UNIVERSITY OF COPENHAGEN

Enterprise Development in Mozambique - Evidence from two decades.

Project: Inclusive Growth in Mozambique – Scaling-up research and capacity

Conference: Transformation Towards Better Jobs

John Rand, University of Copenhagen

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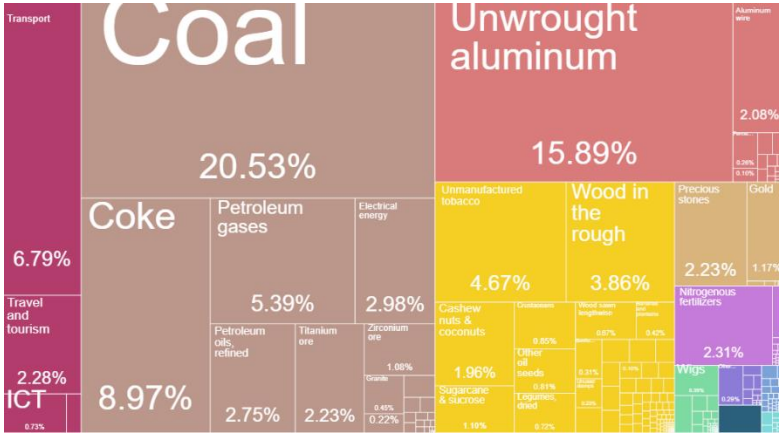
Setting the scene (1)

- Mozambique has **failed to industrialize** and there has been very little manufacturing job creation and growth enhancing structural change.
  - Labor has not moved from lower to higher productivity employment (**lack of structural transformation**).
  - Manufacturing share of GDP has gone from **13% in 2002 to 9% in 2017**. (CEMPRE – 13.3% in 2002 to 8.7% in 2017)
  - Manufactuing exports (as a percentage of total export) remains at 2002 level (**only around 6%**).

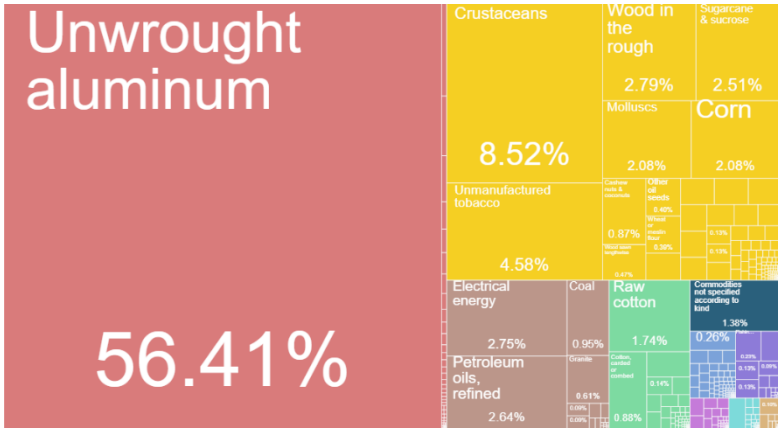
- Structural change (the shift of resources from low to high productivity uses) is needed in Africa (Page, 2012)
  - Can longer-run growth be sustained in absence of structural change.

- Can (and how should) Mozambique industrialize?
  - What can accelerate the shift of labor from low productivity jobs in agriculture and the informal sector to higher productivity jobs in agro-industry, manufacturing or tradable services?

