

# Beyond Manufacturing: Structural Change in Africa Reconsidered

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Governor's Lecture

Bank of Uganda

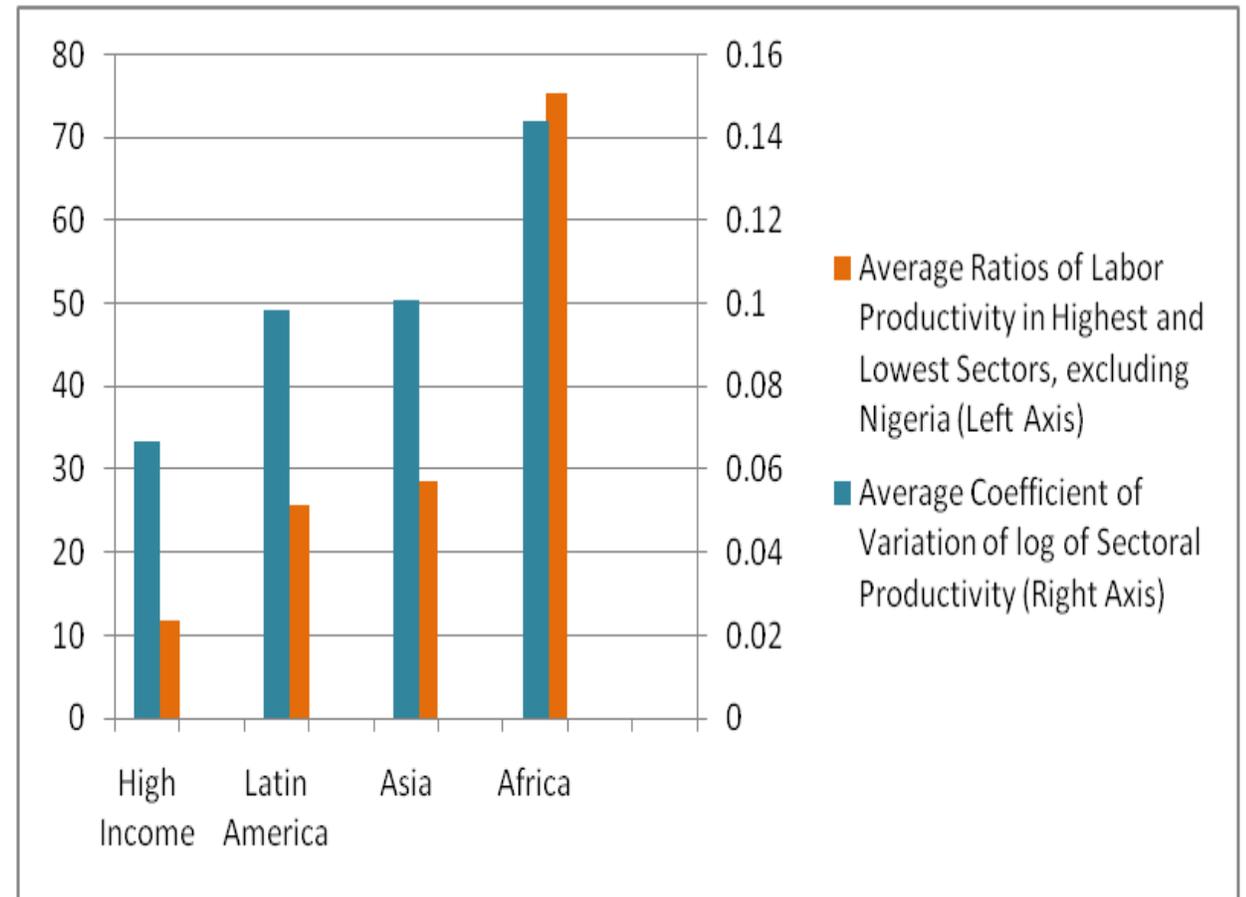
Kampala, 21 September 2018

# Rediscovering Structural Change

- An idea as old as the study of economic development
  - Lewis, Kuznets and Chenery
- Academic interest in structural change waned in the 1980s & 90s
  - Cross country regressions consigned it to the “residual”
- The result for public policy was a focus on “whole economy” drivers of growth such as openness, institutions, governance, etc.
  - These prescriptions proved to be of little practical relevance to public policy
- Since 2000 a group of “new structuralists” have emerged in development economics
  - Lin, Rodrik, Stiglitz

# The Potential for Structural Change

- In countries at low levels of income productivity differences between sectors are large
  - The movement of resources from low productivity to high productivity employment drives growth
  - As incomes rise, productivity differences among sectors (and enterprises) tend to converge
- Africa has the greatest differences in productivity among sectors, and therefore the greatest potential for structural change



# Regional Differences in the Role of Structural Change are Striking

- In East Asia within sector productivity growth and structural change were complementary
- Between 1990 and 2000 “growth reducing” structural change slowed overall growth in In Africa and Latin America.
- Recent structural change (2000-2010) in Africa has been from agriculture into low productivity services

Figure 4.b. Decomposition of Productivity Growth by Country Group, 1990-1999 (weighted)

