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At the services of development: Service types, development pathways and linkage opportunities

by

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At the service of development

Service types, development pathways and linkage opportunities

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Background

- **Production transformation** is a complex process as it involves interdependent changes across multiple domains and structures of the economy.
- Since the first industrial revolution, **the relationship between services and productive capacity** has changed in time and space, as a result of **changes in technologies and ways of organizing production** (outsourcing, global value chain networks, servicification)
 - Services have become **increasingly heterogenous**, in terms of their VA potential, technology content and opportunities for linkages development across the economy
 - While the service industry is becoming dominant as share of GDP across all countries (including LDCs), the **service industry has emerged from different development processes** and, thus, **acquired different features**

In service of development

How services can contribute in enhancing productive capacity, especially across developing countries?

- What type of services?
- How services add value in GVCs?
- Where services come from? And how inter-sectoral symbiotic relationship develop?
- How services can contribute to local production system (LPS) development
- What service policies for production transformation?

What type of services? (1)

- There is **no agreed definition of what comprises services.**
- Generally speaking, services include **all economic activities other than agriculture, mining, manufacturing, construction and public utilities (electricity, gas and water)**, although the last item is often included as part of services in some studies.
- In terms of the International Standard Industrial Classification (ISIC), **services comprise trade and finance, transport and communication, public administration and defense, and other services.**
- From a GVC perspective, **different types of services contribute to the execution of different productive, technological and organisational functions**

What type of services? (2)

1. *Marketed services*

(a) **Producer services**

(i) finance, banking, credit, insurance, real estate

(ii) professional services: engineering, architectural, legal

(iii) other services: cleaning, maintenance, security

(b) **Distributive services**

(i) transport and storage

(ii) communications

(iii) wholesale and retail trade

(c) **Personnel services**

(i) domestic services: laundry, barbershops, etc.

(ii) hotel, restaurant and catering, etc.

(iii) repairs

(iv) entertainment and recreation

2. *Nonmarketed services*

(a) **Social services**

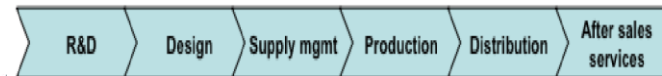
(i) health, medicine, hospitals

(ii) education

(iii) welfare

(iv) public administration, legal, military services

A Taxonomy for Services



TYPE	UPSTREAM			DOWNSTREAM		
	Code	Description	Knowledge intensity	Code	Description	Knowledge intensity
TECHNOLOGICAL	Computer programming, consultancy and related activities ■■■			Computer programming, consultancy and related activities ■■■		
	J6201	Computer programming activities		J6201	Computer programming activities	
	J6202	Computer consultancy and computer facilities management activities		J6209	Other information technology and computer service activities	
	J6209	Other information technology and computer service activities				
	Engineering and scientific services ■■■			Maintenance, repair and overhaul (MRO) ■■		
	M71	Architectural and engineering activities; technical testing and analysis		G452	Maintenance and repair of motor vehicles	
	M721	Research and experimental development on natural sciences and engineering				
	Market research ■■					
	M732	Market research and public opinion polling (for informing product design)				
	Design services ■■■					
M741	Specialised design activities					
Other professional, scientific and technical activities ■■■			Other professional, scientific and technical activities ■■■			
M749	Other professional, scientific and technical activities n.e.c.		M749	Other professional, scientific and technical activities n.e.c.		
OPERATIONAL	Telecommunications ■			Telecommunications ■		
	J61	Telecommunications		J61	Telecommunications	
	Management services ■■			Management services ■■		
	M70	Activities of head offices; management consultancy activities		M70	Activities of head offices; management consultancy activities	
	Employment activities ■			Employment activities ■		
	M78	Employment activities		M78	Employment activities	
	Business support activities ■			Business support activities ■		
N82	Office administrative, office support and other business support activities		N82	Office administrative, office support and other business support activities		
OTHER	Legal and accounting services ■■			Legal and accounting services ■■		
	M69	Legal and accounting services		M69	Legal and accounting services	
	Renting and leasing activities ■			Renting and leasing activities ■		
	N771	Rental and leasing of motor vehicles		N771	Rental and leasing of motor vehicles	
	M773	Renting and leasing of other machinery, equipment and tangible goods				
M774	Leasing of intellectual property and similar products, except copyrighted works					

