The trajectories and challenges of industrialisation in Tanzania. Evidence from firms

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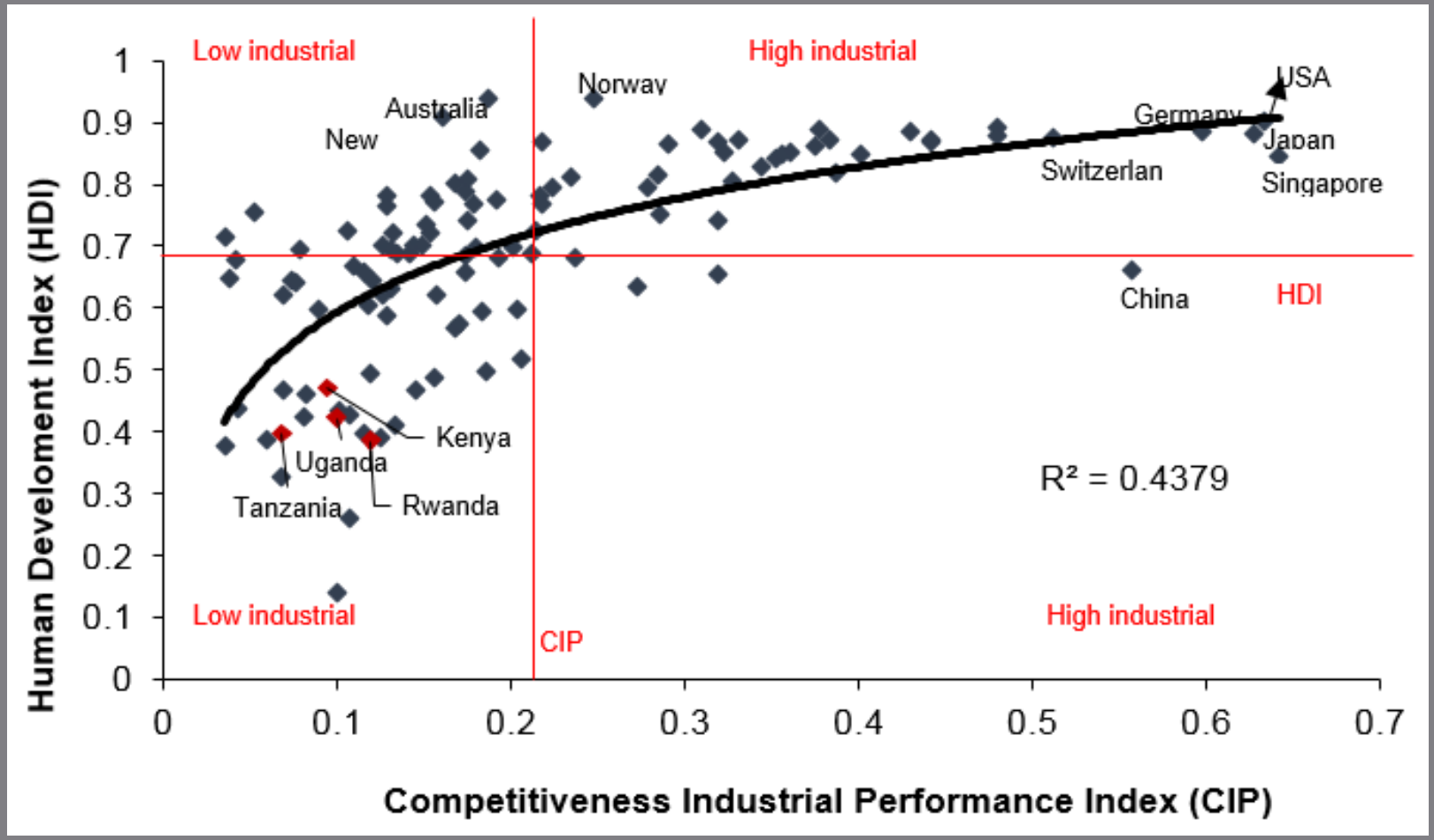
Development as production transformation



Data source: INDSTAT and UNCOMTRADE; See EAC Industrial Competitiveness Report 2017

Setting the scene

Rediscovery that development is about production transformation

- New wave of industrial policy across Africa (e.g. Tanzania 5YDP)
- The recognition in the global policy arena SDG Agenda (G 8 & 9)
- **New industrialisation challenges in a fast-changing competitive setting in the era of global production**

The Global/African context

- Since the mid-1990s, the African continent has experienced an **increasing integration into Global Value Chains (GVCs),** mainly led by the penetration (investment and value extraction) of Transnational Corporations (TNCs).
- More recently, **emergence of major regional and continental players** and rise in domestic demand boosted intra-African and regional trade.

Presentation outline

1. **Does global value chain integration deliver ‘quality of growth’, defined as both economic and social upgrading in Africa?**
2. **Tanzania/Regional Focus: What are the industrialisation trajectories and challenges in Tanzania? How is Tanzania performing in Regional Markets?**
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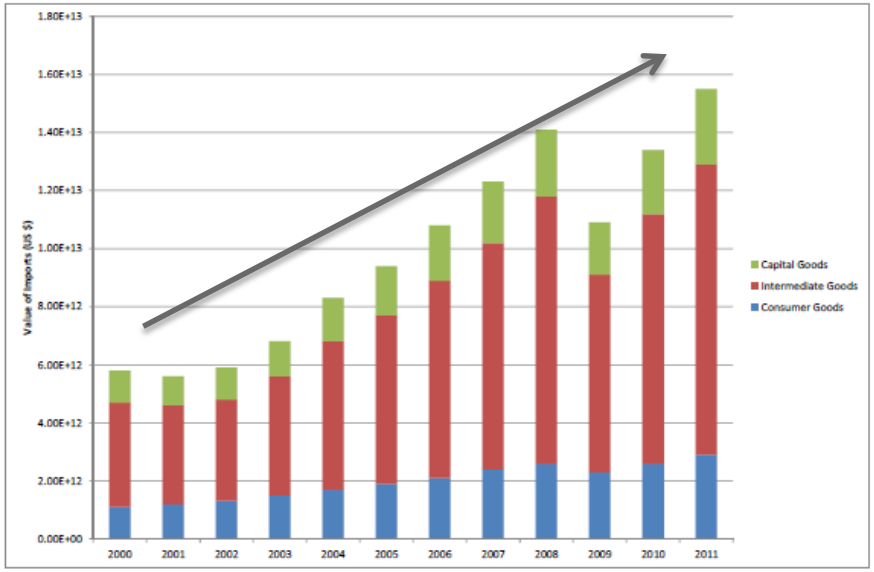
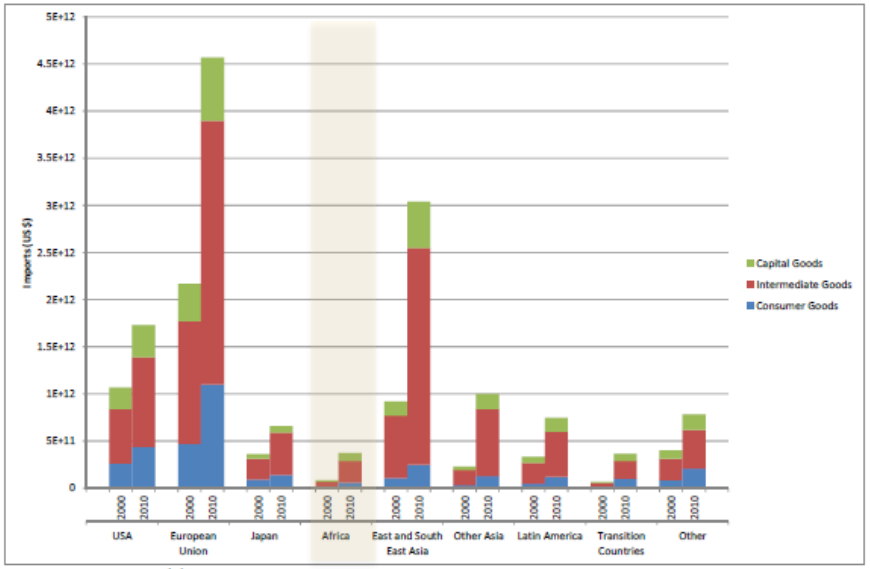
5. **The political economy of industrialisation (ACE: Anti-Corruption Evidence, a research agenda)**

Africa is integrating in world trade and GVCs

- **Increasing value of world imports** (with intermediate goods making up 65% of world imports in 2011)



Source: UN COMTRADE



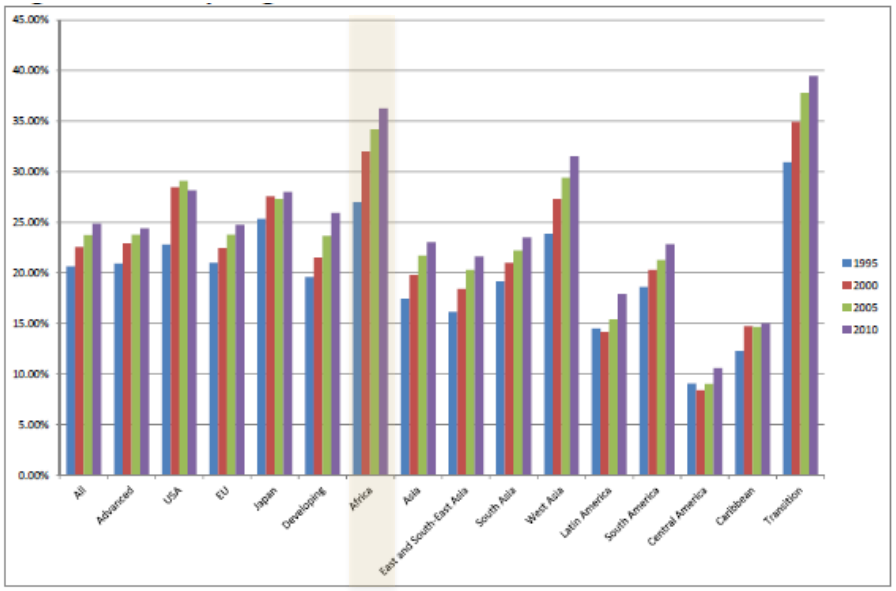
Source: UN COMTRADE

See: Foster-McGregor et al, 2016

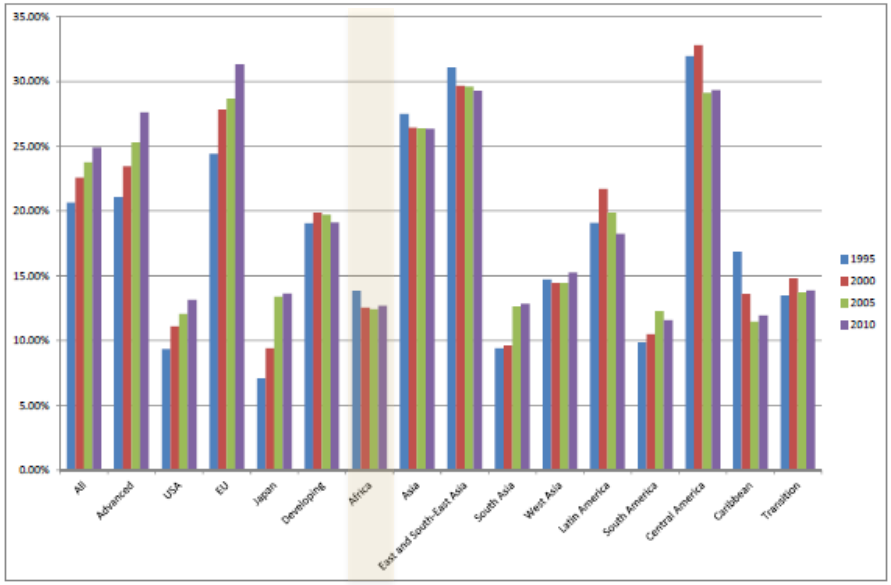
But mainly upstream integration in GVC

Much of Africa's participation in GVCs is in upstream production, with **firms in Africa providing primary products and simple manufactures to firms in countries further down the value chain (as a result very small value contribution, just 1% of foreign VA)**