Export composition by product



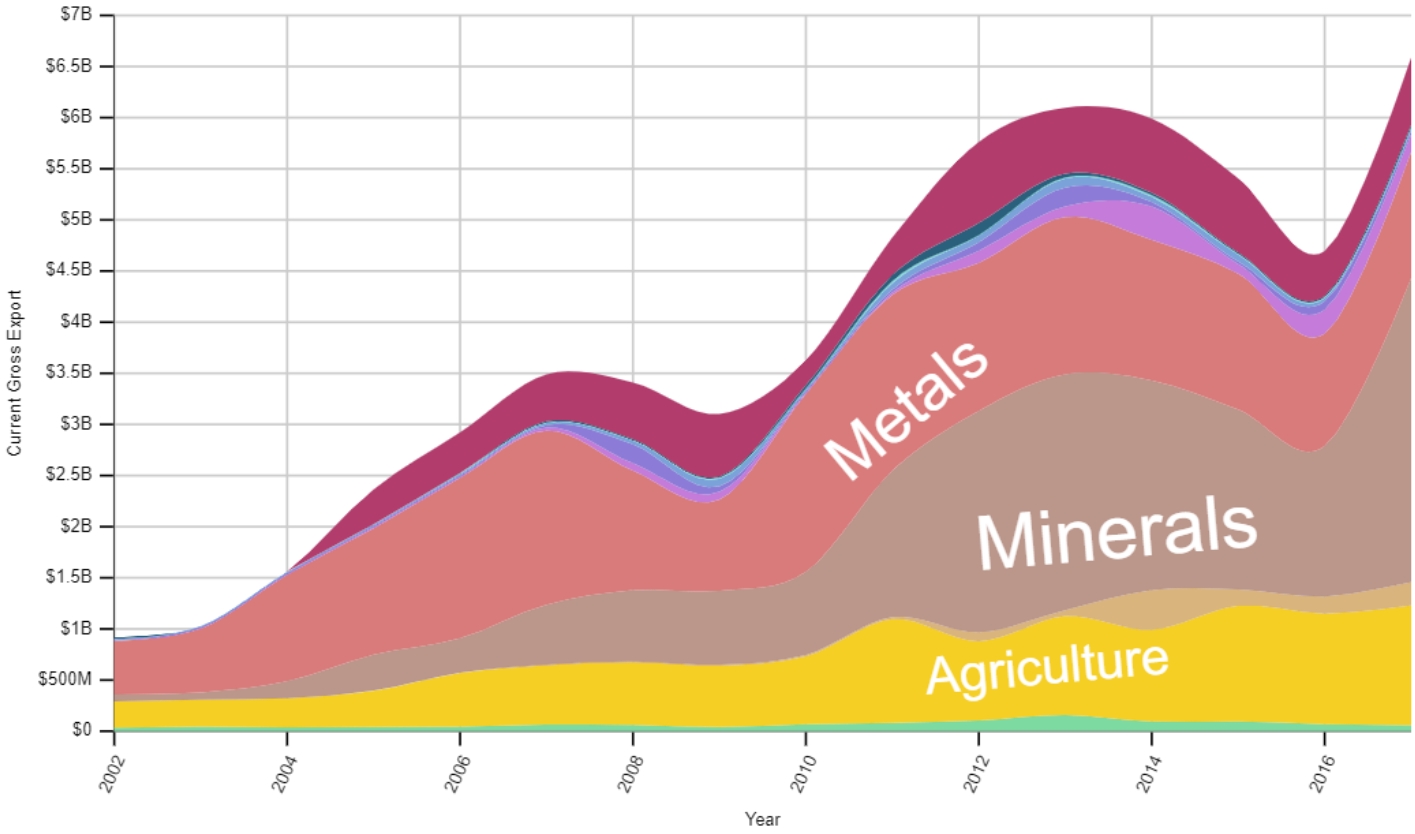
Export composition in 2017



Export composition in 2002

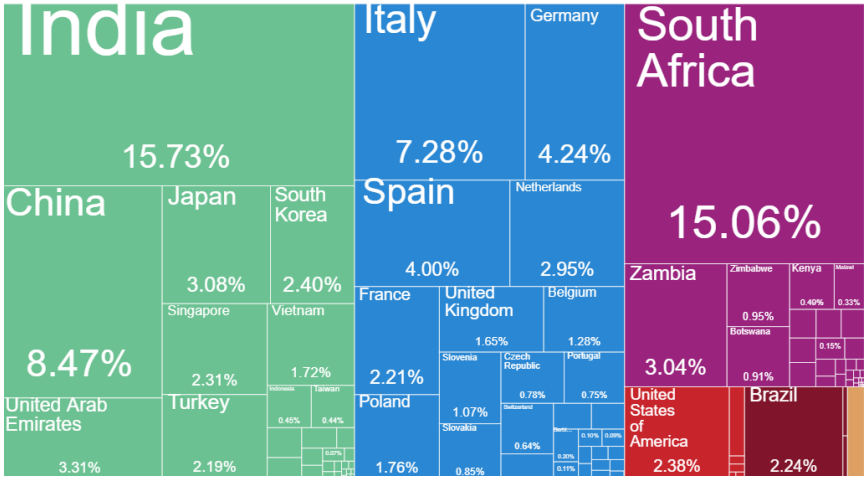
Source: Atlas of Economic Complexity

Export by product 2002 - 2017

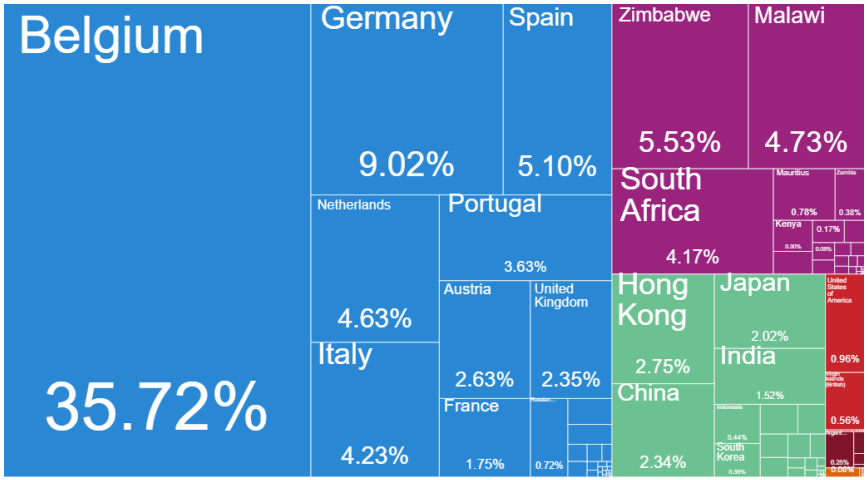


Source: Atlas of Economic Complexity

Export composition by product



Export destination in 2017



Export destination in 2002

Source: Atlas of Economic Complexity

Failure to industrialize during globalization

- Currently Mozambique is **ranked 138** (out of 190) on the Doing Business ranking.
    - Main problem found within:
        - Starting a business.
        - Investor property rights.
        - Getting credit.
        - Contract enforcement.

- Currently Mozambique is **ranked 123** (out of 133) on the Economic Complexity ranking.
    - Since 2002 Mozambique's economy has become less complex the last 15 years.
    - **Lack of diversification** of exports.
    - Troubling pattern of export growth. Largest contribution to export growth coming from **moderate complexity products**.

- A key aspect of the project ”Inclusive Growth in Mozambique – Scaling-up research and capacity” has been trying to understand the lack manufacturing performance and industrial development and in Mozambique over the last 15 years.

The IGM Project

- Collection and analysis of enterprise manufacturing data.
  - ICA (2002/03)
  - DNEAP (2006)
  - WB/ICA (2006/07)
  - IIM (2012)
  - IIM (2017) **collected during this project**
  - WB (2017/18)

- Not panel data, however some firms can be traced from 2002 – 2017 (gazelles???). Forthcoming work.

- Several topics covered (today we focus on):
  - Productivity/Survival and doing business constraints.
  - Learning by exporting
  - Access to credit

Perceived Doing Business Constraints 2002-2017