Notes: "■" = Low knowledge intensity; "■■" = Medium knowledge intensity; "■■■" = High knowledge intensity.

Based on ISIC Rev.4

TYPE	UPSTREAM			DOWNSTREAM		
	Code	Description	Knowledge intensity	Code	Description	Knowledge intensity
FINANCIAL	Financial and insurance activities ■■			Financial and insurance activities ■■		
	K64	Other monetary intermediation		K64	Other monetary intermediation	
	K642	Activities of holding companies		K642	Activities of holding companies	
	K643	Trusts, funds and similar entities		K643	Trusts, funds and similar entities	
	K649	Other financial service activities, except insurance and pension funding activities		K649	Other financial service activities, except insurance and pension funding activities	
	K65	Insurance, reinsurance and pension funding, except compulsory social security		K65	Insurance, reinsurance and pension funding, except compulsory social security	
K66	Activities auxiliary to financial service and insurance activities		K66	Activities auxiliary to financial service and insurance activities		
DISTRIBUTIVE	Retail trade of intermediate goods and components ■			Retail trade of finished goods and components ■		
	G46	Wholesale trade, except of motor vehicles and motorcycles		G47	Retail trade, except of motor vehicles and motorcycles	
	G453	Sale of motor vehicle parts and accessories		G451	Sale of motor vehicles	
				G453	Sale of motor vehicle parts and accessories	
				G454	Sale, maintenance and repair of motorcycles and related parts and accessories	
	Transportation and storage ■			Transportation and storage ■		
	H4912	Freight rail transport		H4912	Freight rail transport	
	H4923	Freight transport by road		H4923	Freight transport by road	
	H4930	Transport via pipeline		H4930	Transport via pipeline	
	H5012	Sea and coastal freight water transport		H5012	Sea and coastal freight water transport	
H5022	Inland freight water transport		H5022	Inland freight water transport		
H512	Air freight transport		H512	Air freight transport		
H52	Warehousing and support activities for transportation		H52	Warehousing and support activities for transportation		
H53	Postal and courier activities		H53	Postal and courier activities		
OTHER	Security services ■			Security services ■		
	N80	Security services		N80	Security services	
	N81	Services to buildings and landscape activities		N81	Services to buildings and landscape activities	
	Information service activities ■■			Advertising and market research ■■		
	JG31	Data processing, hosting and related activities; web portals		M731	Advertising	
			M732	Market research and public opinion polling		
			M742	Photographic activities		

Notes: "■" = Low knowledge intensity; "■■" = Medium knowledge intensity; "■■■" = High knowledge intensity.

Based on ISIC Rev.4

Where services come from?

- **Among developed economies and fast industrialisers with a broad production base**, the producer services industry and KIBS companies emerged from:
 - outsourcing services from manufacturing
 - demand pull from agriculture industrialisation
 - demand pull from high tech manufacturing industries
 - technology push from high tech manufacturing industries

And resulted in symbiotic co-value creation processes of production transformation and capabilities development

Where producer services come from?

- High tech manufacturing industries like aerospace but also...
- Highly industrialised countries like the Netherlands, Spain and Italy specialising in the food industry and export have developed production technologies with integrated producer services for freshness, logistics, etc.