Mainly upstream integration



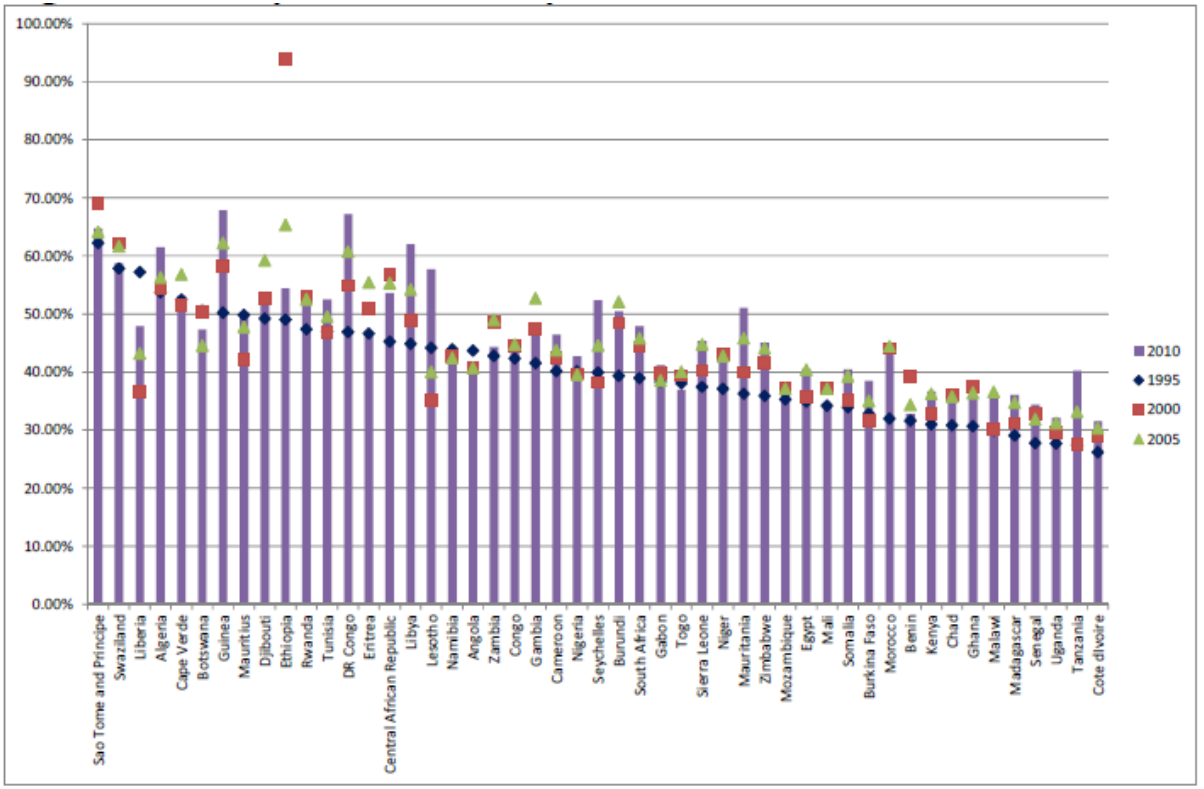
Limited downstream integration, and little signs of increasing since 1995



Data source: UNCOMTRADE-Eora GVC Data; See: Foster-McGregor et al, 2016

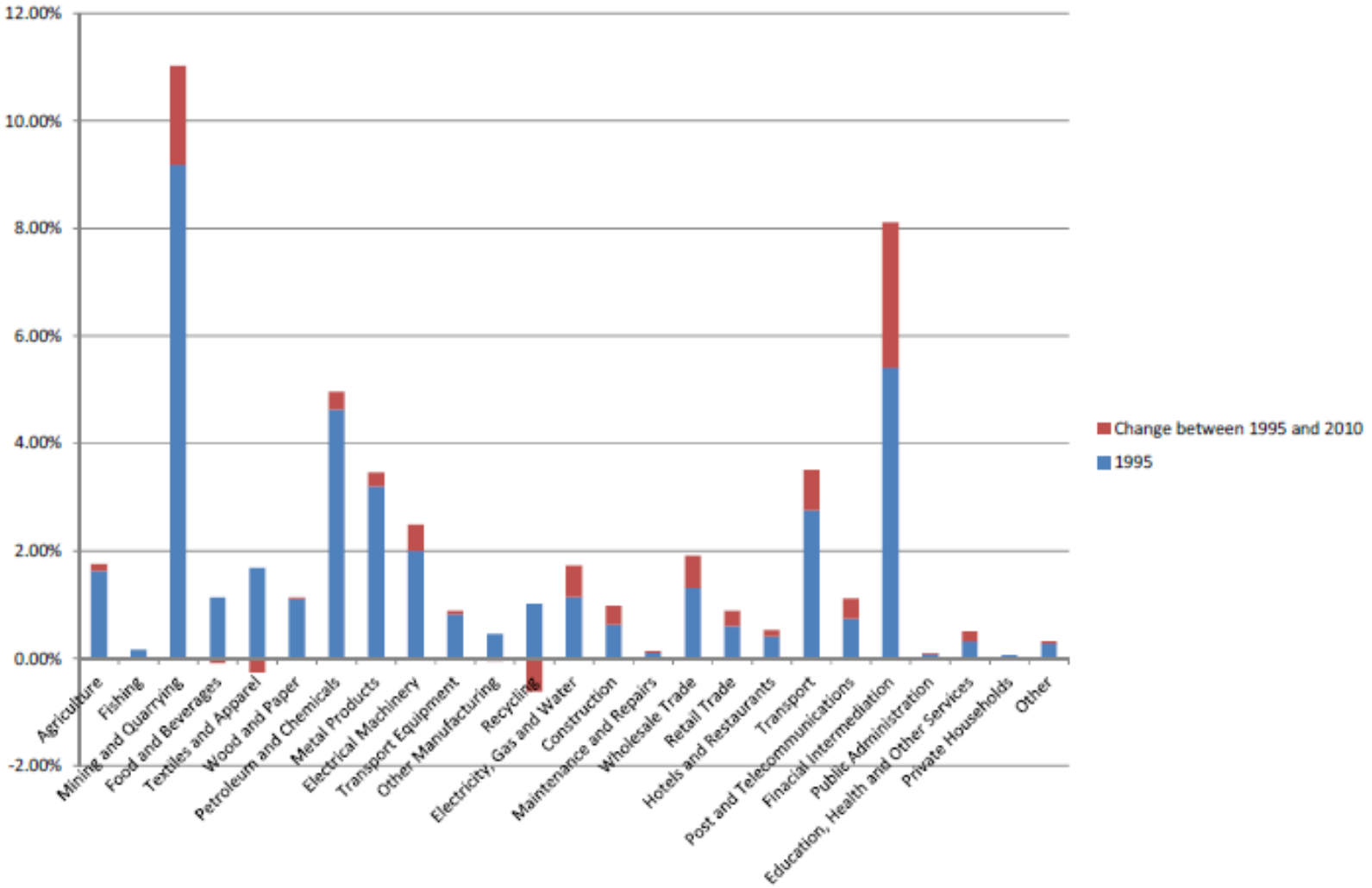
The evidence (3): different integration pathways across countries

Some countries including **Mauritius, Botswana, Ethiopia, Kenya and Tanzania** have been able to move **into downstream production**, reporting shares of downstream production in total GVC involvement of 50% or more in 2010.