	2002	2006	2012	2017
Access to finance and cost of credit	83.6	72.4	55.9	61.0
Access to land	26.7	18.3	51.5	47.1
General corruption	**64.4**	**45.3**	**47.3**	**61.2**
Crime, theft and disorder	**54.4**	**34.4**	**45.8**	**55.7**
Macroeconomic instability (inflation, exch. rate)	**63.0**	**63.0**	**43.7**	**78.6**
Customs and trade regulation administration	**49.4**	**37.8**	**43.5**	**32.8**
Anti-competitive practices (e.g. monopoly	60.4	32.4	41.4	44.5
Tax rates	54.9	49.7	32.9	48.9
Tax administration	47.3	35.3	31.6	41.4
Transportation	27.3	25.7	31.2	42.5
Skills and education of workers	**33.9**	**35.7**	**28.6**	**34.1**
Labor regulations	**37.9**	**48.4**	**28.5**	**35.7**
Electricity	64.7	46.2	21.8	49.6

Note: Factors problematic for the operation and growth of businesses (per cent having responded “major obstacle” or “serious obstacle”).

Productivity and Survival (1)

- Productivity and survival are important indicators of manufacturing sector performance and competitiveness.

- Only few productivity studies for Mozambique exist.
  - TFP growth can be explained by changes in capacity utilization. Concern about sustaining strong productivity growth as Mozambique approaches its technology frontier.
  - **Mozambican manufacturing has one of the lowest production efficiency levels in Sub-Saharan Africa** - many inefficient firms are able to survive in the manufacturing sector. (limited creative destruction).
  - Entry barriers (limited entry) and survival rates very high compared to the level of development.

- Our studies: Updated data 2002-2017.
  - All firm observed at least twice during the period.
  - Consistent estimates of technical efficiency applying a fixed effects stochastic frontier model.
  - Consistent analysis of the association between firm efficiency and constraints to doing business.

