Industry in Tanzania
Performance, Prospects, and Public Policy

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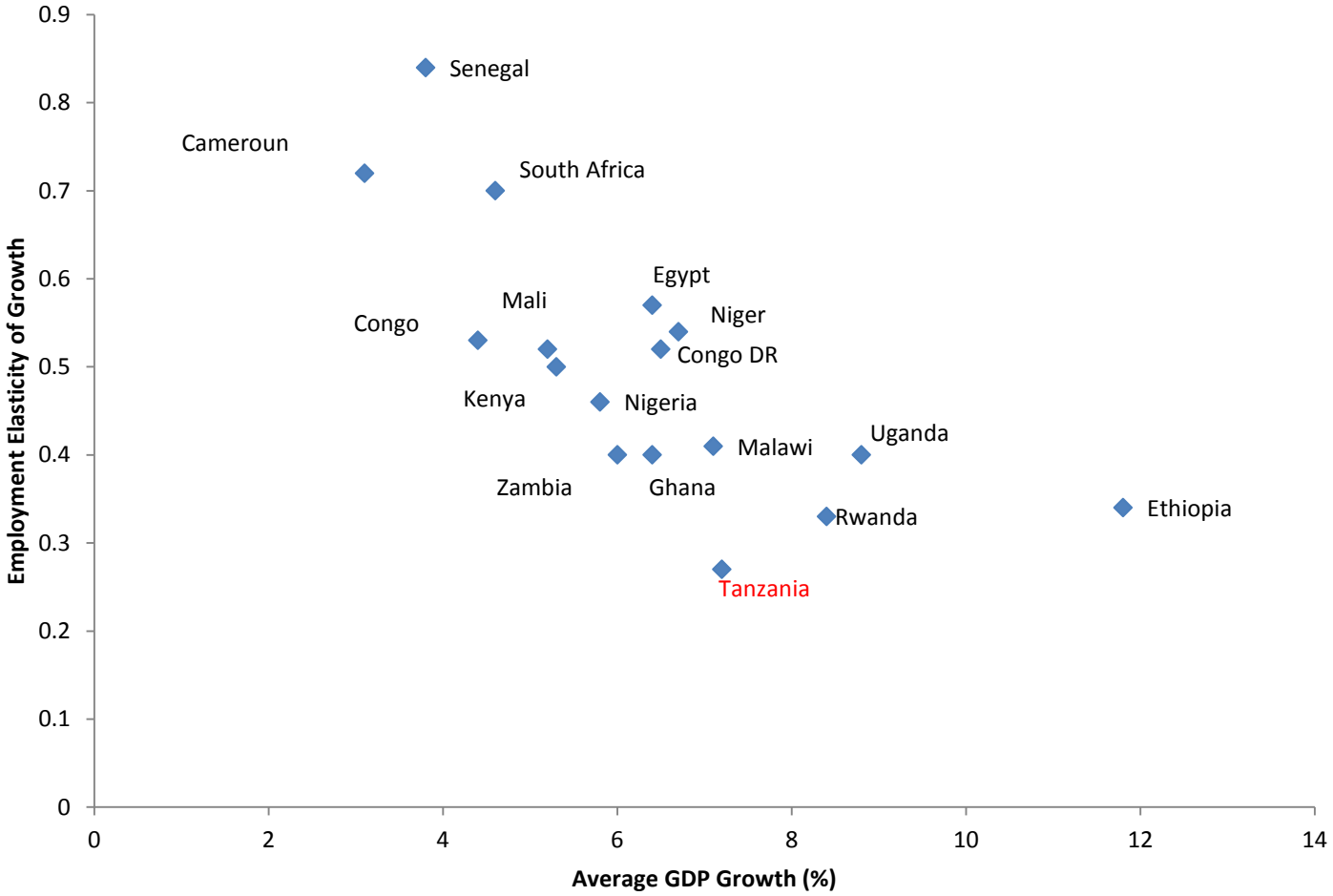
An Impressive Record with Some Concerns

- Tanzania ranks among the leading stars of the 'African growth miracle'.
  - Since 2000 5–7 per cent annual growth of GDP
- Some "consumer warnings."
  - the Tanzanian economy has added fewer 'good' jobs—those paying decent wages and offering some security of employment—than would be expected
  - Tanzania's rapid economic growth has not translated into correspondingly rapid reductions in poverty.