Data source: UNCOMTRADE-Eora GVC Data; See: Foster-McGregor et al, 2016

…and limited increase in VA across sectors



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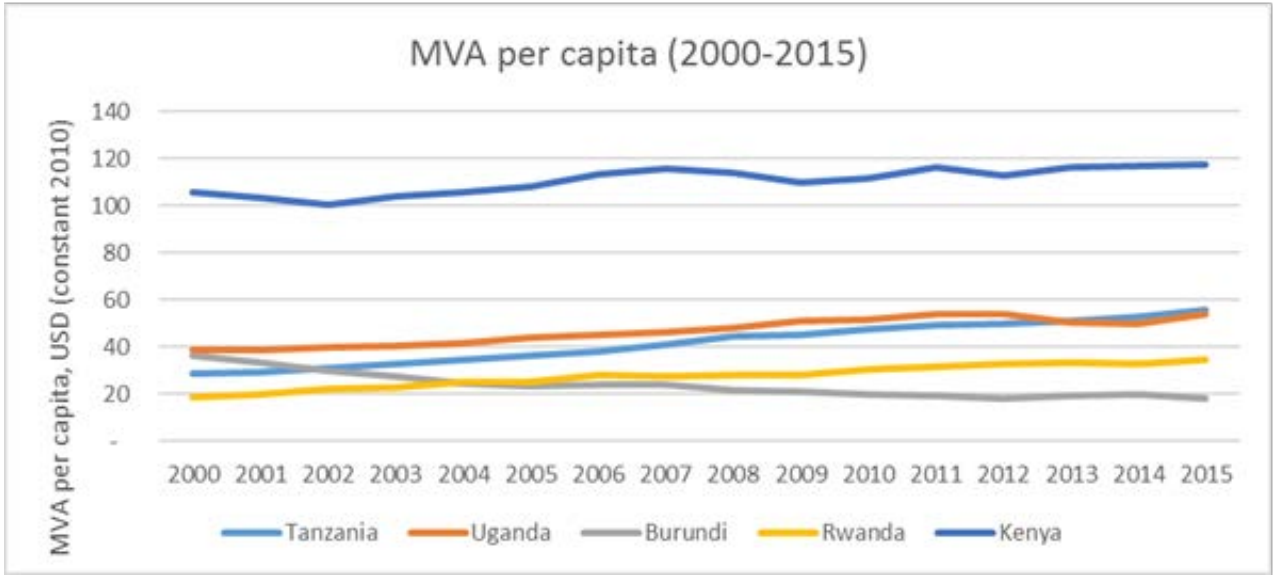
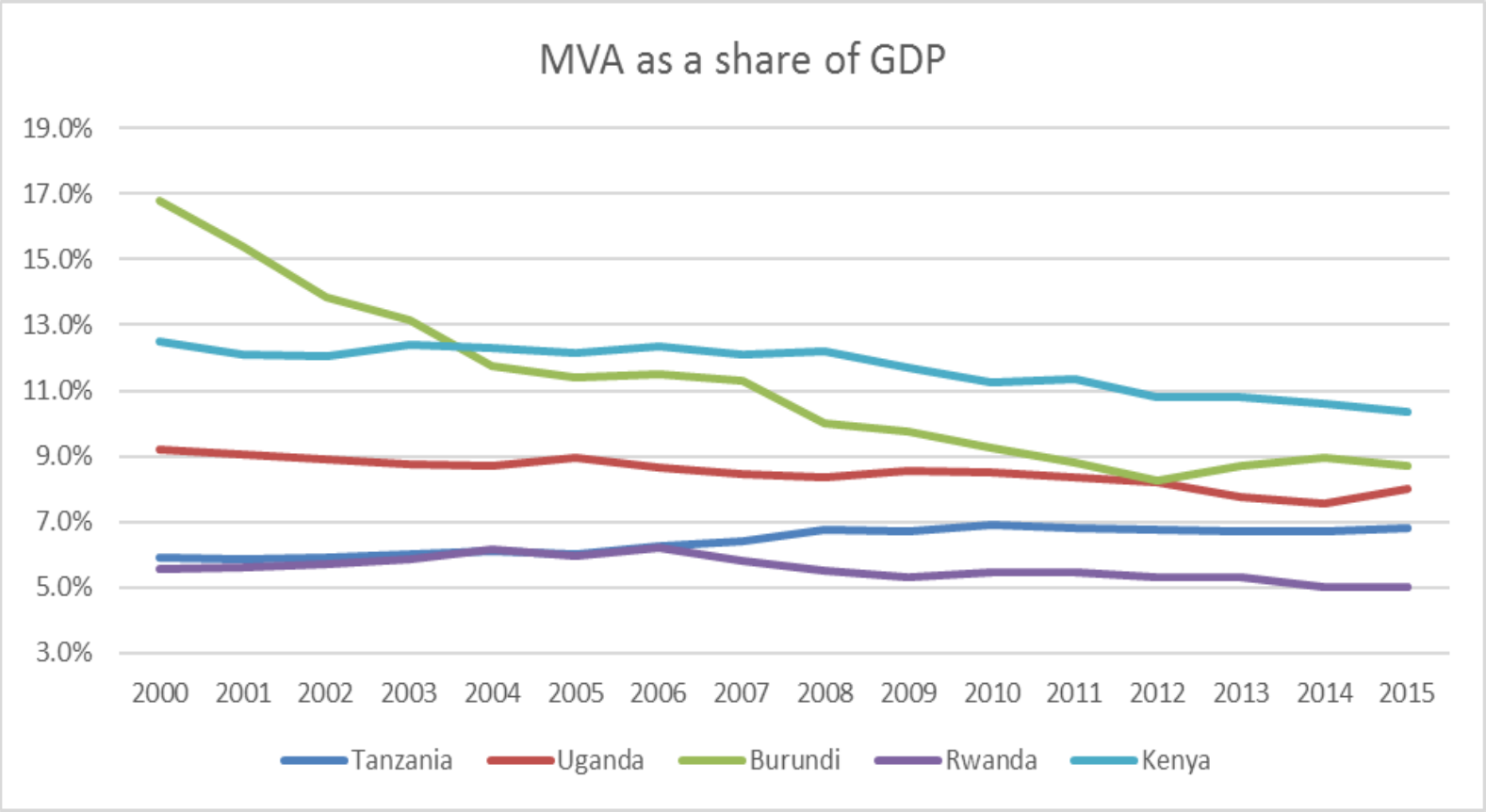
Tanzania industrialisation trajectory in EAC: fast growth rate



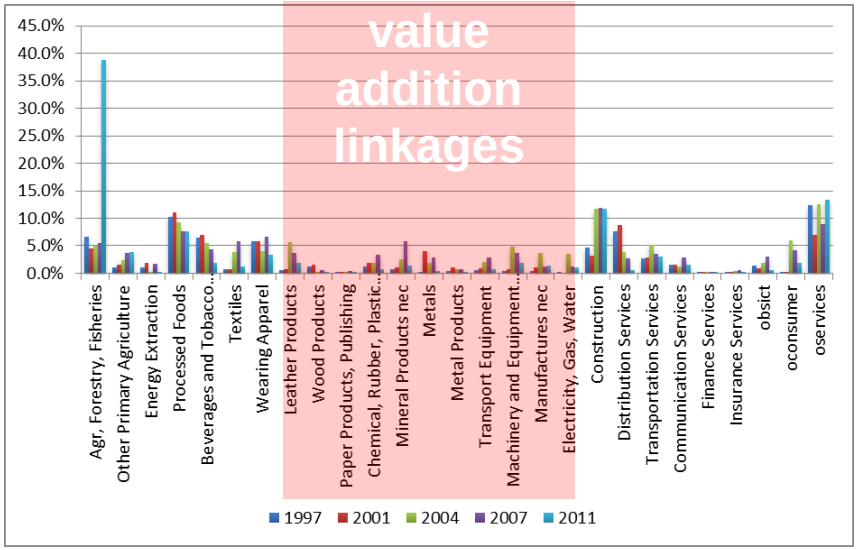
	Value (USD)	MVA Growth rate				
	2015	2000-2015	2000-2005	2005-2010	2010-2015	2014-2015
Kenya	5,413,528,416	3.4%	3.1%	3.4%	3.8%	3.5%
Tanzania	2,988,029,222	7.7%	7.5%	9.0%	6.7%	9.0%
Uganda	2,101,899,669	5.7%	6.1%	6.9%	4.1%	11.0%
Rwanda	402,361,853	6.9%	9.0%	6.3%	5.3%	7.6%
Burundi	204,028,823	-1.2%	-5.4%	0.3%	1.7%	-5.4%

Structural change: weak industrialisation in EAC

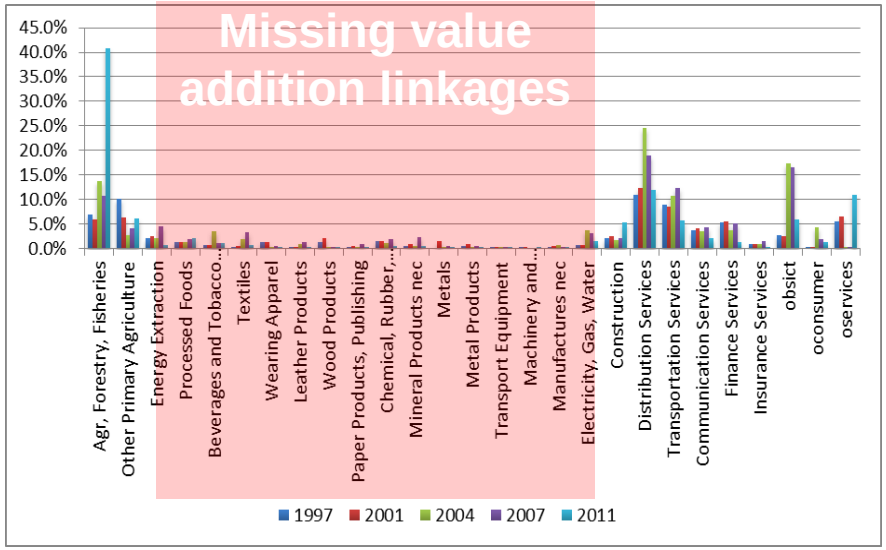


Domestic linkages for Tanzania (1997 – 2011, relative to total sectoral value)