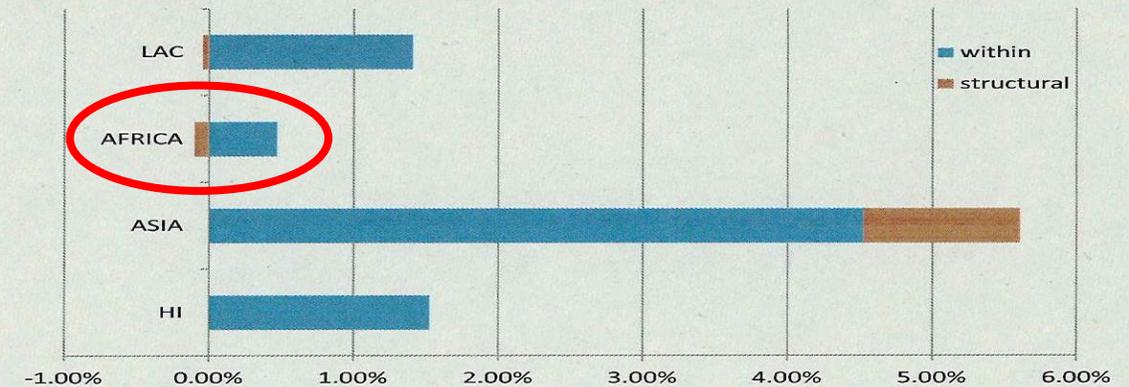
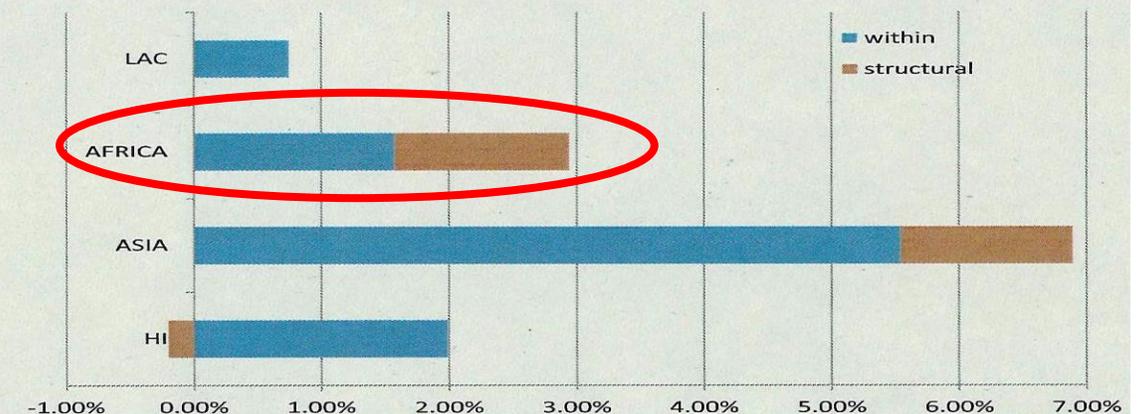
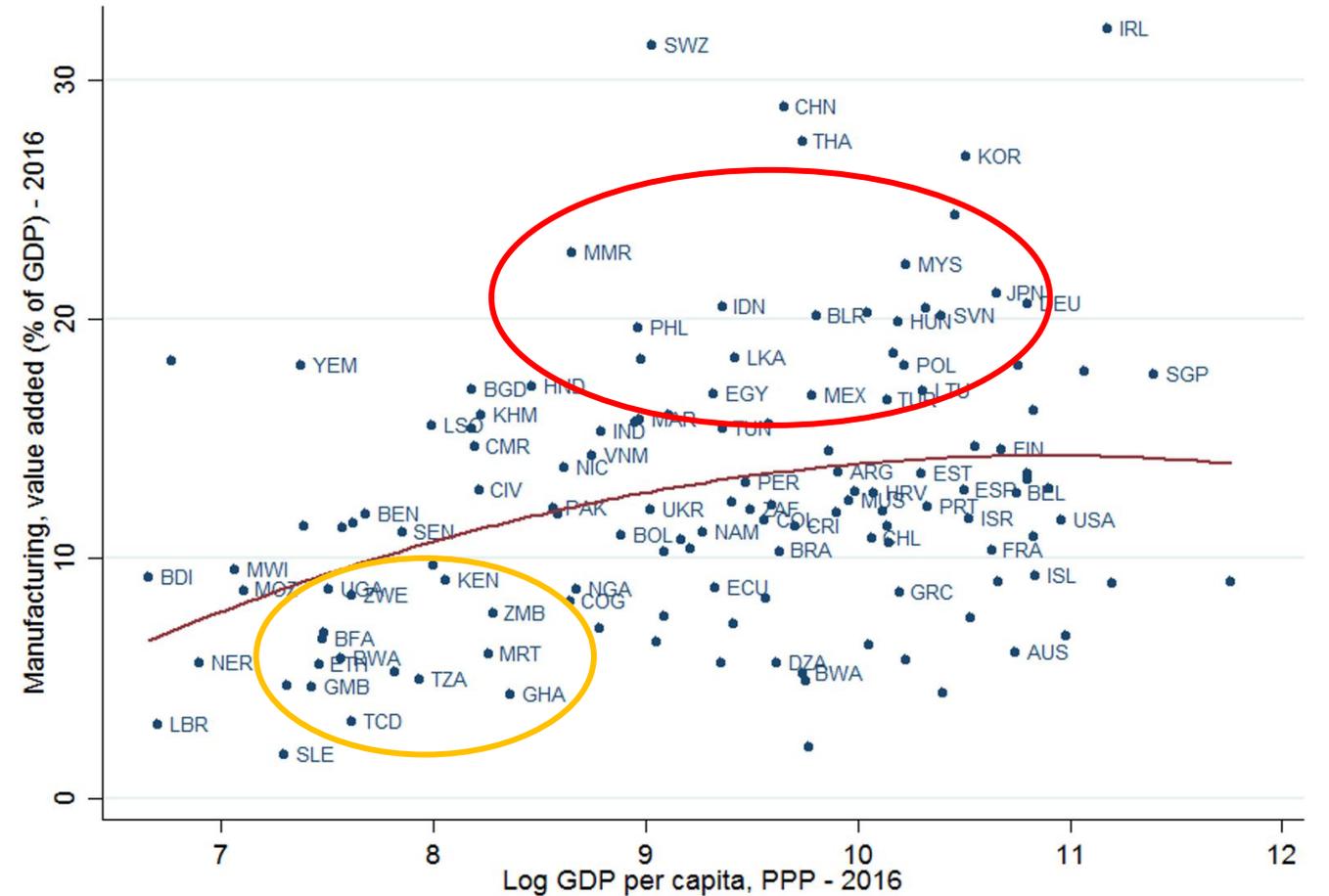


Figure 4.d. Decomposition of Productivity Growth by Country Group, Post 2000 (weighted)



# As are Regional Differences in the Role of Industry

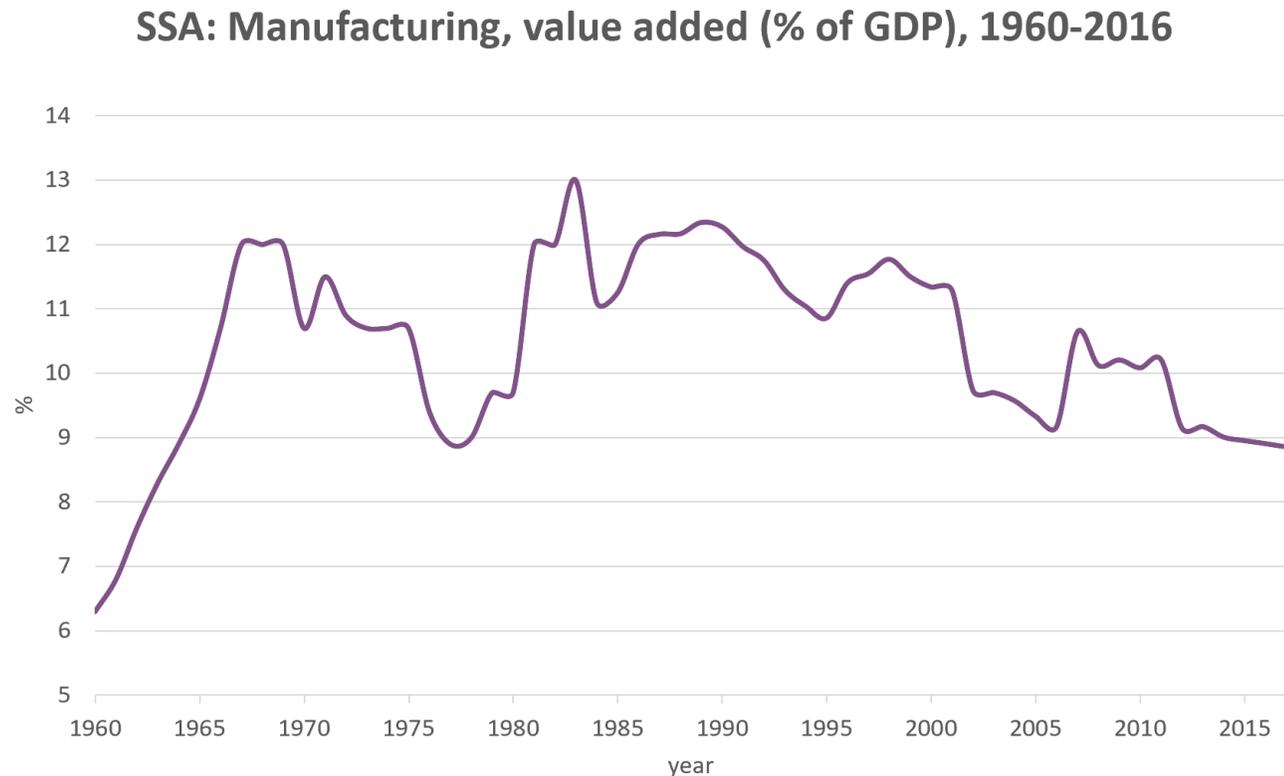
- Historically, industry has led the process of structural change
- It has played an outsized role in East Asia
- Industry has played only a minor role in Africa's growth turn around
  - The region's fast growing economies (ETH, GHA, KEN, RWA, TZA, UGA) are all negative outliers