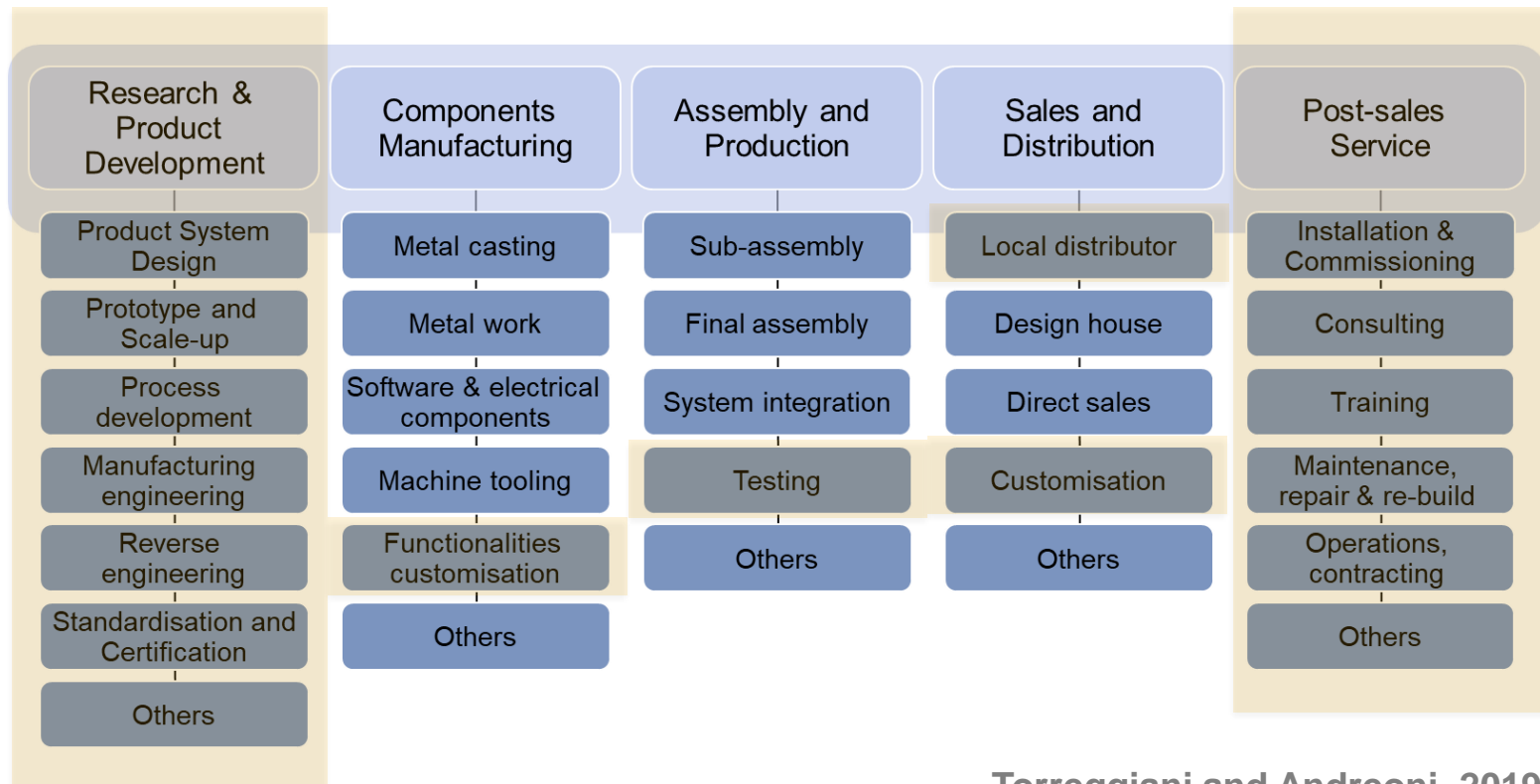




Where services come from?