Backward linkages:
from Tanzania economy to a specific sector

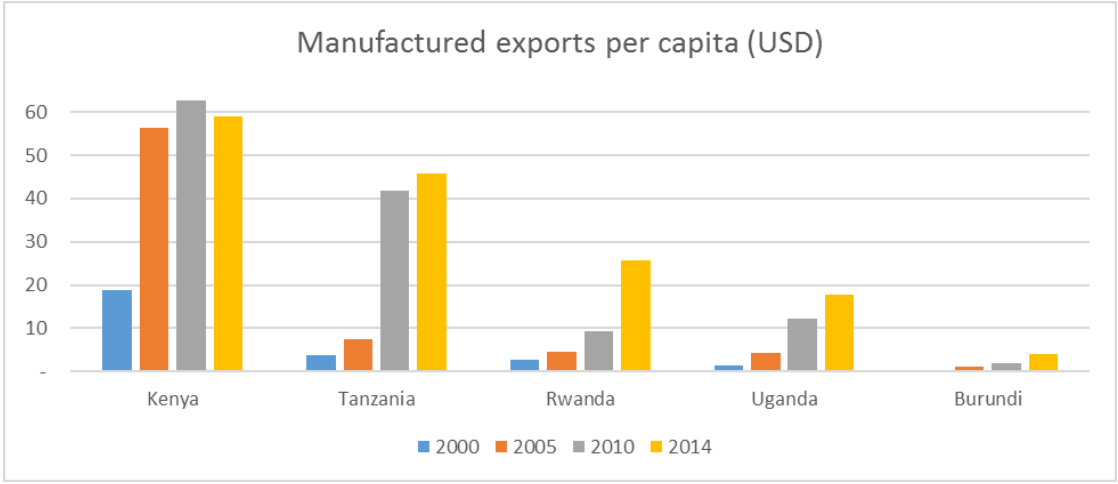


Forward linkages:
from one specific sector to Tanzania economy



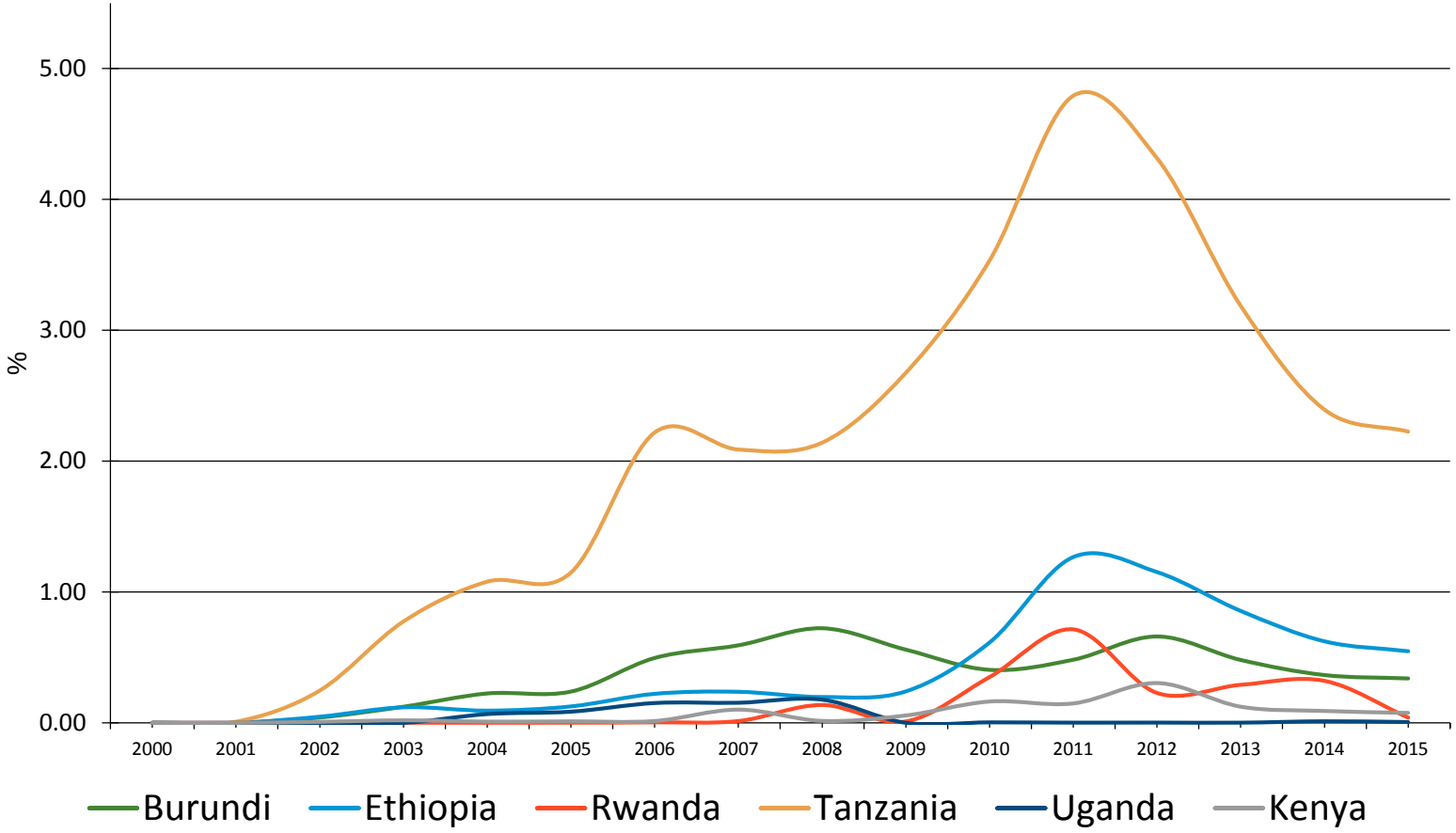
- The value addition linkages among mfg industries (both backward and especially forward) are very limited: **the production system is disarticulated**

Value addition in export remains weak and volatile: challenges in global market integration

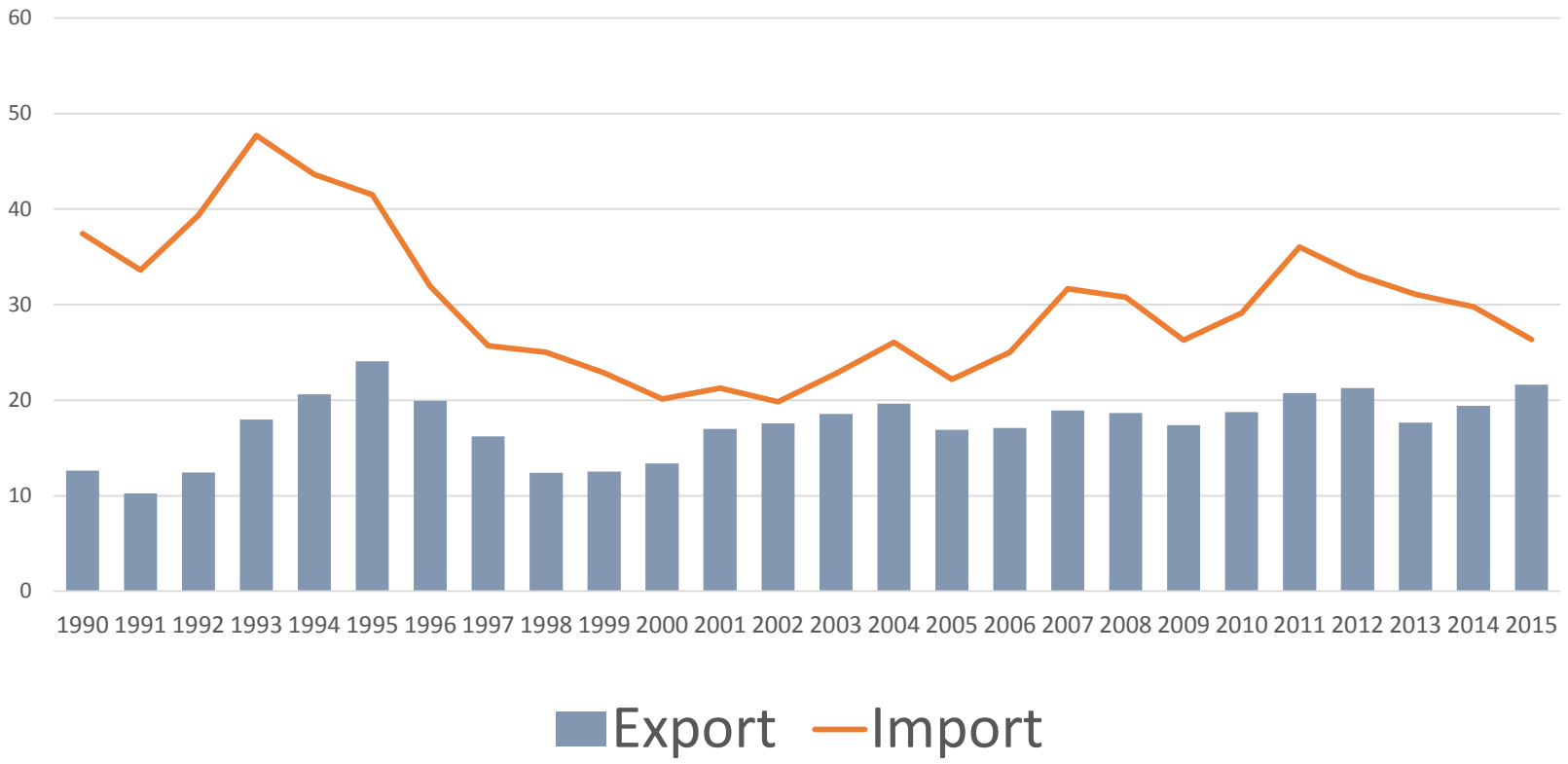


	Value (USD)	Compound Annual Growth Rates			
	2014	2000-2014	2000-2005	2005-2010	2010-2014
Kenya	58.95	**8.48%**	24.42%	2.17%	-1.49%
Tanzania	45.86	**19.47%**	14.48%	41.03%	2.40%
Rwanda	25.71	**17.48%**	11.57%	14.95%	28.75%
Uganda	17.87	**20.79%**	27.42%	23.20%	10.23%
Burundi	4.10	**18.07%**	22.16%	12.52%	20.19%

Minerals export dominance, and high rents



Chronic import dependence in Tanzania, although recent deficit reduction



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Explaining performances from firm evidence: Structural heterogeneity and challenges

- The industrial performance in Tanzania is driven/affected by a number of **structural features of the industrial system determining its VA potential and competitive setting**
- The industrial sector is composed by **very heterogeneous firms** with different strengths and weaknesses, along different sectoral value chains
- Industrial policy must take these features into account

> **Andreoni 2017a "Mapping industrial production in Tanzania: A disaggregated analysis building on the 2013 Census", UNIDO Working paper in collaboration with Nbs and MITI**

The Census of Industrial Production, 2013: Different “firm types” in the industrial sector

Taxonomy for productive establishments (TPE)		
1-9 workers (Small establishments)	1-4 workers **(Micro establishments)**	
	5-9 workers **(Small establishments)**	
10+ workers (Large establishments)	10-99 workers (Medium establishments)	10-19 workers **Small-Medium (SM) establishments**
		20-49 workers **Medium (M) establishments**
		50-99 workers **Medium-Big (MB) establishments**
	100+ workers (Big establishments)	100-499 workers **Big (B) establishments**
		500+ workers **Major (M) establishments**

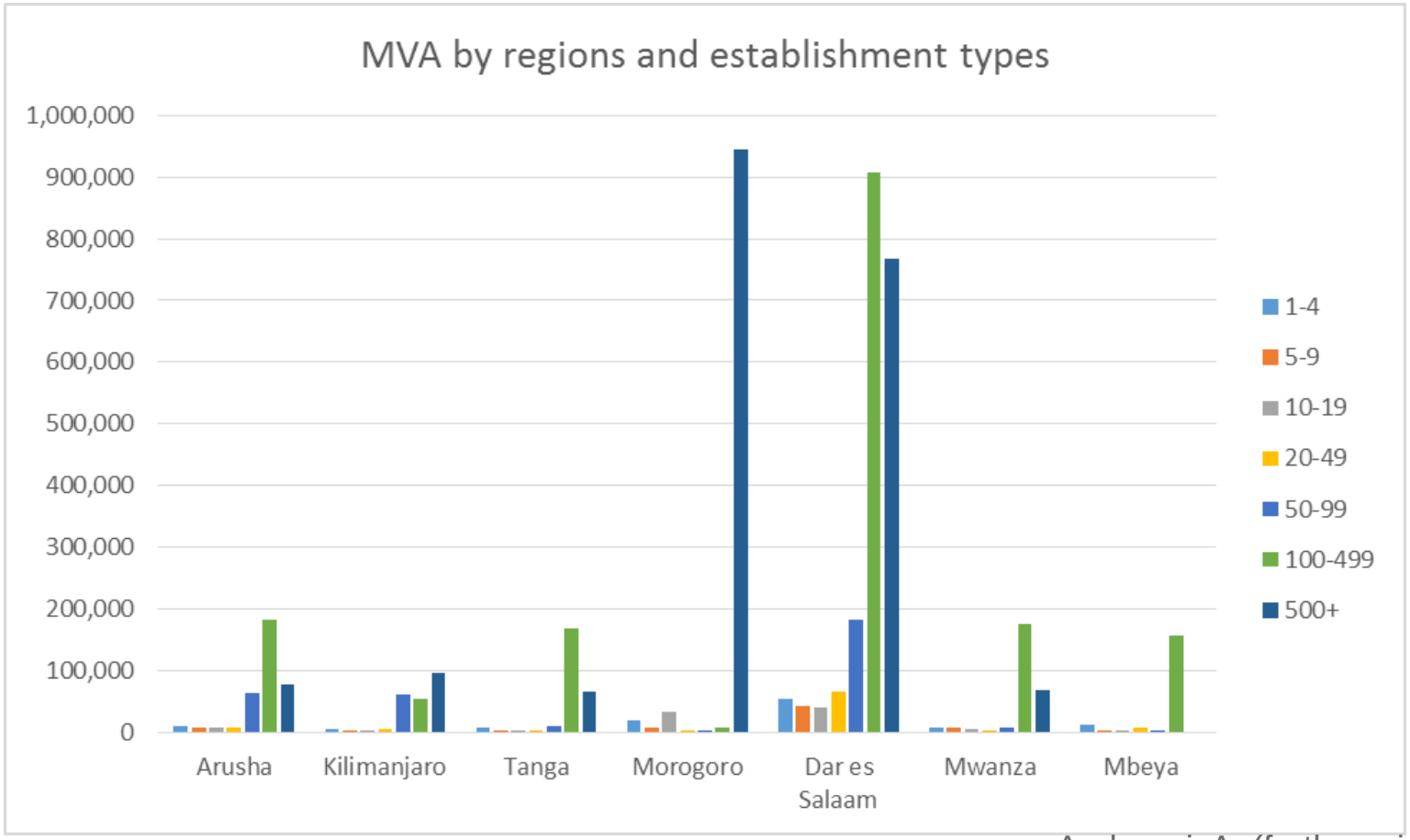
Andreoni, A. (forthcoming, 2017a)