Source: World Bank World Development Database and World Bank Africa Development Indicators

# Africa Has Deindustrialized

- **Africa's share of manufacturing in GDP is less than half of the average for all developing countries**
- **Per capita manufactured exports are about 10 per cent of the developing country average.**
- **Africa's share of global manufacturing is smaller today than in 1980**



Source: World Bank World Development Database and World Bank Africa Development Indicators. Author's calculations.  
Notes: SSA excludes South Africa.

# Leading Some to Question the Durability of Growth

“there is a genuine question about whether Africa’s growth can be sustained...I come down on the pessimistic side, due to what I think are **poor prospects for industrialization**”

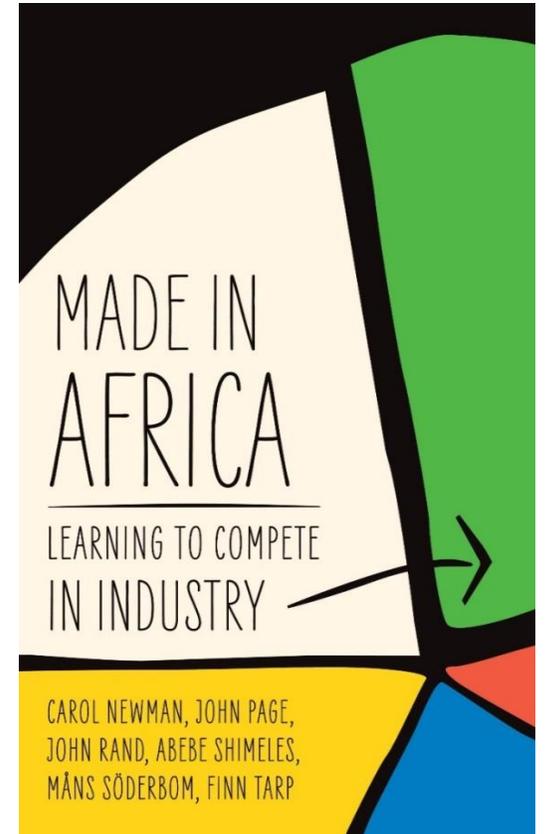
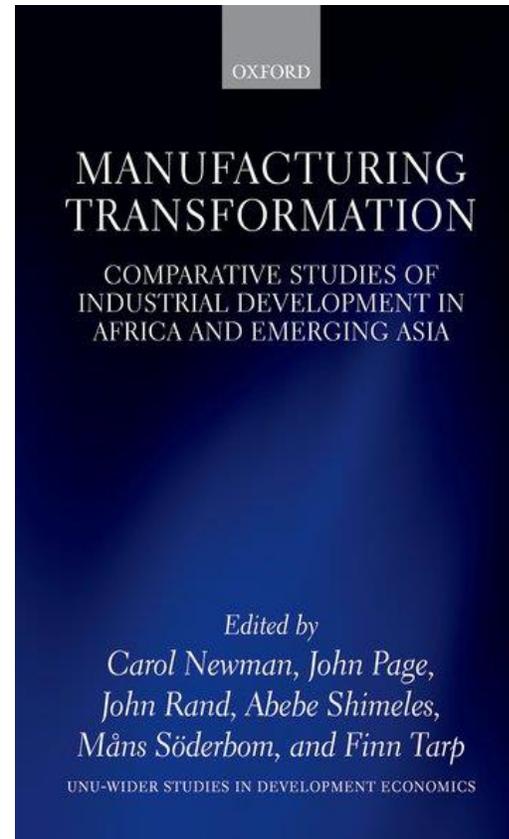
*-- Dani Rodrik (2014)*

“... it is unlikely that manufacturing export led growth will have the impact that it had in China and East Asia. **It cannot be the sole strategy or even at the heart of a country’s growth strategy.**”

*-- Joseph E. Stiglitz (2018)*

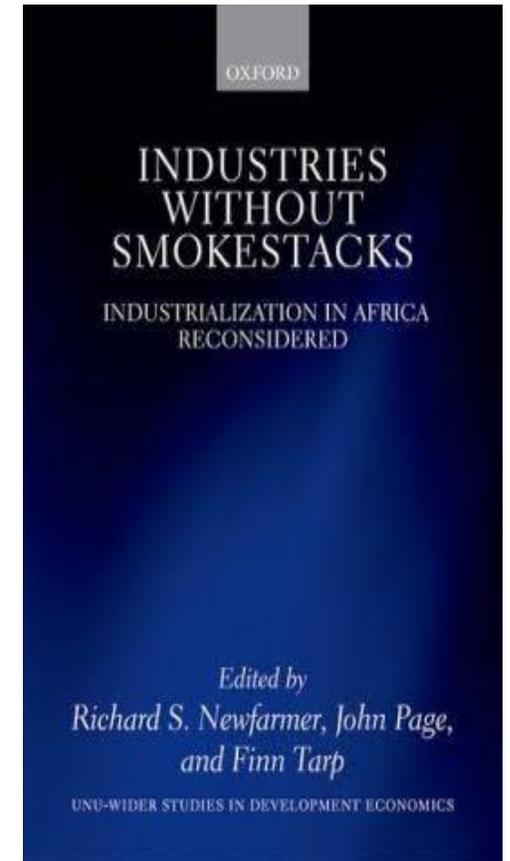
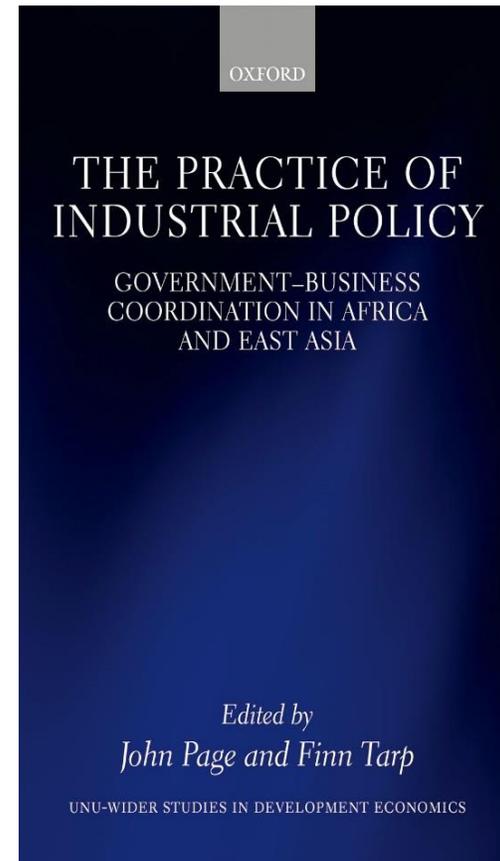
# The Brookings-WIDER Research Program

- A multi-year, multi country comparative research program
- *Learning to Compete* (2016) (with AfDB) Tried to Answer a Simple Question:  
Why is there so little industry in Africa?