Mining equipment VC in South Africa:

Production services are critical and symbiotic to manufacturing (& other sectors) development



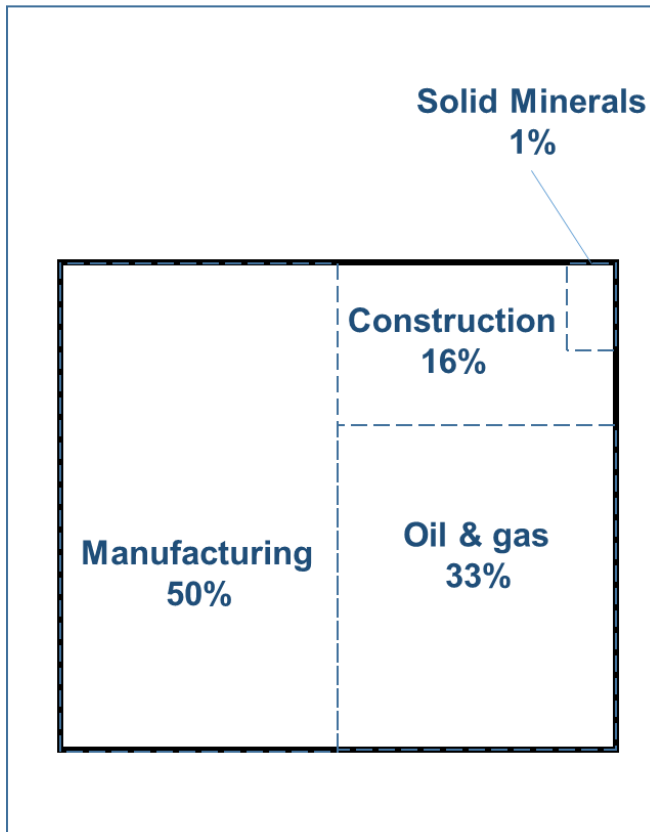
Where services come from?

- **Among developing economies with a limited production base**, the producer services industry is mainly driven by:
 - demand pull from financial sector
 - demand and technology pull from trading activities and infrastructures
 - technology push from SMEs of diaspora entrepreneurs

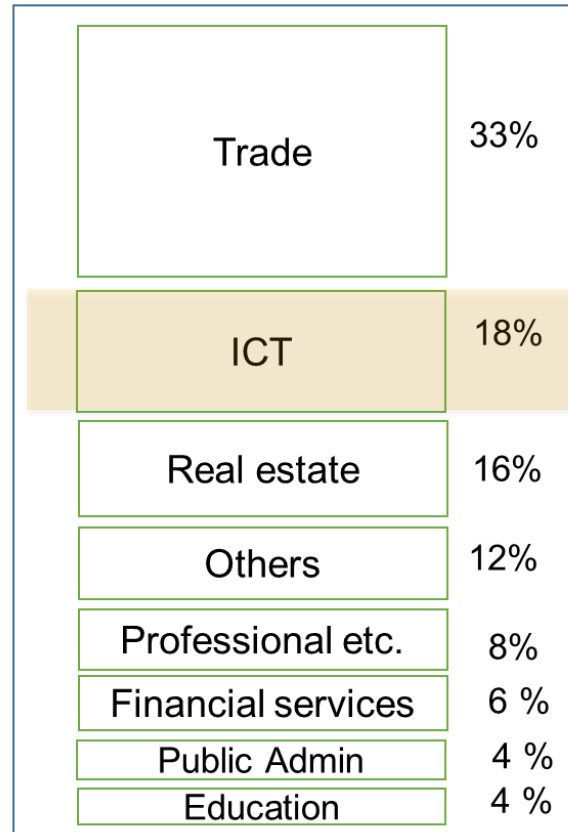
The impact on productive transformation and linkages remain more limited and in many cases de-linked from value creation (more value extraction along value chain)