The Census of Industrial Production, 2013: Accounting for "firm types"

ISIC Rev.4	Industrial Activity	Employment Size							Total
		1 - 4	5 - 9	10 - 19	20-49	50-99	100-499	500+	
B	Mining and quarrying	77	105	69	90	21	23	7	391
C	Manufacturing	41,656	5,820	**391**	**290**	**127**	**151**	**38**	48,474
D	Electricity, gas, steam and air conditioning supply	109	15	0	4	4	16	3	151
E	Water supply; sewerage, waste management and remediation activities	78	62	33	28	18	9	0	227
	Total	41,919	6,002	493	412	170	199	48	**49,243**

Andreoni, A. (forthcoming, 2017a)

Regional manufacturing VA concentration (89.3% in 7 regions) by firm types



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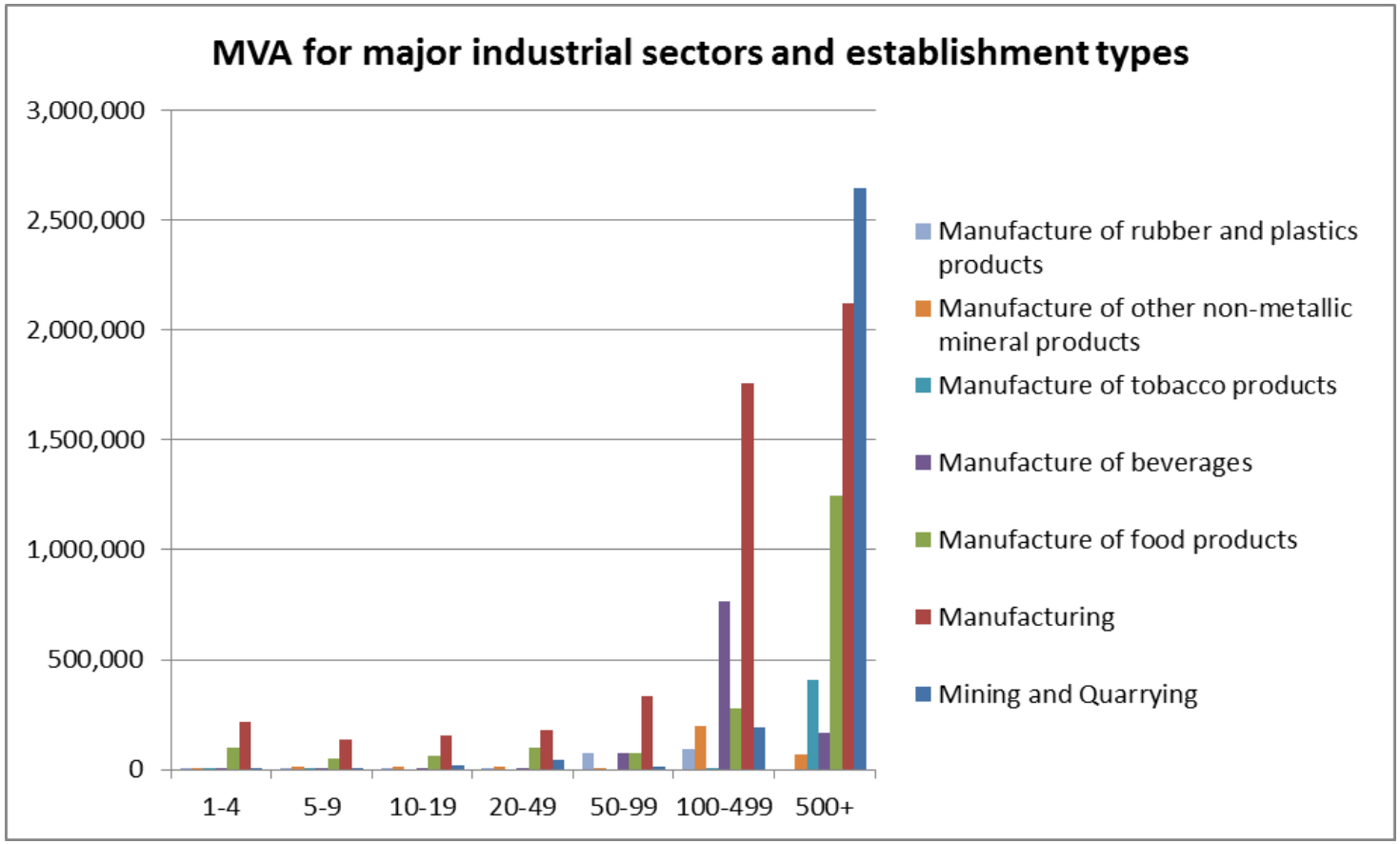
> MVA concentration among big firms (500+, 60%VA; 100-499, 25%VA): “missing middle”

> VA in mining (=food+beverages), limited employment (1/3)



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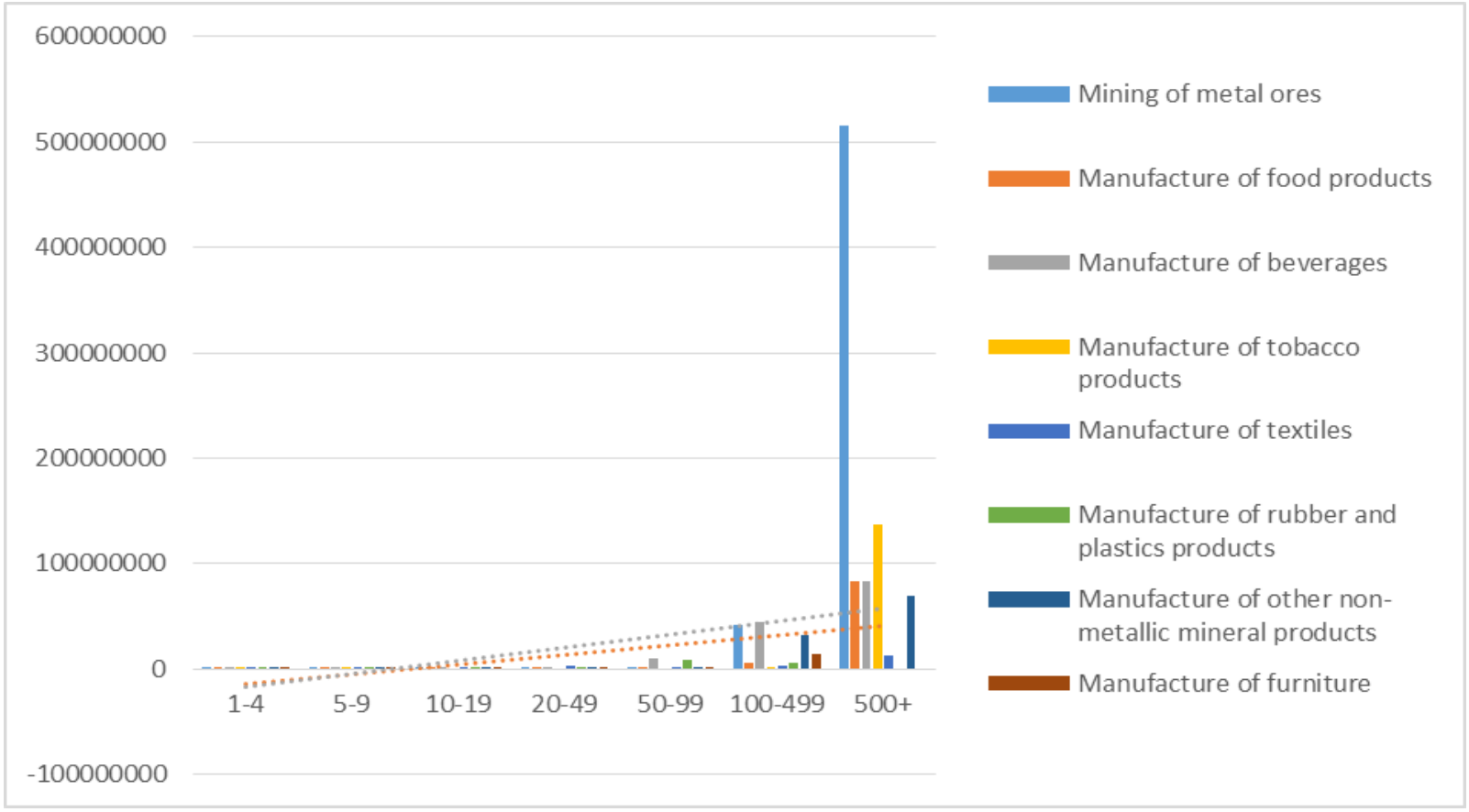
Firm productivity increases with scale, although it varies across sectors