# The Brookings-WIDER Research Program

- *The Practice of Industrial Policy* (2017)  
Comparative studies of business-government coordination in Africa and East Asia
- *Industries Without Smokestacks: Industrialization in Africa Reconsidered* (2018)  
Expanded the definition of “industry” to tradable services and agro-industrial exports

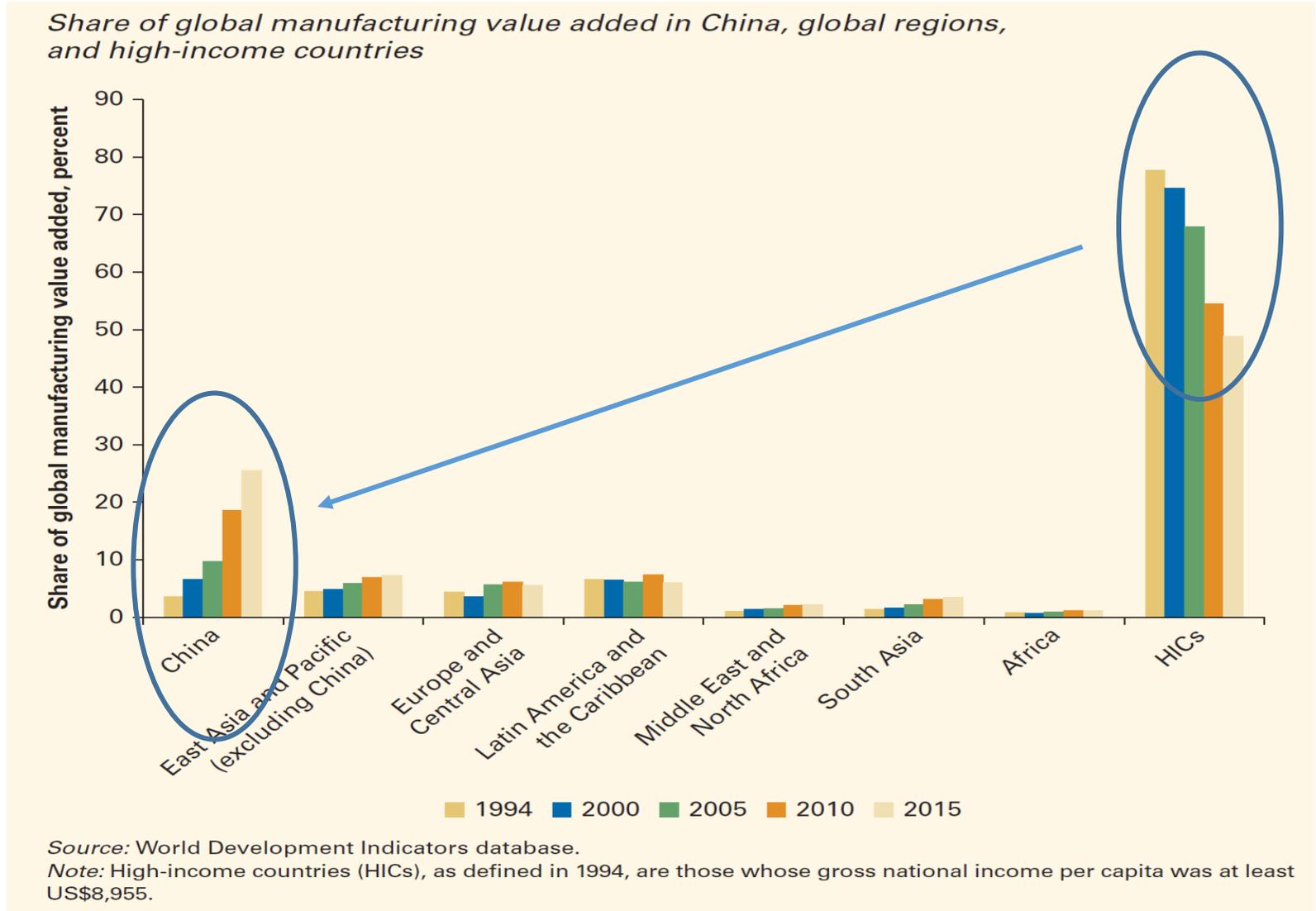


# A Focus on Firms

- Most analysis of Africa's lagging industrial development has focused on the investment climate.
  - Regulatory reform ...*Doing Business*
  - Infrastructure and Skills
- Investment climate studies focus explicitly on the environment *external* to the firm.
- But, the key issues in industrial policy reflect what happens *within* ("firm capabilities") and *between* firms (externalities and coordination failures).
- We wanted to learn: (1) What makes firms more competitive and (2) what makes countries more attractive to competitive firms.