The Nigeria ICT case

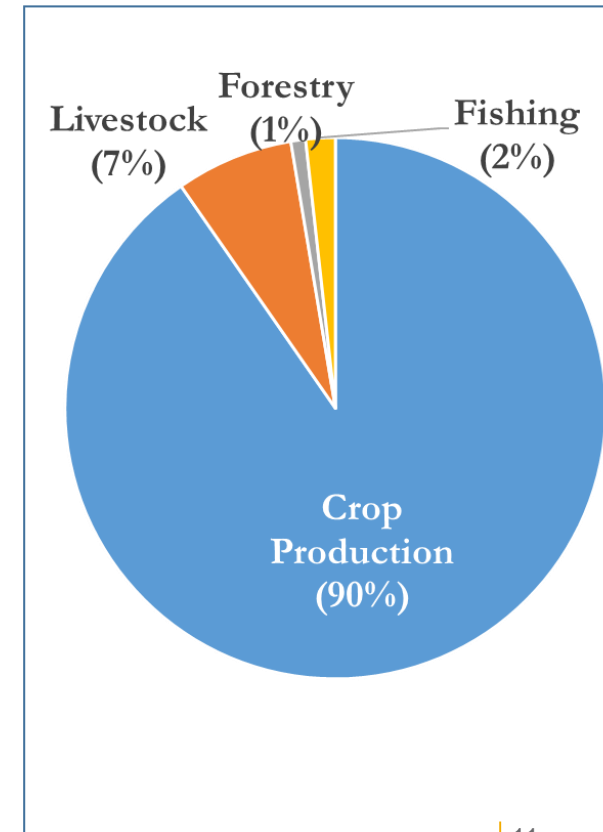
INDUSTRY (19%)



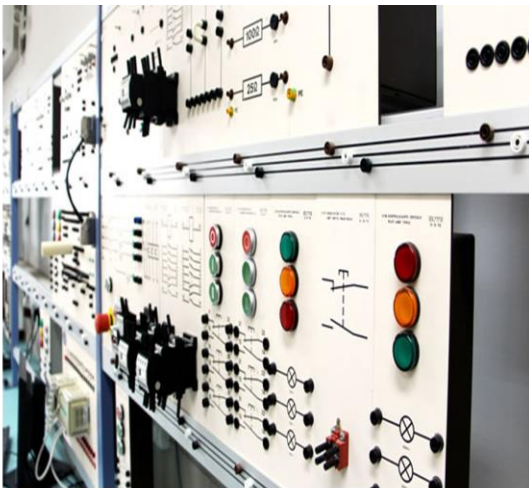
SERVICES (56%)



AGRICULTURE (25%)



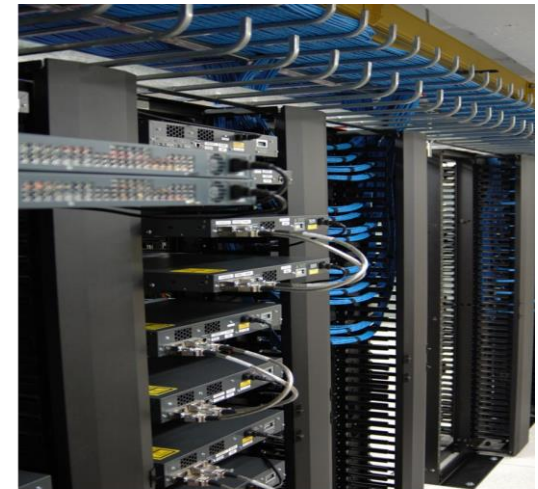
The Nigeria ICT case: linkage opportunities and challenges