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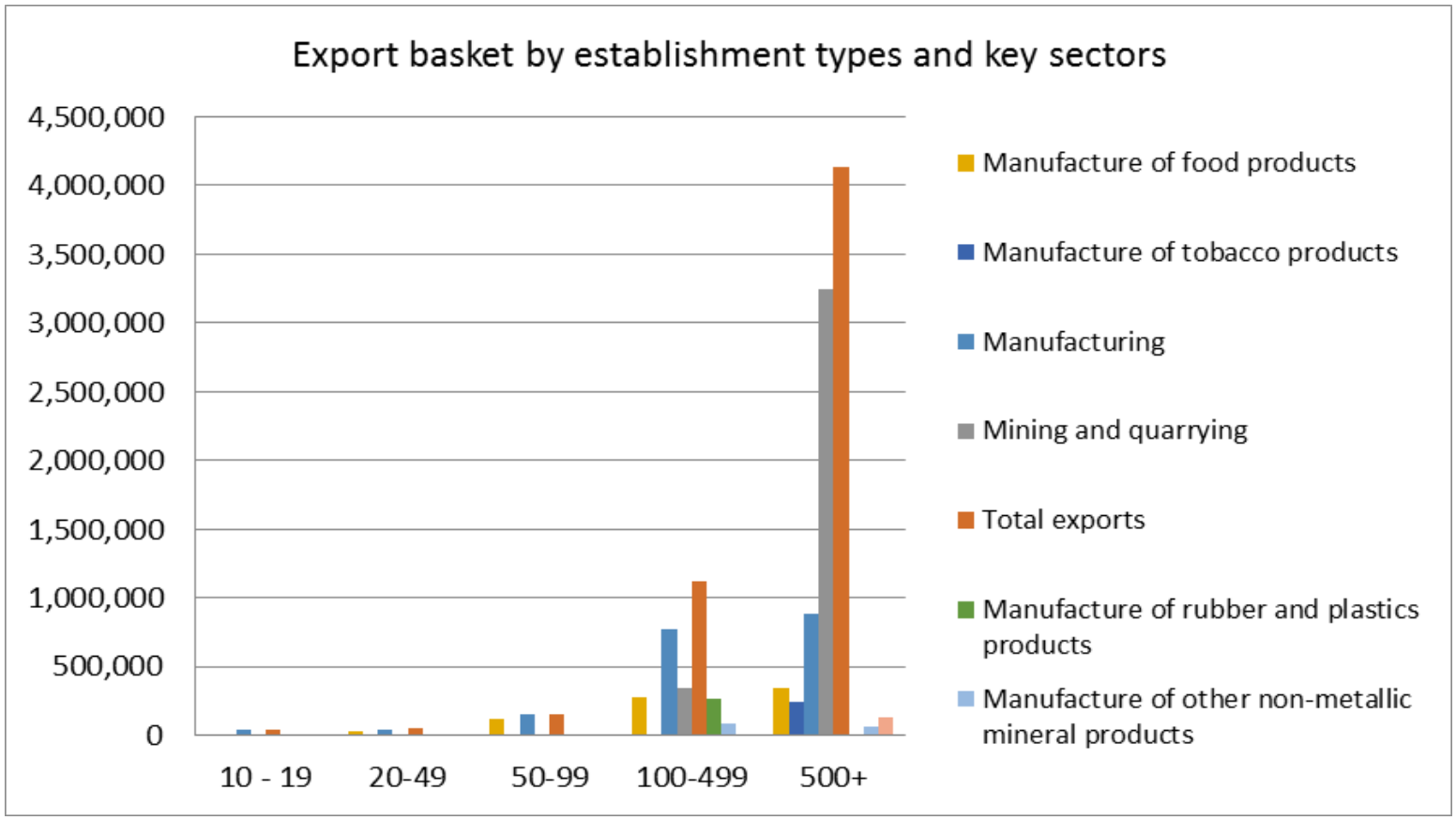
87% of the export value is generated by big and major establishments (90% in mining concentrated in 500+ firms)



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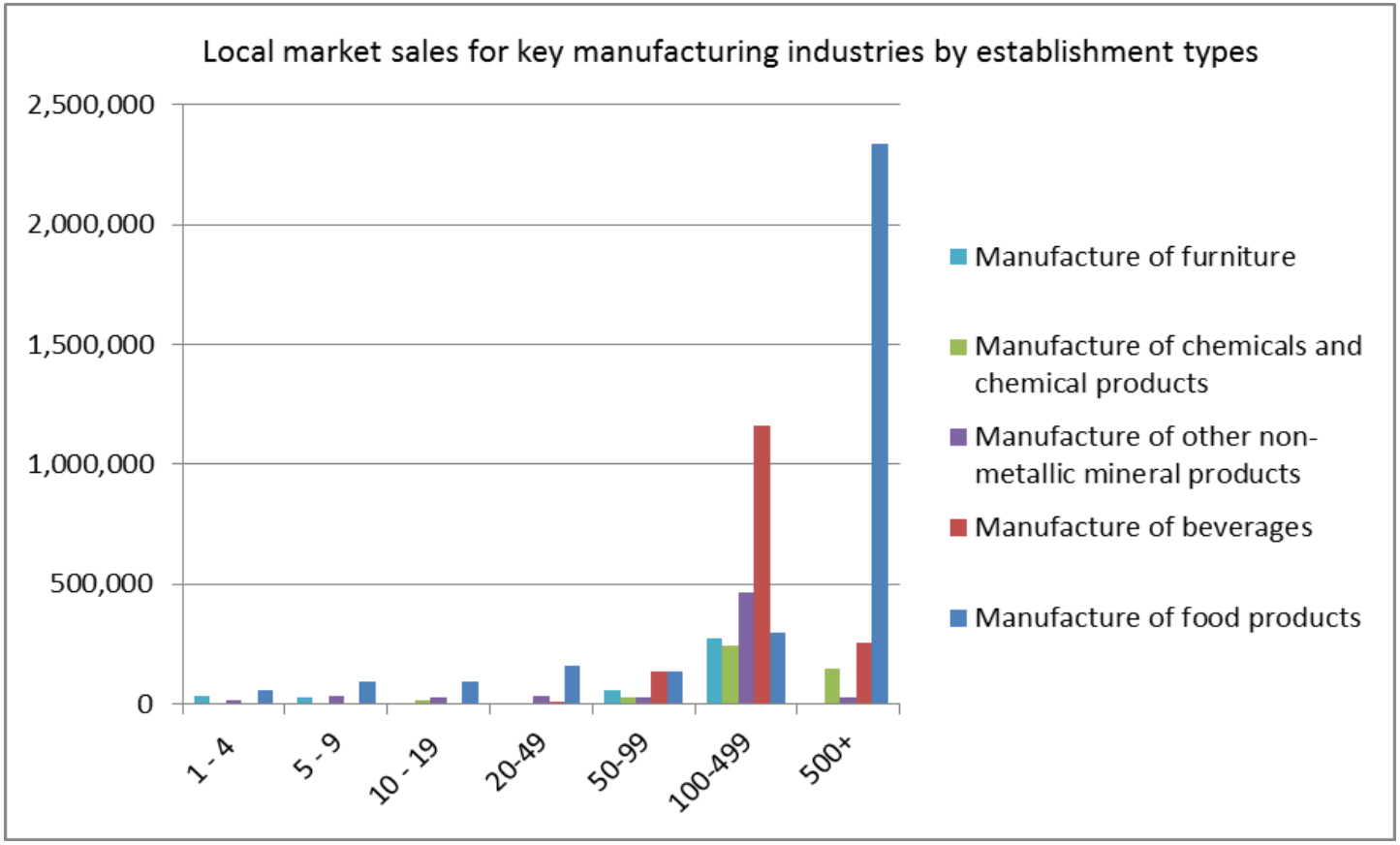
79% big and major firms dominated, however local market plays an important role in **small firms upgrading**



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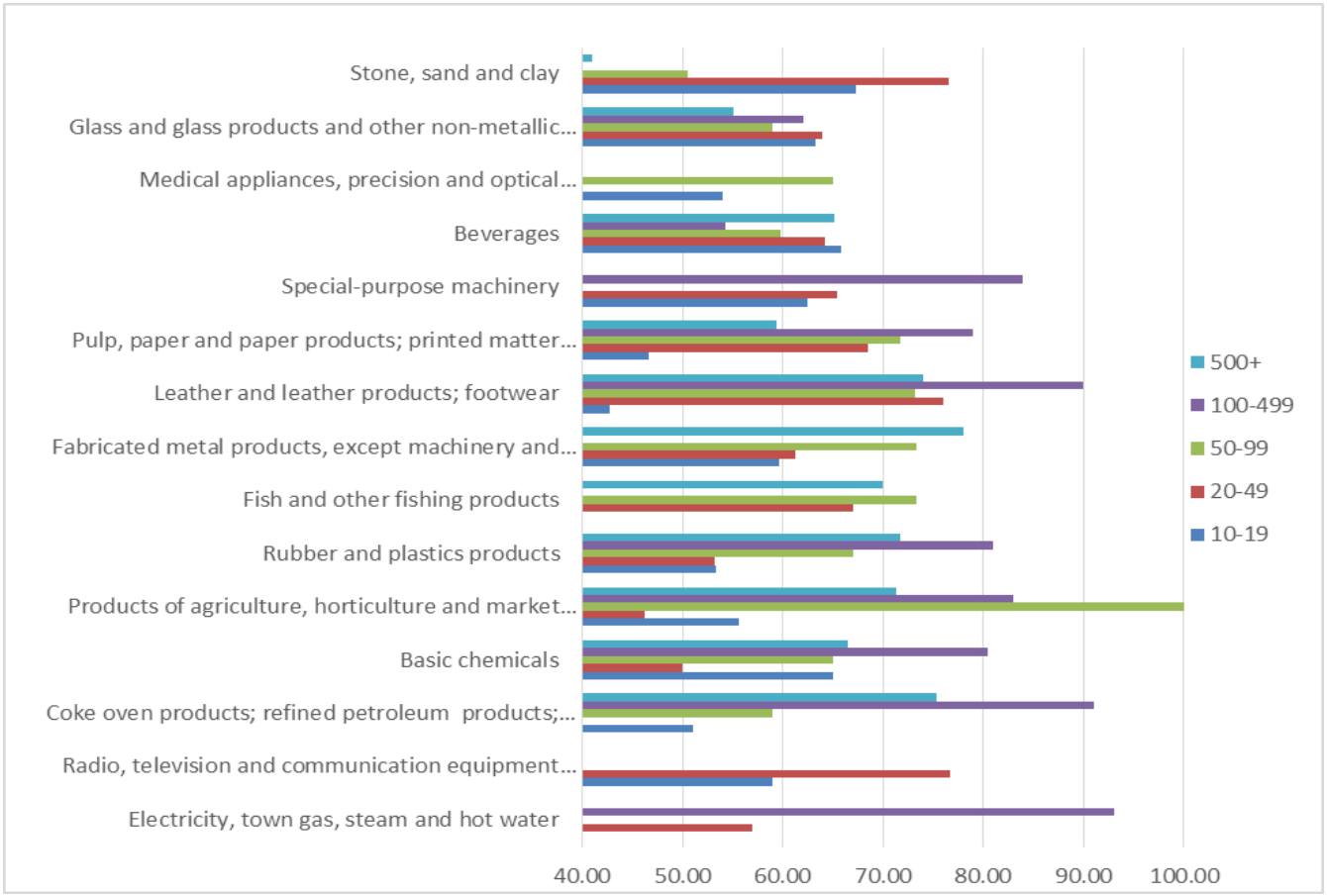
Production capacity underutilisation on average (PCU 63%), however sector/firm types specific