Why Structural Change Matters

Employment Elasticities and Growth in Africa



Structural Change in Tanzania

- Tanzania has only recently begun to experience significant structural change (McMillan et al. 2013).
- Between 2000 and 2010
  - the share of the labor force in agriculture declined from 86.1 per cent to 73.4 per cent.
  - the share of the total labor force in services rose from 11.3 to 20.6 per cent
  - the share of the labor force in manufacturing increased from 1.4 to 2.7 per cent
- Relative to international benchmarks, manufacturing is very small.

Benchmarking Tanzania's Manufacturing Deficit

Country	Share of Labour Force			
	Agriculture	Manufacturing	Other Industry	Services
Least Developed Country Benchmark (US$700)	70.0	9.0	3.0	18.0
Low-income Benchmark (US$1100)	60.9	11.5	2.9	24.7
Lower Middle-income Benchmark (US$1500)	57.9	13.7	3.0	25.4
Upper Middle-income Benchmark (US$4200)	14.0	25.0	4.0	57.0
Africa Average 2010	49.8	8.3	5.1	36.8
Tanzania 2005	76.7	2.1	2.7	18.5
Tanzania 2010	73.4	2.7	3.3	20.6

Notes: Least developed country benchmark: BGD (1994), CAM (1996), CHN (1987), IND (1989), IDN (1982), VNM (1992);

Low-income benchmark: BGD (2003), CAM (2002), CHN (1992), IND (1994), IDN (1986), THL (1980),
VNM (1996);

Transitioning economies benchmark: CAM (2005), CHN (1995), IND (2000), IDN (1992), PHL (1982),
THL (1985), VNM (2001);

Middle-income benchmark: CHL (2003), KOR (1993), MYS (2004).

Why Structural Change Matters

- Five million non-farm businesses operate in Tanzania. (one for every four people),
  - four times higher than in the United States and ten times higher than in France (World Bank 2014a).
- The vast majority of these enterprises are in the household sector.
  - Between 2000/01 and 2006 employment in the household enterprise sector grew by 13 per cent, exceeding the overall change in the labor force and the growth of wage employment.
- More than two-thirds of these household enterprises in urban areas were formed because of lack of any other job opportunities (Kweka and Fox 2011).

Structural Change and Poverty

- Tanzania's growth elasticity of extreme poverty is less than 0.5,
  - low compared to estimates of 1.6 to 2.5 found in the cross-country literature (Fosu 2011).
- The slow pace of structural change is partly responsible
  - Had the share of labor in manufacturing been at the benchmark poverty would have been 12% lower

Table 4: Structural change and poverty simulations

Country	Observed poverty headcount	Simulated poverty headcount	Percentage change in headcount
Ethiopia 2005	41.6	39.7	-4.6
Malawi 2011	65.6	63.5	-3.2
Mali 2005	47.4	47.4	0.0
Rwanda 2005	52.8	48.5	-8.1
Tanzania 2007	62.6	55.2	-11.8
Uganda 2005	36.2	34.0	-6.1
Zambia 2003	64.9	63.4	-2.3
Ghana 2005	22.6	22.9	1.3
Nigeria 2010	66.8	66.6	-0.0
Senegal 2005	31.1	40.3	29.6
Botswana 2005	34.4	30.7	-10.8
South Africa 2006	15.9	11.6	-27.0

Source: Author's calculations as described in text.

The Formal Industrial Sector

- Formal manufacturing has grown significantly in the last decade.
  - Between 2000 and 2010, manufacturing value added (MVA) more than doubled in real terms from US$894 million to US$1,992 million (UNIDO 2012).
  - Since 2010 growth of the manufacturing sector has continued to outpace overall GDP growth,
- But indicators of industrial dynamism are still quite low.

