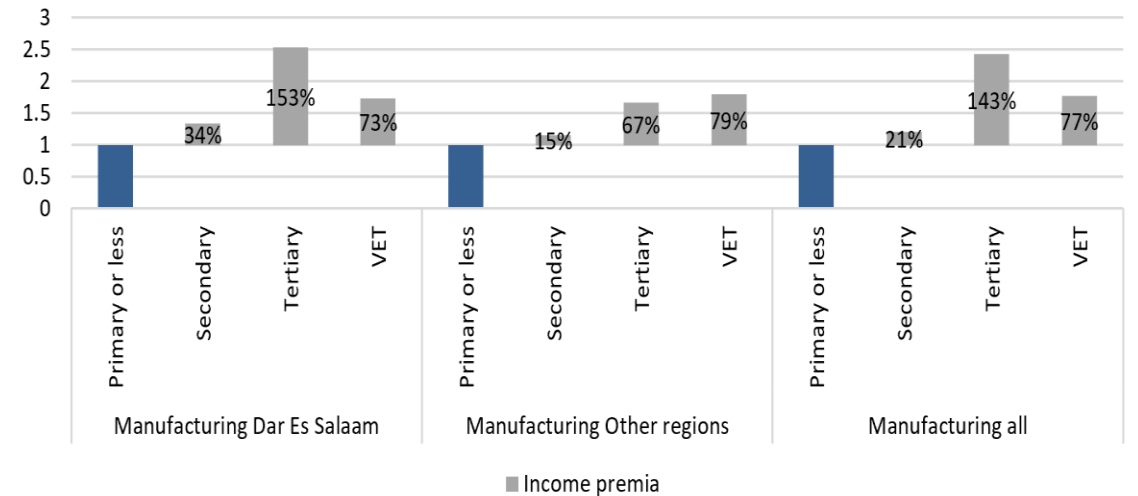
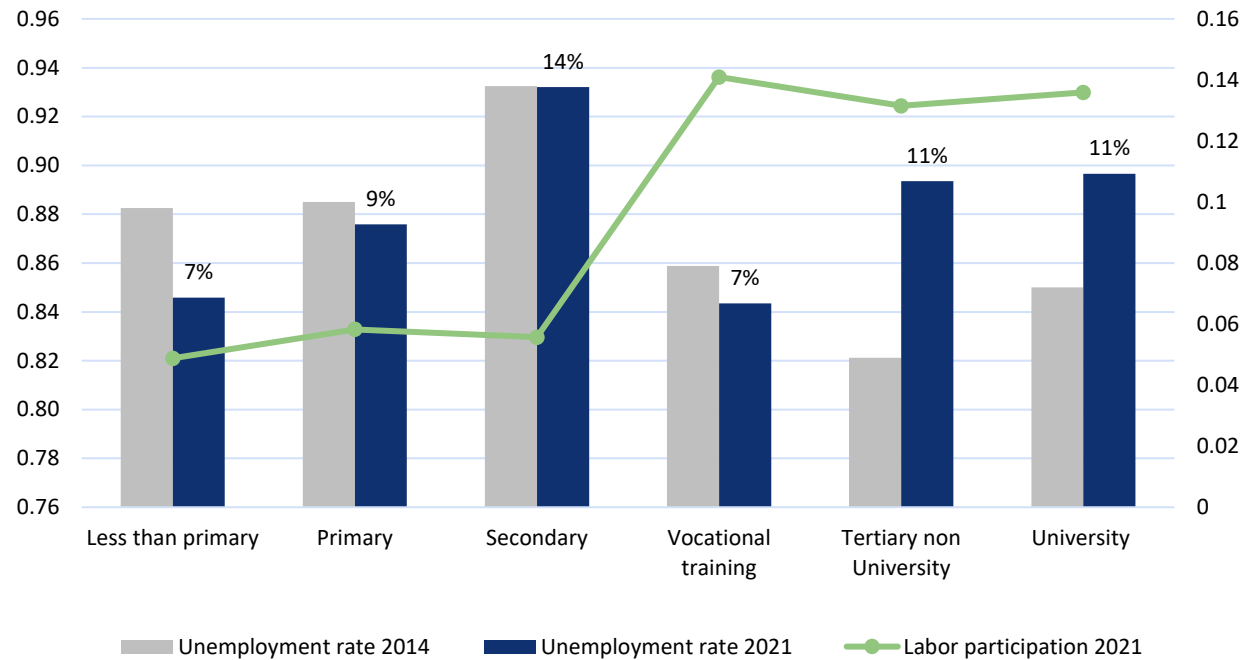
B. Tertiary enrollment rate