Instrumentation and control system for Oil & Gas industry



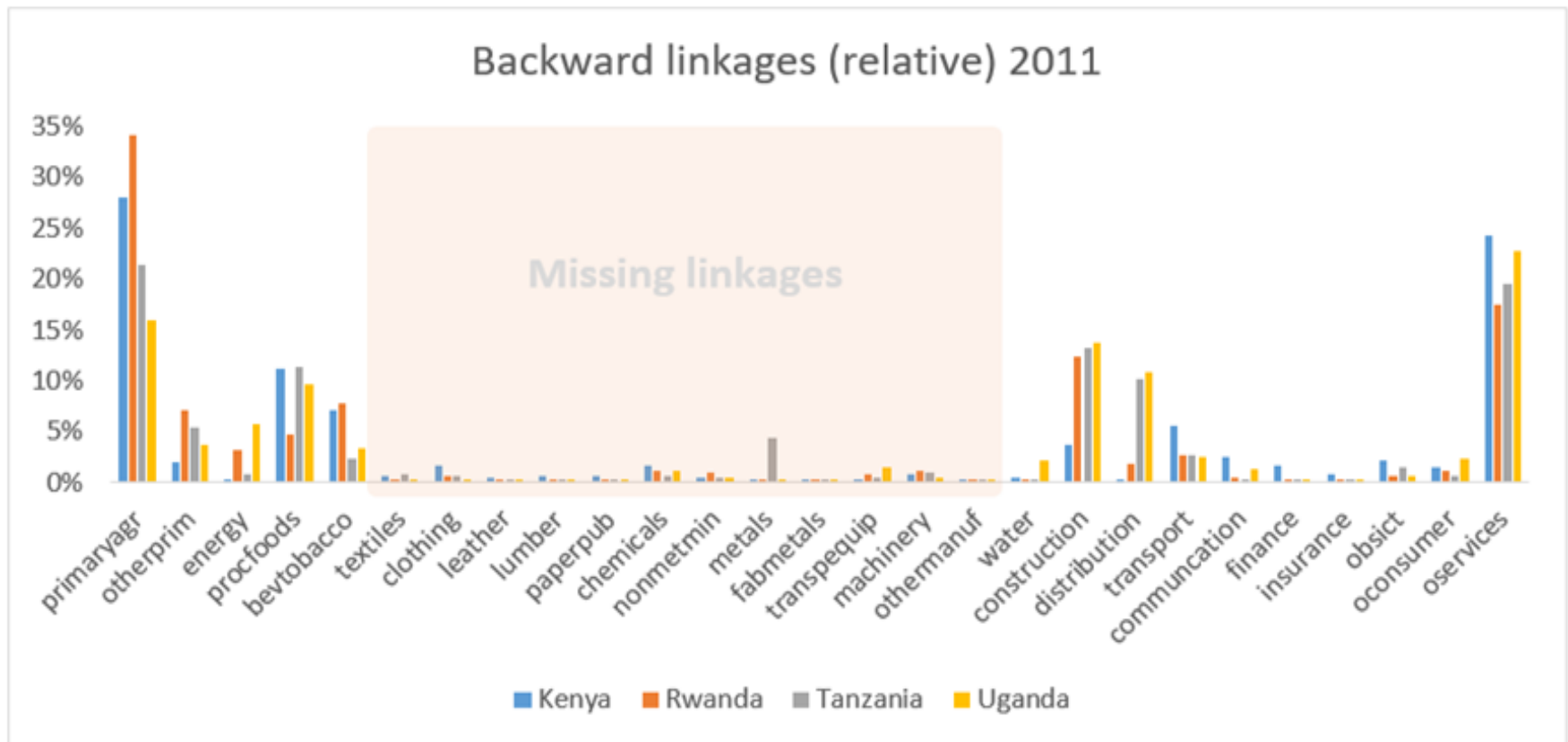
Tool for Measuring Nitrogen Requirement of Crops