# Three changes in the global economy make industrialization more difficult for Africa....

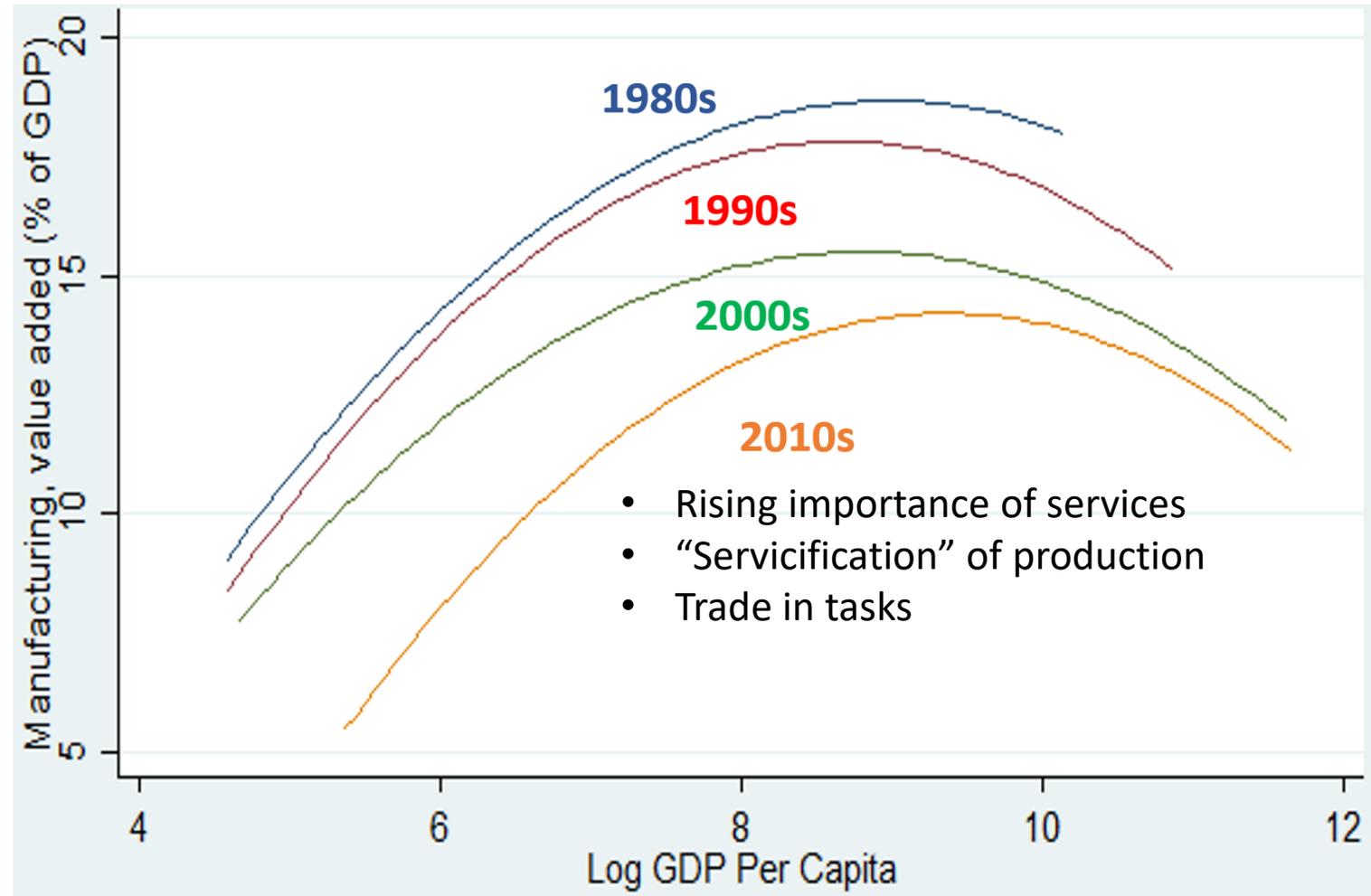
- **1- China and East Asia dominate as manufacturing centers...**



# Three changes in the global economy make industrialization more difficult for Africa....

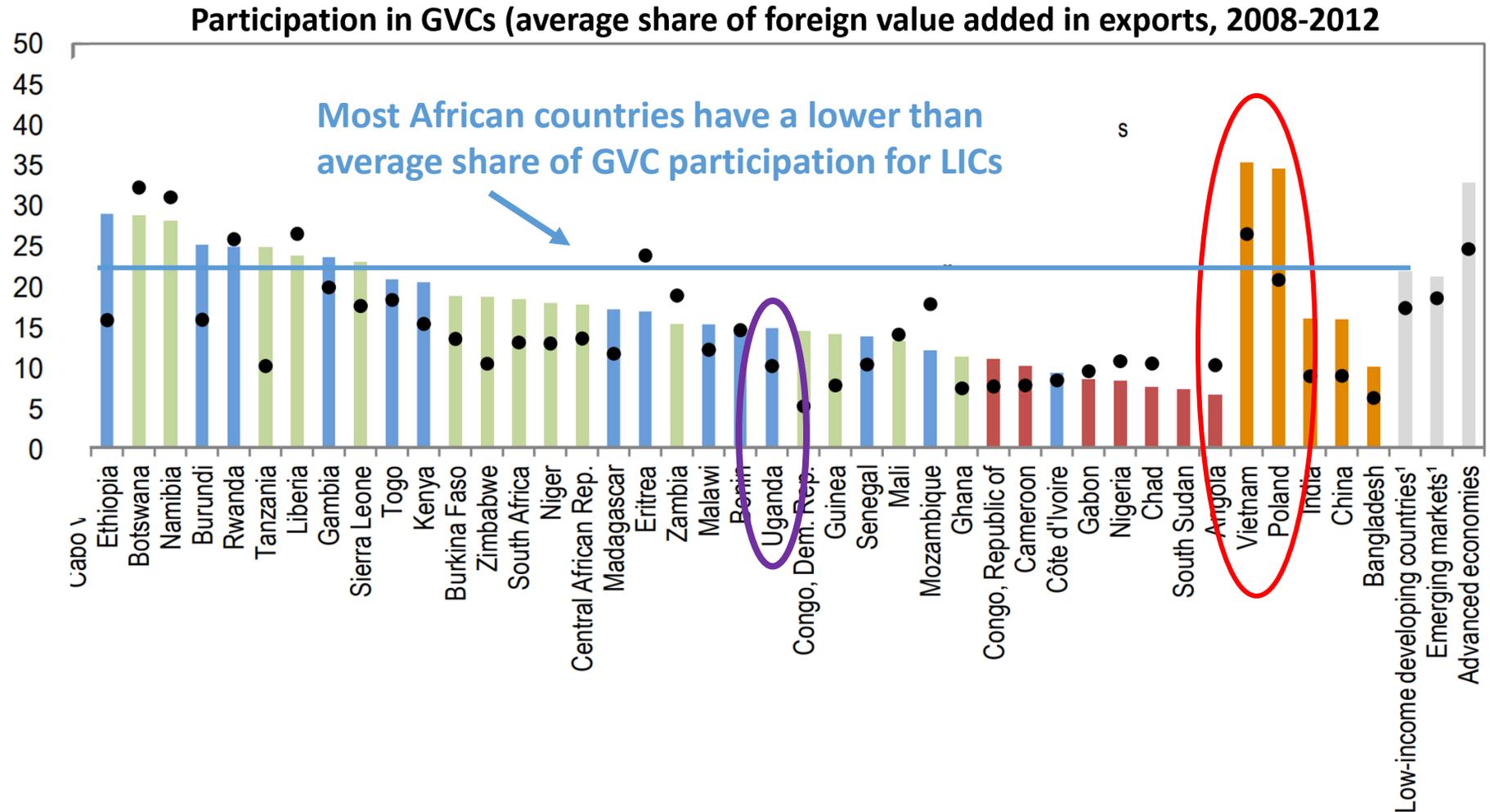
- 1- China and East Asia dominate as manufacturing centers...
- 2 - Manufacturing as a share of GDP is falling everywhere on average

Manufacturing as share of GDP on average declines over four decades



# Three changes in the global economy make industrialization more difficult for Africa....

- **1- China and East Asia dominate as manufacturing centers...**
- **2 - Manufacturing as a share of GDP is falling everywhere on average**
- **3 - Selling to the global market increasingly requires participating in global value chains**