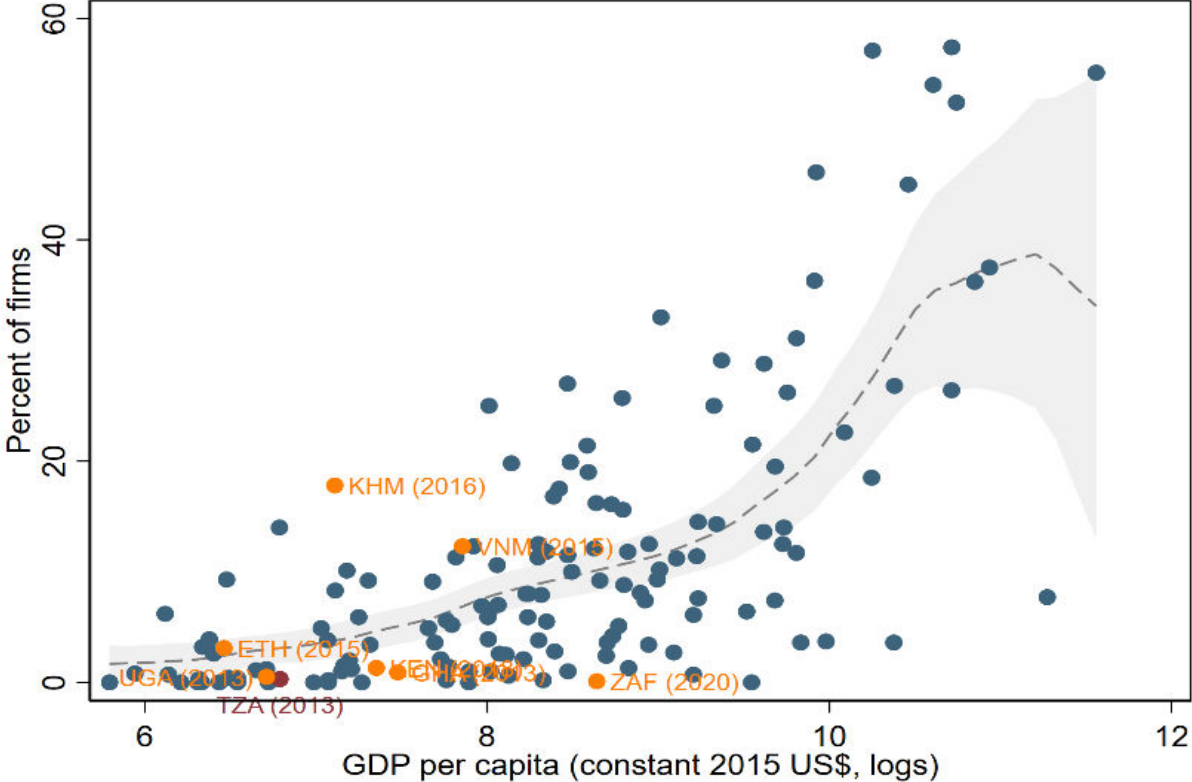
## Returns to schooling with more recent data show a decline in returns during recent years, and particularly low returns in the manufacturing sector

Variable	(1) All sample	(2) Non-manufacturing sector	(3) Manufacturing sector
Years of schooling	0.0804***	0.0814***	0.0595***
Experience	0.015***	0.0143***	0.0162***
Exp2	-0.000204***	-0.000189***	-0.000304**
Women	-0.461***	-0.447***	-0.608***
Urban	0.406***	0.422***	0.237***
Manufacturing dummy	-0.157***	-	-
Constant	11.29***	11.26***	11.5***
Observations	8534504	7749046	785457
Adjusted R-squared	0.174	0.175	0.165

# Despite increasing unemployment, the wage premium for tertiary education is high, as are premia for vocational training