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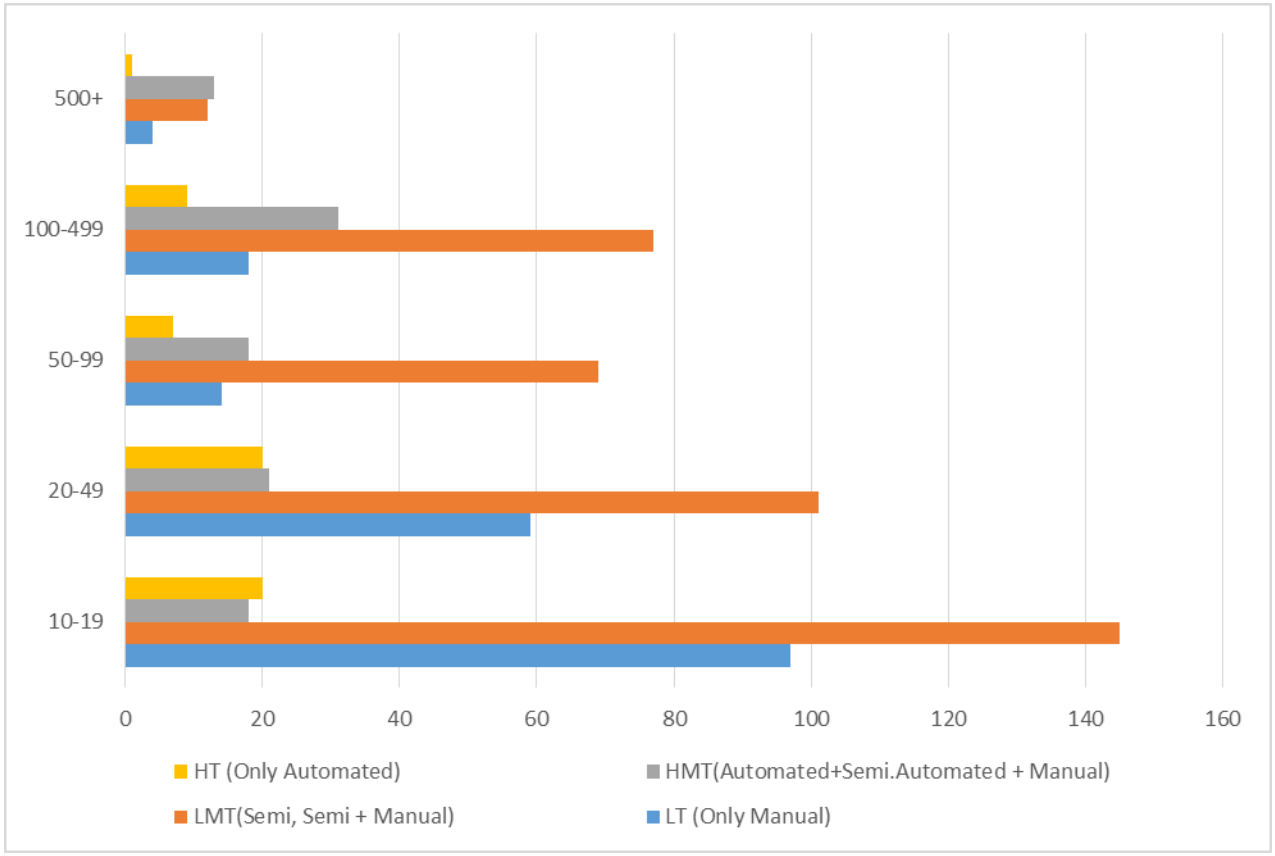
Production technologies: Bigger firms are not necessarily more technologically advanced



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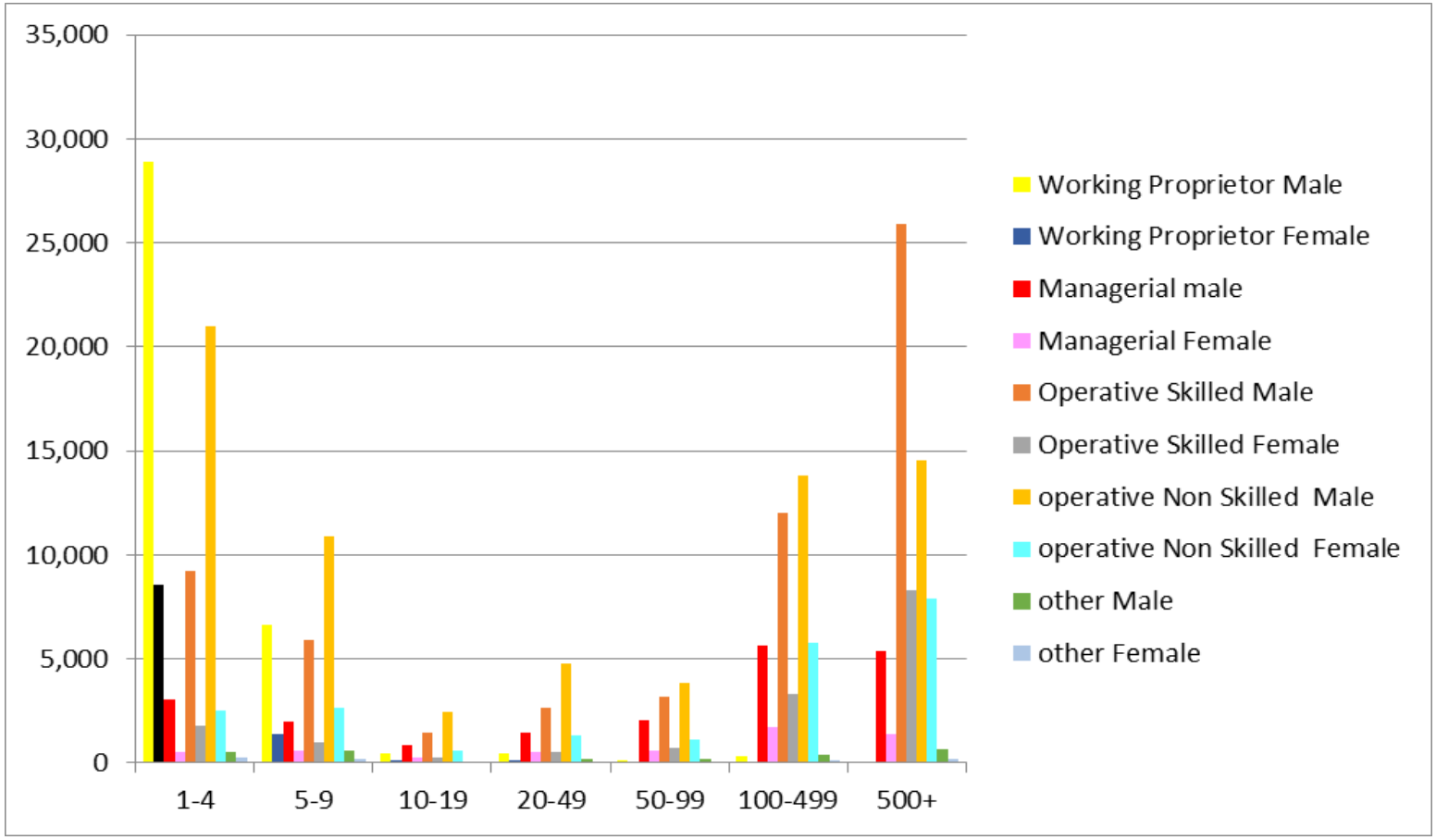
Lack of technical skills is particularly critical among smaller firms…



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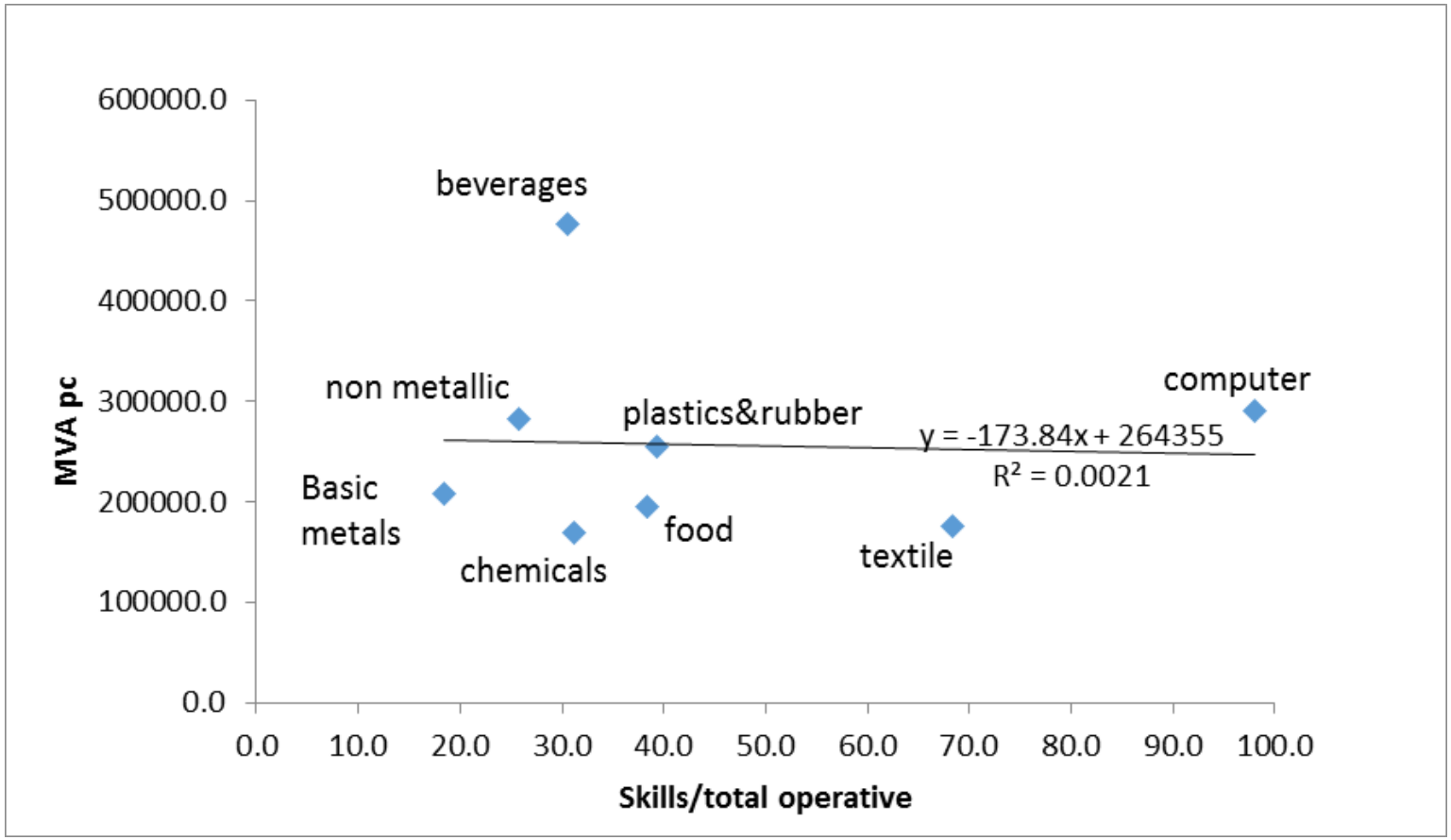
Even more critical is the **lack of organisational capabilities** across sectors and firm types



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Import dependence remains high, also in leading sectors (limited backward linkages)

(Tshs Million)