# The Rise of “Industries Without Smokestacks”

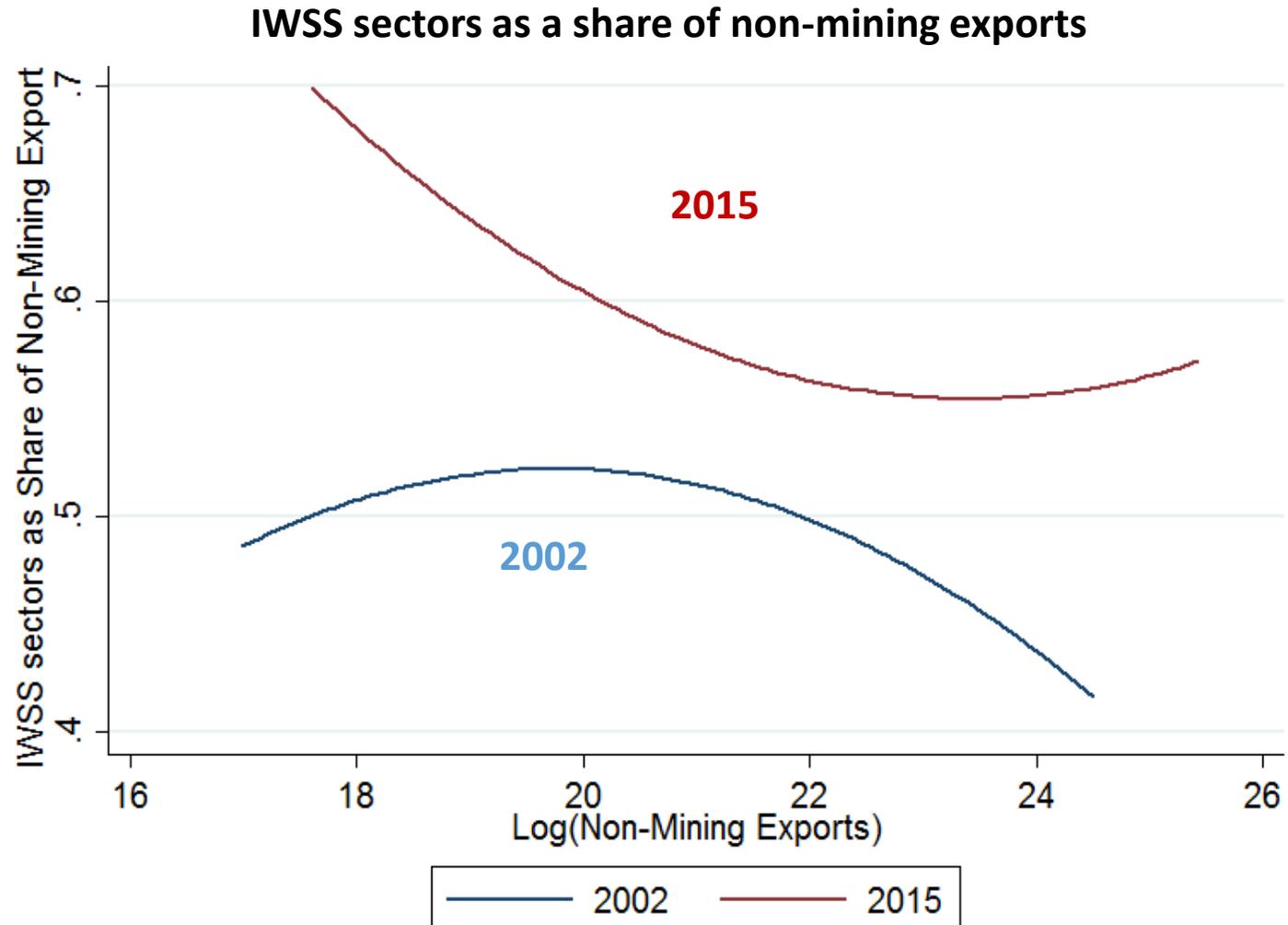
- Technology and falling transport costs have created a class of tradable services and agro-industry that are more similar to manufacturing than to traditional services or agriculture
  - Think call centers versus restaurants; cut flowers versus subsistence agriculture
- These “industries without smokestacks” share many of the firm characteristics of manufacturing
  - Technical change, learning, agglomeration
- They also offer a broader array of options for structural change.
  - Horticulture and agro-processing
  - Tourism
  - Tradable services, such as Information and communication services
  - Transit trade and logistics

# “Industries Without Smokestacks” Have Become More Important in Africa

In 33 African countries with relevant data:

IWSS grew more rapidly and became more important in export portfolios

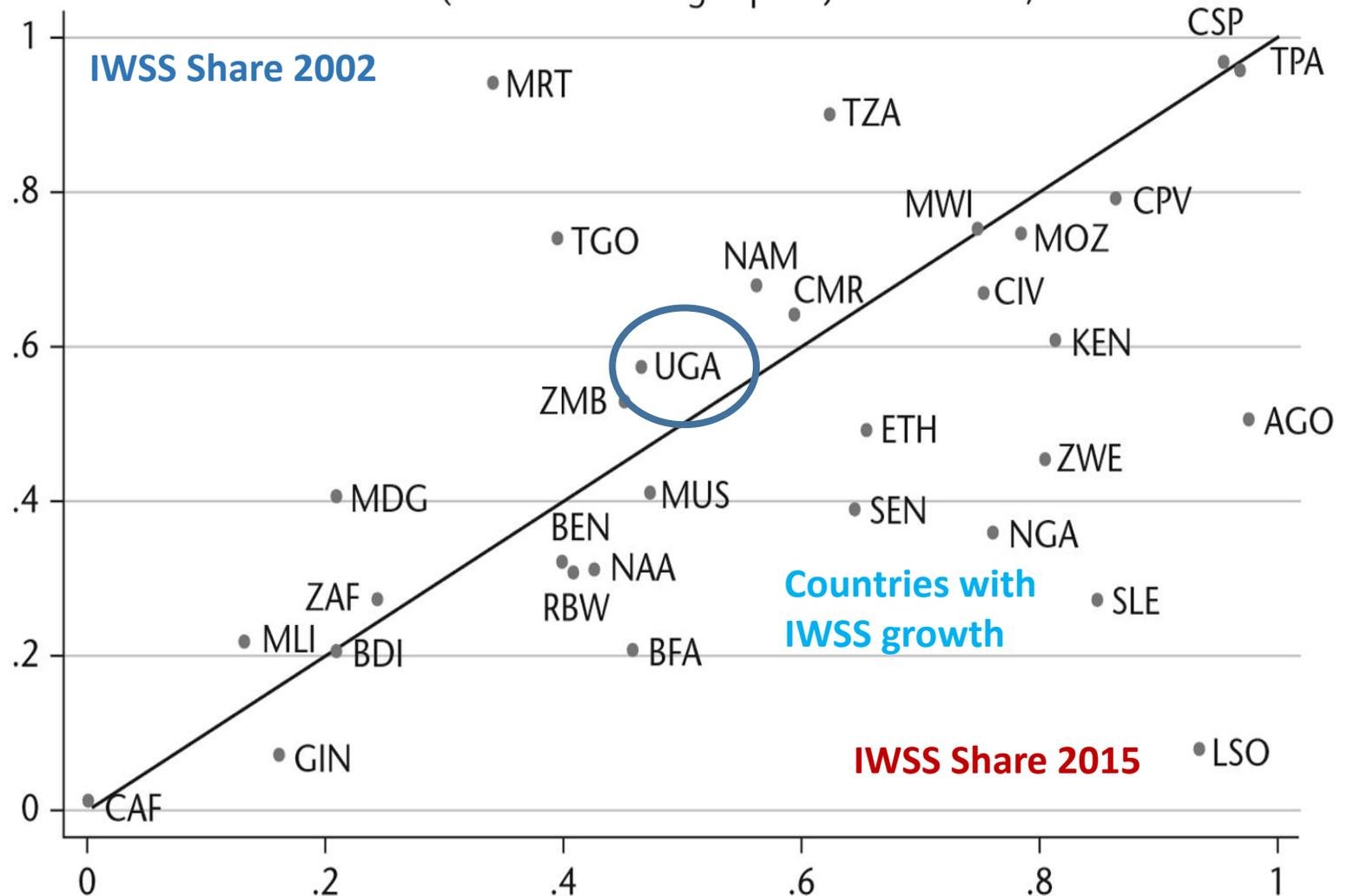
Both large and small exporters saw gains in these sectors



# “Industries Without Smokestacks” Have Become More Important in Africa

IWSS sectors grew more rapidly, or at least as fast, as traditional sectors in two thirds of African countries – and faster in half of the countries.