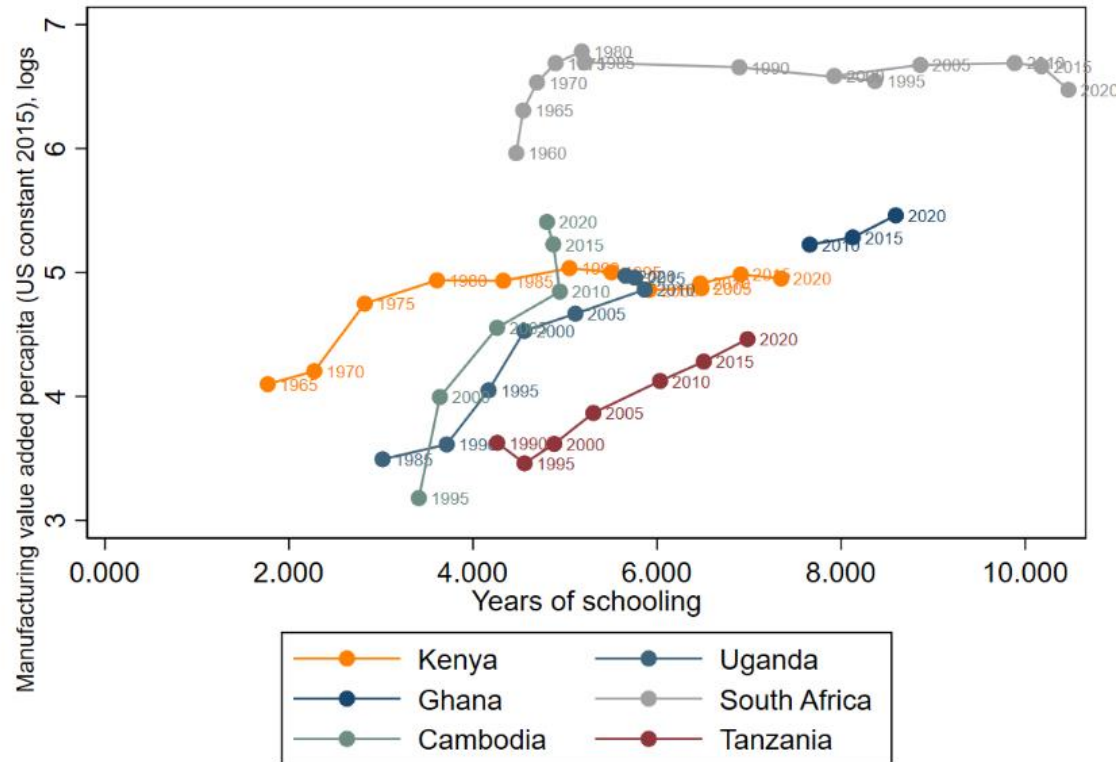


# The proportion of firms indicating an inadequately educated workforce as the main obstacle is very low compared to peers and with other countries in the world

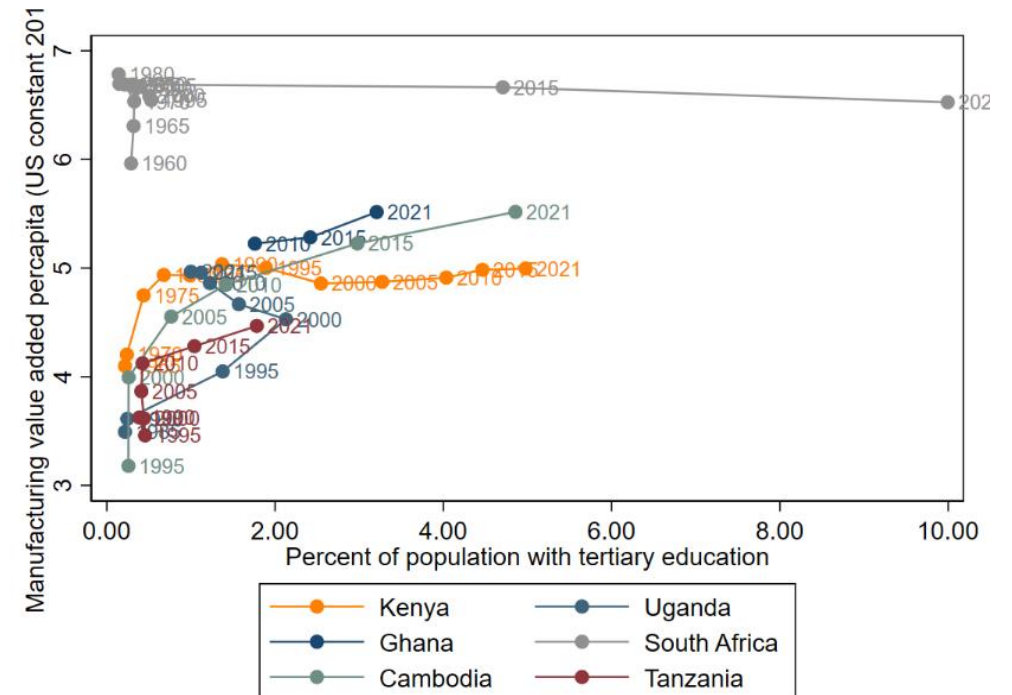


**A recent expansion in the supply of education (measured by years of schooling and proportion of individuals with tertiary education) are related positively with the value added per worker in the manufacturing sector**