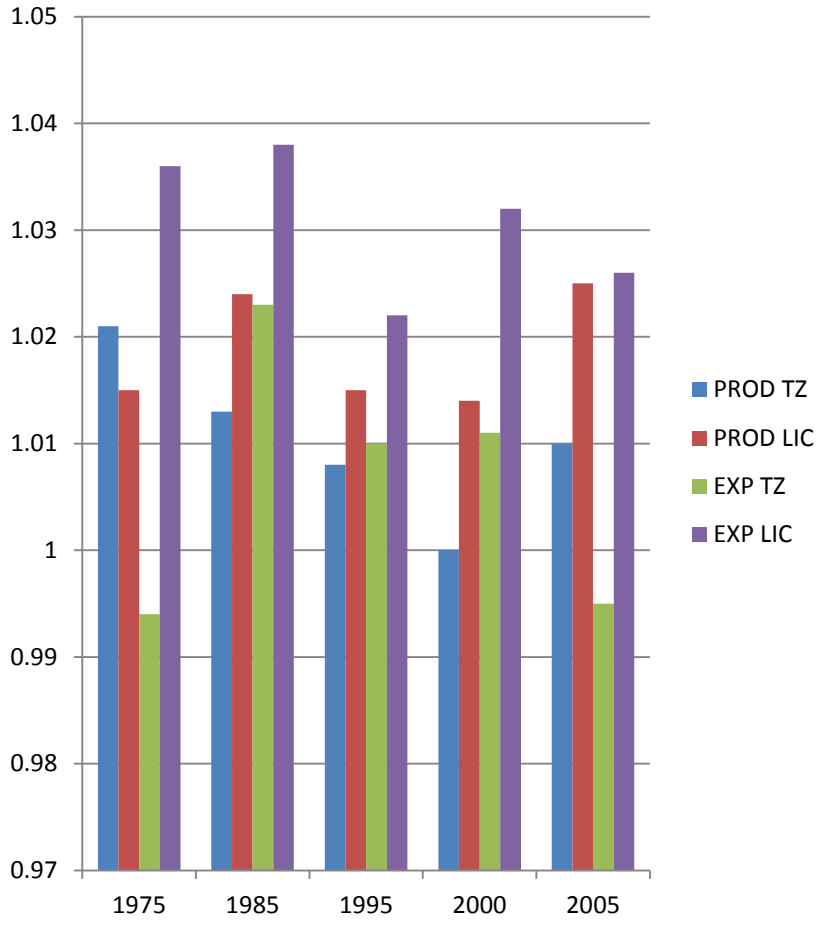
The Formal Industrial Sector

Indicators of Industrial Development

	Manufacturing Value added per capita (US$)			Medium and high technology share of manufacturing production (%)			Manufactured exports per capita (US$)			Share of manufactured exports in total exports (%)			Share of medium and high technology exports in total manufactured exports (%)		
	2000	2006	2010	2000	2006	2010	2000	2006	2010	2000	2006	2010	2000	2006	2010
Tanzania	18	24	40	12.4	12.4	12.0	7	10	43	37.0	26.0	42.3	3.9	11.3	16.7
SSA	28	33	35	7.4	14.4	15.0	23	40	40	25.0	24.0	24.0	8.9	18.2	20.8
Low-income countries	--	48	61	--	20.7	20.7	--	83	71	--	61.0	56.0	--	16.2	25.0

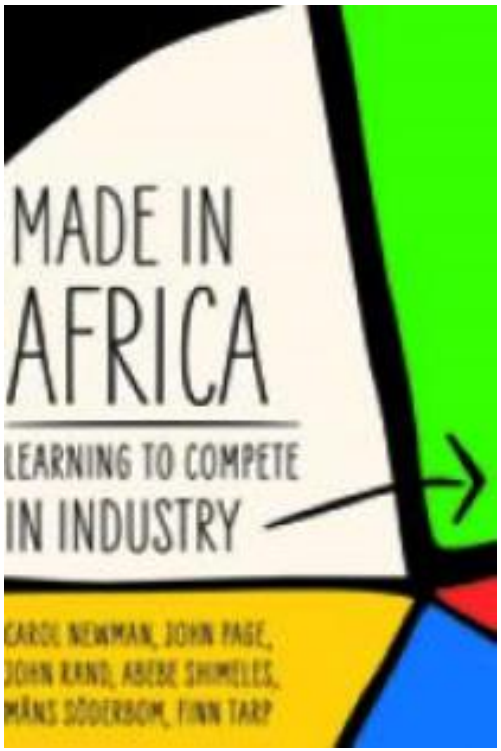
Production and Export Sophistication Has Declined

- Manufacturing is concentrated in a few low-tech sectors (UNIDO 2012).
- The share of medium and high-technology products in total manufacturing output was about 12 per cent in 2011, below the Africa-wide average.
- Tanzania's industrial sector has become less sophisticated over time.