IWSS sectors as a share of non-mining exports



# Rethinking African “Industrialization”

- Patterns of structural change in contemporary low income countries will differ substantially from historical experience.
- Africa’s resource endowments suggest that many internationally competitive activities will be “industries without smokestacks.”
- The challenge for policy makers is to promote the growth of high productivity sectors capable of absorbing large numbers of moderately skilled workers.

# “Industrial Policy” for the 21<sup>st</sup> Century

- Market imperfections mean that the social returns in growth-promoting investments exceed private returns
  - A case for public action
- Externalities and coordination failures call for a coherent strategy of public action
  - Put differently, Africa needs a strategy for structural change
- Because “industries without smokestacks” share many firm characteristics with smokestack industries, they also respond to broadly similar policies.
- But to design effective industrial policies we need to understand what drives the choice of “industrial” location.

# Four Drivers of Industrial Location

- **The “basics” (AKA the “Investment Climate”)**
  - Infrastructure and skills
  - Institutions and regulation
- **Exports**
  - Scale is important
  - Firms in low income countries increase their productivity by exporting
- **Firm capabilities**
  - The tacit knowledge and working practices that affect both productivity and quality
- **Agglomerations**
  - Industrial clusters confer significant productivity gains

# Lacking the “Basics”

- Country case studies highlight large gaps in infrastructure:
  - Power is the biggest constraint
  - Transport and logistics come a close second
- Skills related to production and management are lacking in many countries
  - Deficiencies in post-primary education
  - Poorly performing vocational and technical education
- **The basics are necessary but not sufficient**
  - Exports, geography and capabilities are interrelated

# New Directions for Industrial Policy

## Mounting an “Export Push”

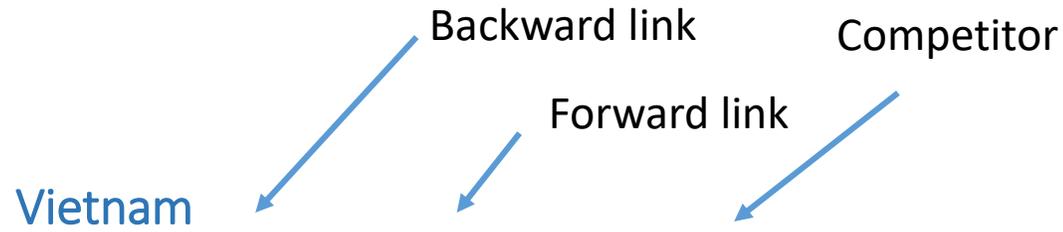
- High social returns to exporting but high private costs of entry
  - The classic rationale for public action
- Entering global markets requires an “East Asian style” export push
  - Broad ownership and effective institutions (leadership from the top)
  - Trade related infrastructure and trade logistics
- Support for regional institutions and infrastructure
- Sustaining an open trading system and rationalizing preferences

# New Directions for Industrial Policy

## Building Firm Capabilities

- Africa lacks capable mid-sized firms (50-70 workers)
  - Management of a growing labor force is a major constraint
- An export push is a major source of capabilities
  - Demanding buyers; repeated relationships
- FDI is another
  - Build effective FDI agencies
- New approaches to management training

# Strengthening Domestic Value Chain Relationships:



FDI Firm				Supplier		Customer		Competitor	
No	Province	Investor	Product	I/No	Inputs	C/No	Products	I/No	Products
1	Hanoi	Japan	Porcelain products	1	Chemical	1	Porcelain products	x	Porcelain products
				2		2	Porcelain products		
				3		3	Porcelain products		
2	Hanoi	Japan	Furniture	4	Glass	4	Furniture	x	Furniture
				5	Wood	5	Furniture	x	Furniture
				6	Wood	6	Furniture		
3	Hanoi	Singapore	Tyres and tubes	7	Chemical	7	Tyres and tubes	x	Tyres and tubes
				8	Chemical	8	Tyres and tubes	1	Tyres and tubes
				9	Chemical	9	Tyres and tubes		
4	Hanoi	China	Electrical equipment	10	Copper wire	10	Transformers	x	Transformers
				11	Copper wire	11	Transformers	2	Transformers
5	Hanoi	Japan	Motor components	12	Iron	12	Auto assembling	x	Auto spare parts
				13	Iron	13	Auto assembling	3	Auto spare parts
				14	Iron	14	Auto assembling		
6	Hanoi	Multiple	Rubber components	15	Rubber materials	15	Rubber products	x	Rubber products
				16	Raw rubber	16	Rubber products	x	Rubber products
				17	Raw rubber	17	Rubber products	x	Rubber products
7	Hanoi	Japan	Metal components	18	Steel	18	Locks	x	Metal products
				19	Steel	19	Misc. mechanical products	x	Metal products
				20	Steel	20	Antennas	x	Metal products
8	Hanoi	Taiwan	Fibre optic cable	21	Special printing ink	21	Optic cable	x	Fibre optic cable
				22	PP bags	22	Optic cable		
				23		23	Optic cable		
9	Hanoi	Japan	Paint	24	Packing bags/boxes	24	Auto assembling	6	Paint
				25		25	Misc. equipment	x	Paint
				26		26	Misc. equipment		
10	Hanoi	Multiple	Paint	27	Chemical	27	Doors	x	Paint
				28	Chemical	28	Concrete	x	Paint
				29	Products for packing	29	Construction	x	Chemicals for construction
11	Hanoi	Multiple	Chemical products	30	Acid	30	Construction	7	Chemicals for construction
				31	Chemical	31	Concrete	x	Chemicals for construction
				32	Chemical	32	Construction		
12	Hanoi	Multiple	Carton products	33	Paper	33	Beer	8	Paper
				34	Paper	34	Milk	x	Carton
				35	Printing	35	Mechanical items	x	Paper bags
13	Hanoi	Japan	Plastic products	36	Aluminum	36	Plastic door	9	Plastic products
				37		37	Plastic door	x	Plastic products
				38		38	Misc. plastic products	x	Plastic products
14	Hanoi	Singapore	Electrical equipment	39	Electric wires	39	Transformers	10	Electric wires
				40	Misc. electronic products	40	Transformers	x	Electric wires
				41	Misc. electric equipment	41	Radio	x	Electric wires
15	Hanoi	Japan	Printing products	42	Printing paper	42	Misc. printing products	11	Printing
				43	Printing paper	43	Misc. printing products	x	Printing
				44	Printing paper	44	Misc. printing products	x	Printing

Note: Out of the 88 identified none refused to participate in the survey. An additional 3 FDI/MNCs were interviewed but their interlinkages were not traced.