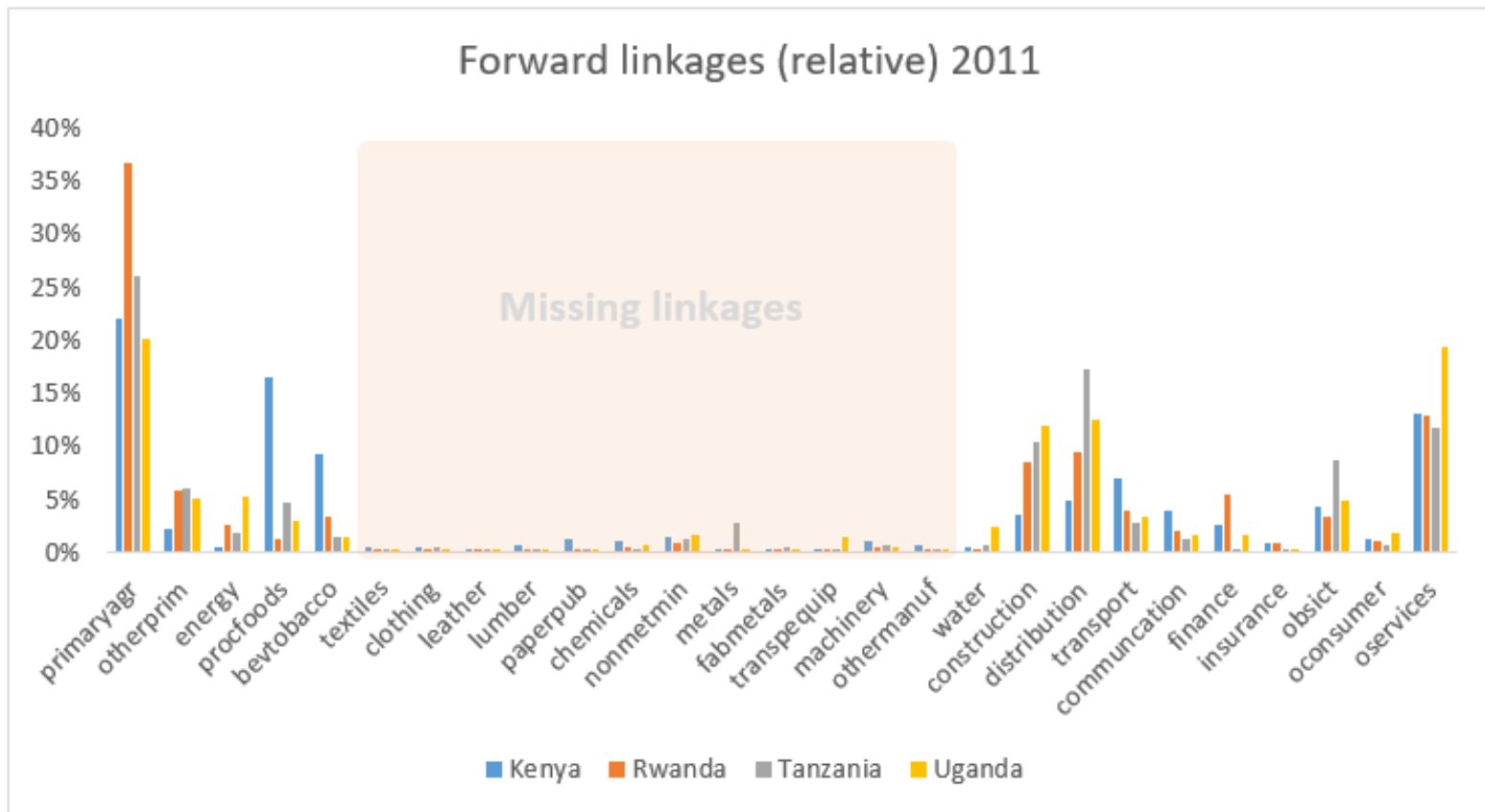
Routing and switching system

- Premature de-industrialisation > limited demand pull and opportunities for scaling up KIBS SMEs
- Technology transfer and absorption capabilities