Learning to Compete

- A Collaborative Research Program of The African Development Bank, The Brookings Institution, and UNU – WIDER
- Trying to Answer a Simple Question:
  - Why is there so little industry in Africa?
- Lead to two others:
  - What makes firms more competitive?
  - What makes countries more attractive to competitive firms



Three Drivers of Competitiveness

- Exports and competition
  - Firms in low income countries increase their productivity by exporting
  - Competition increases productivity through entry and exit
- Firm capabilities
  - The tacit knowledge and working practices that affect both productivity and quality
  - Capabilities can spill over to other firms through supply chain links
- Agglomerations
  - Industrial clusters confer significant productivity gains
  - Virtually everything we know about agglomeration economies comes from middle and high income countries

Manufactured Exports

- Tanzania has had the most rapid growth of manufactured exports among its East African neighbors (UNIDO 2012).
  - Manufactured exports per capita increased from US$3 in 2000 to US$43 in 2010
- Sale of new products to traditional destinations and finding new customers for traditional products (extensive growth) have accounted for 95 per cent of the net growth in manufactured exports
- Regional exports in East Africa accounted about half of the growth in the extensive margin

	Intensive Margin				Extensive Margin			
Destination	Growth in existing product to current destination	Reduction in existing product to current destination	Extinction of existing product to current destination	Total intensive margin	New products in current destination	New destination of existing products	New products to new destination	Total extensive margin
Tanzania								
All	54.7%	-6.9%	-9.9%	37.9%	31.1%	30.2%	0.7%	62.1%
Manuf.	6.9%	-2.9%	-3.1%	1.0%	12.6%	6.1%	0.7%	19.4%
on Manuf.	47.7%	-4.0%	-6.9%	36.9%	18.0%	6.4%	0.0%	24.4%

Source: Regolo (2012).

Firm Capabilities

- Tanzania lacks capable mid sized firms (50-70 workers)
  - Management of a growing labor force is a major constraint
- Firms learn capabilities from exporting
  - The positive relationship between exporting and productivity is mainly due to process and quality innovations undertaken by firms
- Firm to firm knowledge transfers are an important source of capabilities
  - FDI is a major source of higher capabilities
  - Vertical linkages along supply chains are sparse in Tanzania

Industrial Clusters

- SEZs are a means of creating clusters
- Tanzania is a relative latecomer to the use of SEZs
  - The government has allocated 13 sites for SEZs, but only one, the Benjamin William Mkapa Special Economic Zone in Dar es Salaam, is operated as an SEZ
- In total Tanzania's SEZs contain about 40 firms, (employing around 10,000 people).
  - SEZs in the Dominican Republic contain more than 550 firms; Viet Nam has 3,500 firms in its export processing and industrial zones (Farole 2011).
- Firms in Tanzania's EPZs have the lowest export orientation among a sample of African countries studied by the World Bank (Farole 2011).

New Directions for Industrial Policy
An Industrial Development Strategy

- Public policy in Tanzania has focused on the "investment climate"
- Investment climate reforms are necessary but not sufficient
  - Drivers of firm-level productivity are interdependent
- Exports, geography and capabilities must be linked strategically
  - They cannot be addressed piecemeal

New Directions for Industrial Policy Mounting an "Export Push"

- Productivity gains but high private costs of entry
  - Knowledge of potential markets' is the most serious constraint for international market entry.
- Entering global markets will need an "East Asian style" export push
  - A broadly owned strategy and effective institutions (leadership from the top)
  - Trade related infrastructure and trade logistics

Comparison of Port Efficiency: Dar es Salaam and Mombasa

Containers								
Indicators:		Waiting time at anchorage	Cargo dwell time	Gross berth productivity	Cost/price for shipping companies	Cost/price for shippers	Total cost	Total cost
Unit:		days	days	MpH	USD per TEU	USD per TEU	USD per TEU	USD per Ton
Dar Es Salaam	Exports	none	6	14	118.2	263.0	381.2	29.9
	Imports	10	10	14	118.2	366.8	485.0	38.1
	Import transit	10	17	14	118.2	320.0	438.2	34.4
Mombasa	Exports	0	4	18	128.9	150.0	278.9	21.9
	Imports	0	4	18	128.9	150.0	278.9	21.9
	Import transit	0	9	18	128.9	132.0	260.9	20.5

New Directions for Industrial Policy Building Firm Capabilities

- An export push is a major source of capabilities (demanding buyers; repeated relationships)
- Build an effective FDI agency
- Strengthen domestic value chain relationships
  - Leverage natural resources
- New approaches to management training
  - Start small and evaluate

New Directions for Industrial Policy Supporting Industrial Clusters

- Bring Tanzania's SEZs up to world class
  - Infrastructure
  - Institutions
- New zones should be located close to suppliers and customers.
- Encourage linkages between zone-based firms and other domestic firms

	Tanzania	Average Africa Sample	Average Non Africa Sample
Power Outages (in hours downtime)			
Within SEZ	50	44	4
Outside SEZ	95	90	46
Import Customs Clearance Times (in days)			
Within SEZ	19	7.1	3.4
Outside SEZ	14	10.3	11.0