Productivity and Survival (2)

- "Mid-size" firms are found to have a lower survival rate than those at the lower and upper ends of the size scale. Missing middle???
- Demand uncertainty an issue for "mid-size" firm survival. (contract enforcement problems)
- Technical efficiency levels are not lower than average, when controlling for time-invariant fixed-effects. (entrepreneurial ability) are important.
- Entrepreneurial ability a serious concern, and natural market based selection does not seem to work in the case of Mozambican manufacturing.
- Results support findings by Warren (2010)

"*Given the skill-level and technology at hand, firms are producing relatively efficiently and improving productivity, but the limited level of (entrepreneurial) knowledge and simple production systems are insufficient to support a process of sustained technology and industrial development*"

Learning-By-Exporting (1)

- Very few manufacturing firms export, and export participation is highly persistent. **Born Globals!**

- **Methodological concern**: Observing a positive association between firm level productivity and export participation does not necessarily mean that LBE is taking place.
    - The positive correlation may be driven by self-selection of more productive firms into export markets.
    - Entry often comes at an extra cost (marketing, networking, licensing, administrative barriers etc.), which the more productive/capable firms are most likely to cope with.
    - Moreover, since export markets are more competitive than domestic markets, it may also be harder for less productive firms to enter in the first place.
    - It should also be noted that LBE and self-selection are not mutually exclusive, and higher efficiency producers entering foreign markets may also improve productivity even faster than domestic firms post entry.

Context – Who are exporters

Carpenter in Matuto, Mozambique

Furniture producer in Maputo, Mozambique

Context – Who are exporters

Carpenter in Matuto, Mozambique - Micro Informal

Furniture producer in Maputo, Mozambique – Micro formal exporter (to RSA), but employees are informal

Learning-By-Exporting (2)

- Introduced by self-selection by combining a generalized **Blinder-Oaxaca approach** with results from traditional matching techniques.

- The BO method essentially identifies two components of the unconditional labor productivity gap, i.e., the difference between labor productivity of firms exporting and of firms not exporting, respectively.
  - The first component of the decomposition measures the importance of differences in observable characteristics between exporters and non-exporters ("characteristics effect").
  - The second component measures the importance of differences in parameters for the two groups. This captures the variation in the returns to the characteristics between exporters and non-exporters. ("coefficient effect" or the unexplained component).

Learning-By-Exporting (3)

- Evidence supporting the learning-by-exporting hypothesis
- Export premium of approximately **20 percent**, controlling for differences in observable characteristics between exporters and non-exporters.
- Qualitative information on exporters suggest that many firms are Born Globals, but that the owners and managers are not Born Globals.
    - Can we analyze the LBE at the firm level or should it be done at the entrepreneurial level?

Access to Credit (1)

- Claim: Limited credit access is could be a serious constraint to future growth and development of the private sector in Mozambique.
    - What does the data say? Analysis done using both World Bank and IIM surveys.

- Only 10 (in 2002), 13 (in 2006), 14 (in 2012) and 13 (in 2017) percent of firms have obtained credit from the banking sector (relatively constant over time).

- In 2002, over 40% of the sample were credit constrained using standard definitions (see Byiers et al, 2010). This fell for a comparable sample to 22% in 2006, 19% in 2012 and 19% in 2017.
    - Credit remains an important constraint, but the subjective evaluation likely overstates the real extent of credit constraints faced by the manufacturing sector.

Access to Credit (2)

- Especially small firms stay out of the credit market due to high interest rates.
- Keeping external audited accounting books seem as an especially efficient tool to reduce credit constraints.
- Informal credit market not able to compensate for formal financial market failures
- Trade credits are starting to play an increasingly important role as substitute for the lack of formal sector banking credit.

Conclusion

- Can (and how should) Mozambique industrialize?

- What we know (or think we know ☺):
  - Misallocation/inefficiencies not as bad as earlier studies claim.
  - Skills are at very low levels. Entrepreneurial and worker capacity upgrading needed? But how?
  - Export led strategy – Maybe even FDI-led?
    - BUT - EC conclusion: Mozambique needs to consider a "Strategic Bet Approach" - Few nearby opportunities in the product space call for coordinated **long jumps** into **strategic areas** with future diversification potential.

- What we want to know:
  - Entreprenerial versus worker capacity effects
  - Role of clusters/agglomeration initiatives
  - Characteristics of "gazelles"