FDI Firm				Supplier		Customer		Competitor	
No	City	Investor	Product	I/No	Inputs	C/No	Products	I/No	Products
1	Nairobi	India	Packaging	1	Tissue and hygiene products	1	Dairy/Food processing	x	Carton packaging
				2		2	Dairy/Food processing	1	Packaging
2	Nairobi	Switzerland	Footwear	3	Textiles			x	Misc. rubber products
				4				2	Food and Footwear
3	Nairobi	USA	Automotive Industry			2	Cement	3	Automotive Industry
4	Nairobi	UK	Pharmaceuticals					4	Pharmaceuticals
5	Nairobi	Mauritius	Iron and Steel Industry					5	Steel
								x	Steel
6	Nairobi	Taiwan	Textile	6	Carton manufacturer				
7	Nairobi	UK	Tobacco	7	Printers			6	Tobacco
8	Nairobi	Netherlands	Petroleum	8	General plastics	x	Sugar		
				9	Misc products				
9	Nairobi	USA	Beverages					7	Beverages
10	Nairobi	France	Cement					8	Cement
								x	Cement
								x	Cement

Note: Out of the 14 identified for interview 9 refused to participate in the survey.

# New Directions for Industrial Policy

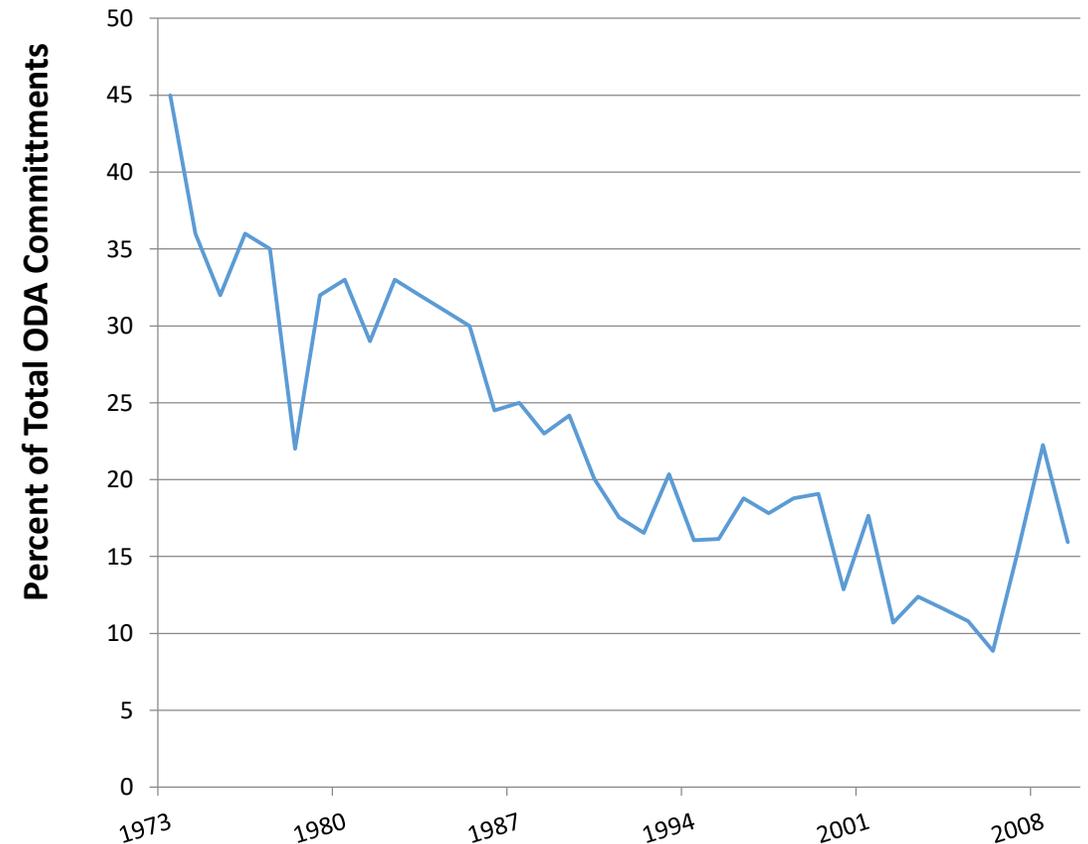
## Creating Clusters

- Agglomeration economies create a collective action problem
- SEZs are a means of creating clusters
  - Bring Africa's SEZs up to world class
- Strengthen the links between firms in the SEZ and domestic suppliers/purchasers
  - "Open architecture" in SEZs and better integration with urban planning

# An Agenda for Aid

- Focus on power, transport and skills
  - Aid will be insufficient but can be leveraged better
- Support for an export push
  - Fix “aid for trade” and tie it to trade logistics
  - Unify and streamline trade preferences (start with AGOA and EPA)
- Capability building
  - Help create world class FDI agencies
  - Support management information and training

ODA for Economic Infrastructure 1973-2009

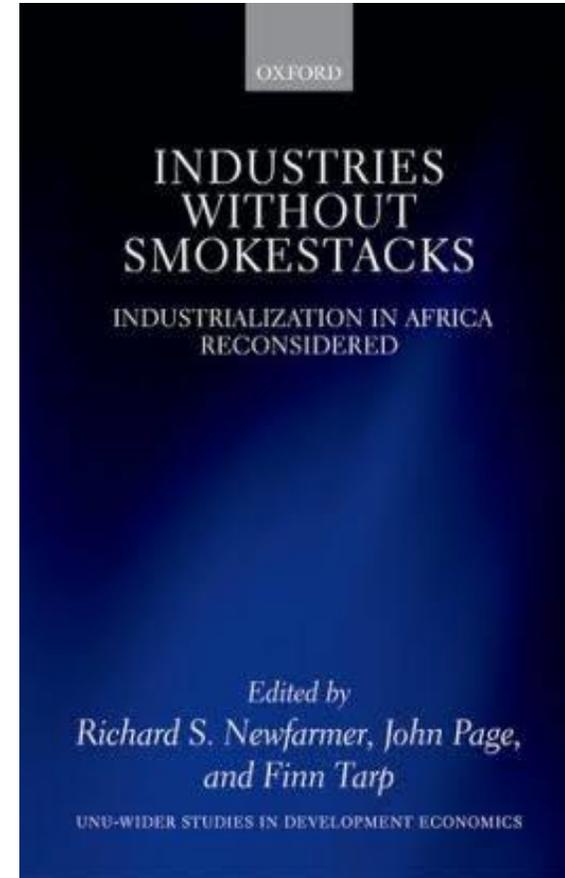


# An Agenda for Aid

- Supporting industrial clusters
  - Focus aid for trade first on making EPZs world class
  - Support institutional reforms to integrate and raise the profile of FDI agencies and SEZ administrations
  - Watch China and learn from successes and failures
- Give African governments the policy space to take initiatives and make mistakes!

# Three Take-Aways

- **Africa can create a new growth miracle, but its form will be much different than East Asia, relying in part on industries without smokestacks**
- **Policies should not focus obsessively on manufacturing...nor ignore manufacturing.**
- **The key to growth will be policies that promote higher-productivity activities and exports... in agri-business, tradable services and manufacturing**





Thank You