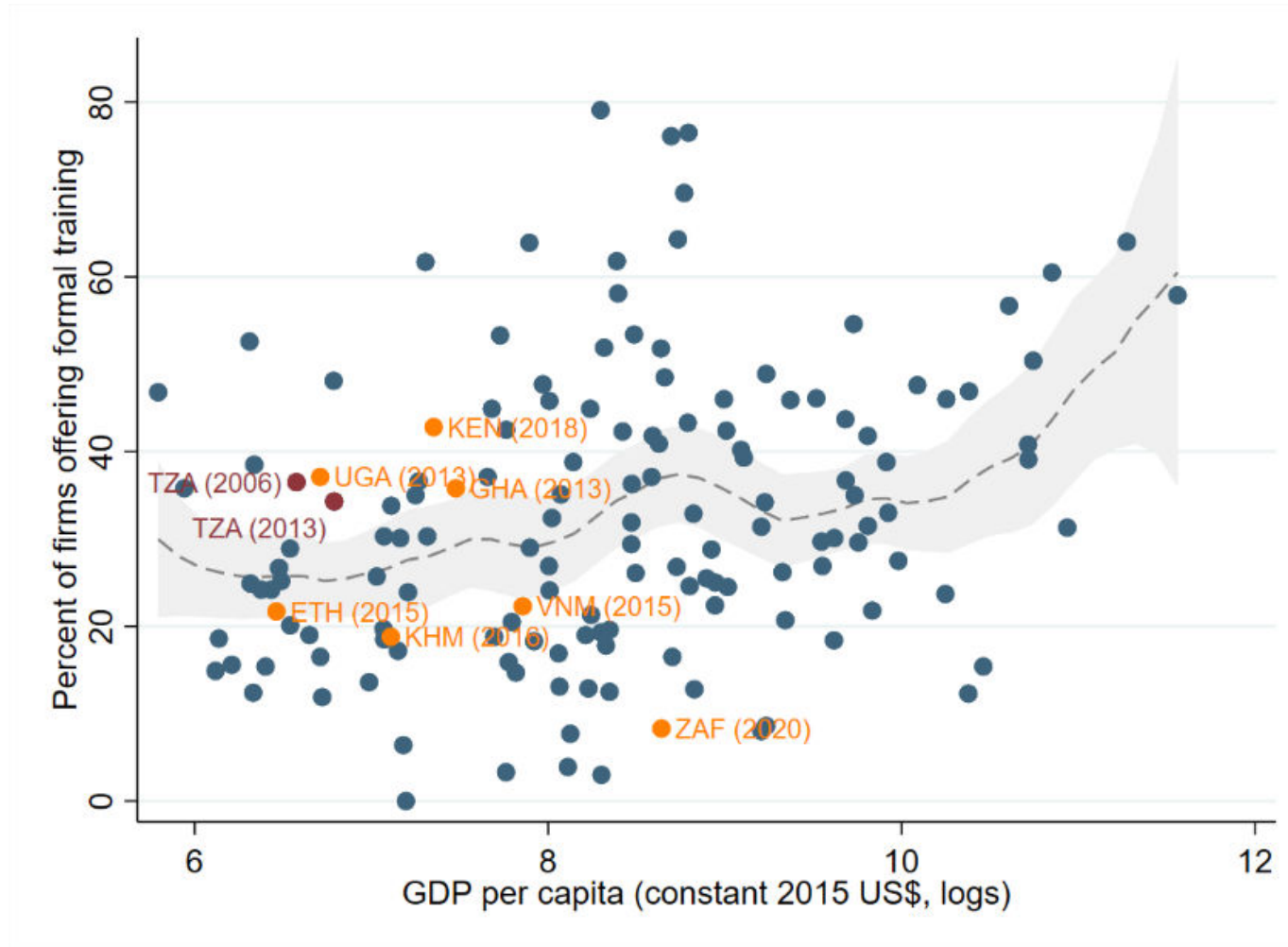
A.- Education supply as years of schooling