		Imported				Local			
Level2	Description	10-49	50-99	100+	Tot	10-49	50-99	100+	Tot
05	Mining of coal and lignite	0	0	0	0	0	0	0	0
07	Mining of metal ores	2,777	0	31,883	34,659	4,436	89	0	4,525
08	Other mining and quarrying	2	0	6,196	6,198	4,386	653	1,717	6,756
B		**2,779**	**0**	**38,078**	**40,857**	**8,823**	**742**	**1,717**	**11,281**
10	Manufacture of food products	5,319	37,347	891,550	934,216	131,897	130,223	652,206	914,325
11	Manufacture of beverages	273	4,073	136,500	140,846	8,808	36,045	300,811	345,664
12	Manufacture of tobacco products	0	0	38,448	38,448	0	0	149,599	149,599
13	Manufacture of textiles	1,332	2,557	112,273	116,161	2,765	19,172	66,111	88,048
14	Manufacture of wearing apparel	129	0	8,593	8,722	486	109	532	1,127
15	Manufacture of leather and related products	1,888	6,679	2,963	11,530	6,612	10,318	8,028	24,957
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	814	192	1,690	2,696	8,942	588	10,170	19,700
17	Manufacture of paper and paper products	1,123	1,967	19,495	22,585	6,156	7,447	6,755	20,357
18	Printing and reproduction of recorded media	2,220	14,750	16,028	32,997	19,700	5,784	16,598	42,081
19	Manufacture of coke and refined petroleum products	0	0	36,855	36,855	496	14,216	0	14,712
20	Manufacture of chemicals and chemical products	5,334	20,299	265,217	290,850	2,278	1,630	36,102	40,010
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	975	2,057	30,017	33,050	0	0	1,196	1,196
22	Manufacture of rubber and plastics products	5,999	40,263	320,243	366,505	18,174	1,160	29,111	48,446
23	Manufacture of other non-metallic mineral products	9,295	3,461	48,065	60,821	20,571	9,396	160,087	190,054
24	Manufacture of basic metals	1,792	958	46,585	49,335	2,629	23,095	36,714	62,438
25	Manufacture of fabricated metal products, except machinery and equipment	7,429	12,139	11,986	31,554	7,521	8,398	24,587	40,505
26	Manufacture of computer, electronic and optical products	0	0	4,290	4,290	0	0	0	0
27	Manufacture of electrical equipment	7,511	18,013	35,555	61,079	1,970	4,138	6,249	12,357
28	Manufacture of machinery and equipment n.e.c.	1,157	0	0	1,157	4,236	0	0	4,236
29	Manufacture of motor vehicles, trailers and semi-trailers	1,637	5,964	0	7,601	6,297	2,380	4,693	13,371
30	Manufacture of other transport equipment	449	0	37,871	38,320	501	0	0	501
31	Manufacture of furniture	3,049	8,977	190,441	202,467	3,005	34,734	2,984	40,723
32	Other manufacturing	1,343	3,314	4,689	9,345	1,141	27,836	212	29,189
33	Repair and installation of machinery and equipment	0	0	0	0	149	1,371	132	1,651
C		**59,068**	**183,010**	**2,259,354**	**2,501,431**	**254,334**	**338,040**	**1,512,876**	**2,105,250**
35	Electricity, gas, steam and air conditioning supply	0	0	11,910	11,910	17,595	25,774	1,004,770	1,048,139
D		0	0	11,910	11,910	17,595	25,774	1,004,770	1,048,139
36	Water collection, treatment and supply	326	0	0	326	5,847	4,447	4,411	14,706
38	Waste collection, treatment and disposal activities; materials recovery	0	399	0	399	1,021	888	0	1,909
E		326	399	0	724	6,868	5,335	4,411	16,615
	Total	62,172	183,408	2,309,342	2,554,923	287,620	369,891	2,523,774	3,181,285

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Industrial policy (IP) implications

Policy and business investments strategies, in particular high quality/productivity FDI must:

- **target critical nodes/bottlenecks, organisations, and linkages in the local production system**
- **Industrial/competition policies along sectoral value chains: enforcement of Competition Policy regimes compatible with Industrial Policy medium-long term targets**
- be **structurally feasible** (production/technology assessment) ***as well as*** **politically viable** (political settlement analysis)

IP1. Building competitive organisations in LPS: Scaling-up, micro-level efficiency and organisational capabilities

Developing production linkages in LPSs, with a focus on critical nodes (Medium size enterprises) and opportunities for scaling- up and thus linking-up (product, process, functional, chain upgrading)

- **Increasing productivity is a function of investment-led scaling-up processes (reaching efficient production scale):** Targeted support of domestic medium enterprises (50-100, depending on sectors), e.g. financial system reforms, matching-grants schemes, etc.

- **Increasing productivity is a function of capital investments, but ALSO depends on how capital investments are used/organised in production**: Support increasing micro-level (shop-floor) efficiency and **organisational capabilities development**, (across ALL companies, in particular medium size)

IP 2. Increasing industrial competitiveness by supporting sMe development and entry > addressing "missing middle" phenomena

Developing technological (and production linkages) in LPSs, with a focus on technology and production services offered by "intermediaries" (PPPs and PTIs, Public Technology Intermediaries) and **companies developing/orchestrating local supply chain**

- **Public technology intermediaries are present in many African countries, but are completely disconnected from the private sector**

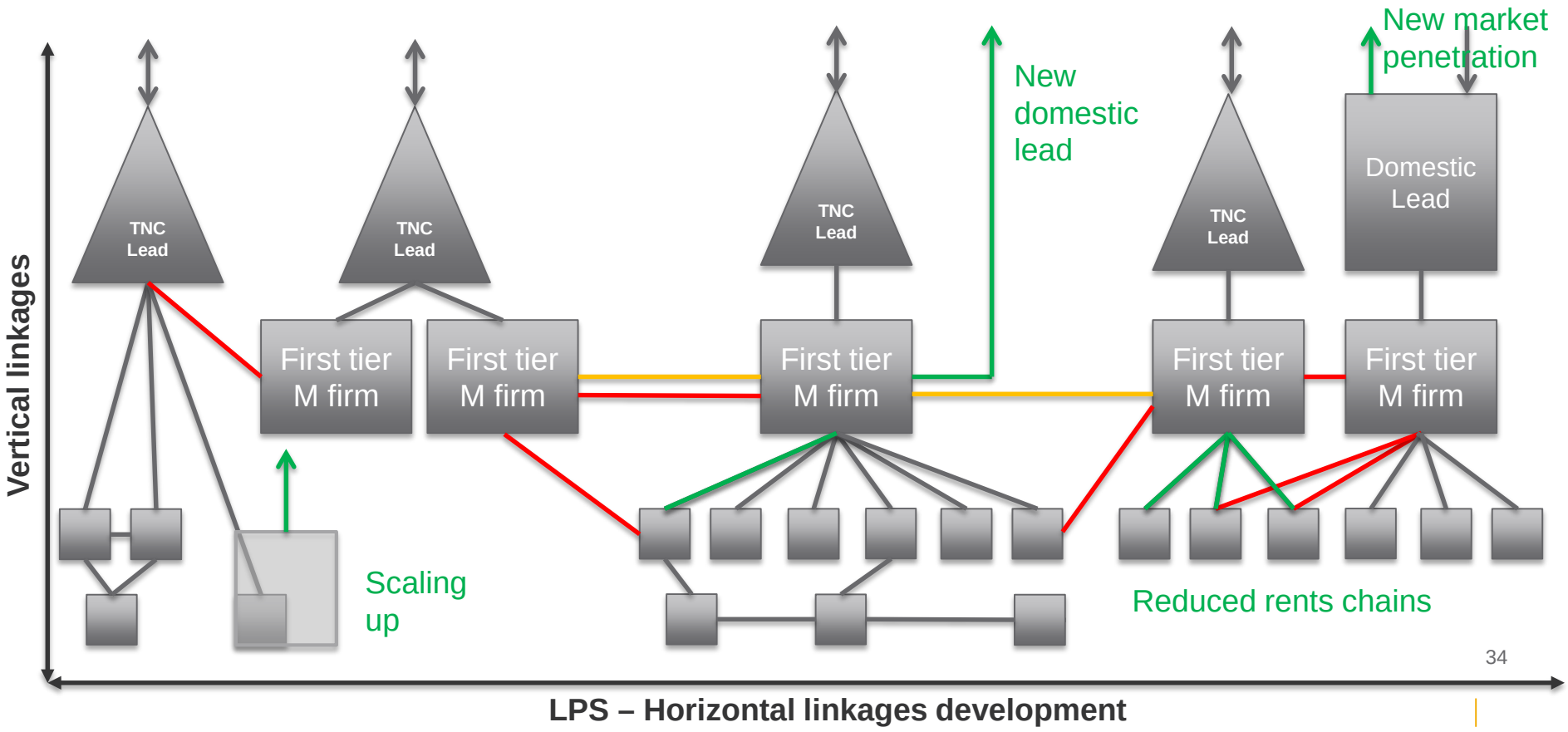
- PTIs provide **quasi public good infra-technologies** including measurement methods (***metrology***), testing facilities (***conformity assessment***), specifications and quality control techniques (***standards***), evaluated scientific and engineering data and technical dimensions of product interfaces

- PTIs provide **sector/task/product specific consultancy services** on new **production technologies**, productivity-enhancing **organisational solutions**, **market opportunities** analysis (market vulnerability, competitors analysis) and **trade support** (international standards conformity assessment, etc.)

Analytical map of LPS dynamics

LPS production linkages and technological linkages

> Increasing value distribution/creation opportunities (reduced rents chains)



IP3. Strategic management of consumption and fiscal linkages

- **Need for capturing domestic demand (consumption linkage):** in many SSA countries (and even for low-tech products) the **domestic demand is captured by imported products** (cheaper products/dumping practices, in particular Chinese manufactured products; crowding out low-tech value chain entrants; 'perceived' higher quality; standardised and reliable; also interchangeability for intermediate products and machinery components)

- **Need for strategic integration in regional markets (SADC, EAC for SSAfrica):** regional markets have **lower entry barriers** in terms of product quality, **still learning, diversification and scale opportunities**

- **Need for strategic use of fiscal linkages** (learning rents allocation and policy enforcement) **for entering global markets** (products with short technological-cycles) **and defy comparative advantage**

Industrial and competition policy enforcement: Interlocking bottlenecks and political economy factors

Political economy factors: the distribution of power among business organisations and political clientelistic networks (political settlement) is such that:

- Conflicts between importers/rentiers and productive organisations
- Complex interests configuration: The same person can be a politician, businessman, importer, rentier, producer…
- Business organisations tend to be uncompetitive and rely on political connections to operate in the market
- Conflicts within sectoral value chains, insiders and outsiders…

ACE Anti-Corruption Evidence

Making Anti-Corruption Real

- **The Anti-Corruption Evidence (ACE) research programme** – led by SOAS, University of London - takes an innovative approach to anti-corruption policy and practice. With £6 million in funding over five years from UK Aid, ACE is responding to the serious challenges facing people and economies affected by corruption by generating evidence that **makes anti-corruption real,** and using those findings to help policymakers, business and civil society **adopt new, feasible, high-impact strategies** to tackle corruption**.**

- Our aim is to **identify opportunities within sectors where feasible policies can persuade a coalition of players to support the enforcement of rules that allow them to pursue their own productivity**. Combined with improvements in vertical rule enforcement, this can lead to feasible and positive anti-corruption and development outcomes.

Thanks for your attention
Comments are welcome

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