B.- Education supply as share of tertiary



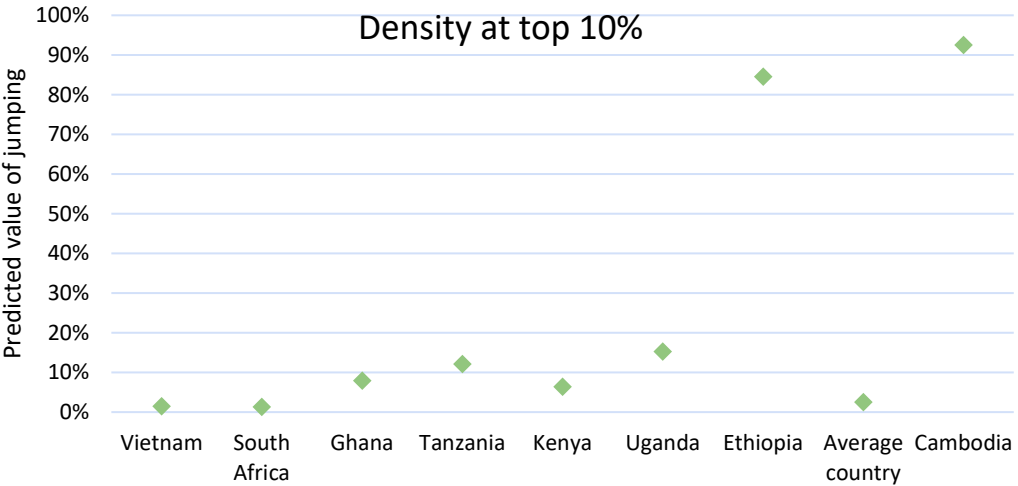
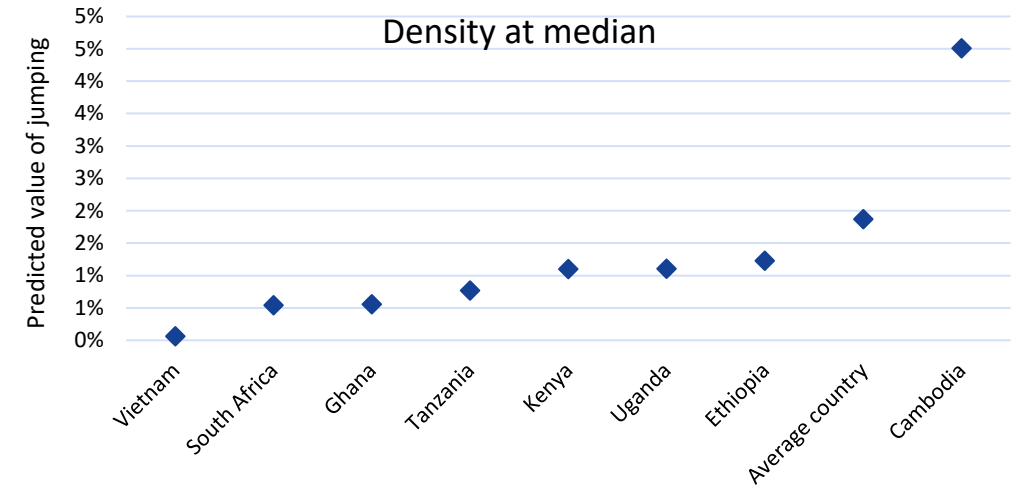
# The proportion of firms offering formal training in the manufacturing sector is higher than expected level given its income, but this proportion has decreased moderately from 2006 to 2013



---

# Coordination failures

# Coordination failures: Tanzania jumped more than the average country to nearby products



Country	Number of products	Export value (USD) 2019 in millions	Average export value (millions) by new product	Export value new products/Total export value 2019
Cambodia	43	2,780.4	64.7	16.6%
Uganda	37	1,478.2	40	65%
Tanzania	35	135	3.9	5.1%
Kenya	32	456.4	14.3	12.8%
Ethiopia	31	131.4	4.2	18.7%
Vietnam	18	10,784.4	599.1	4.9%
Ghana	9	101.4	11.3	1.2%
South Africa	8	240.6	30.1	0.5%



# Policy recommendations