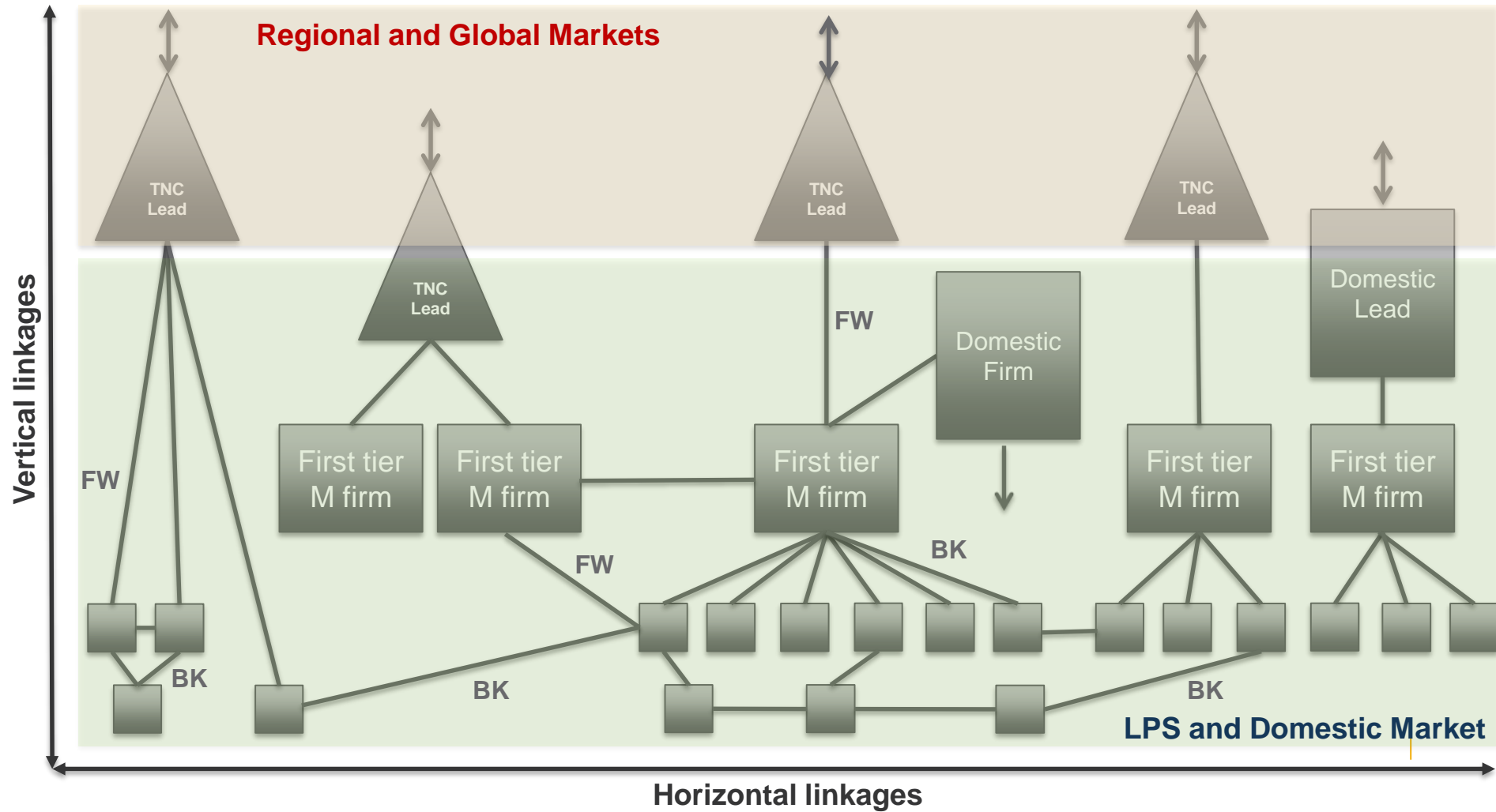
Missing manufacturing BK linkages in EAC



Missing manufacturing FW linkages in EAC



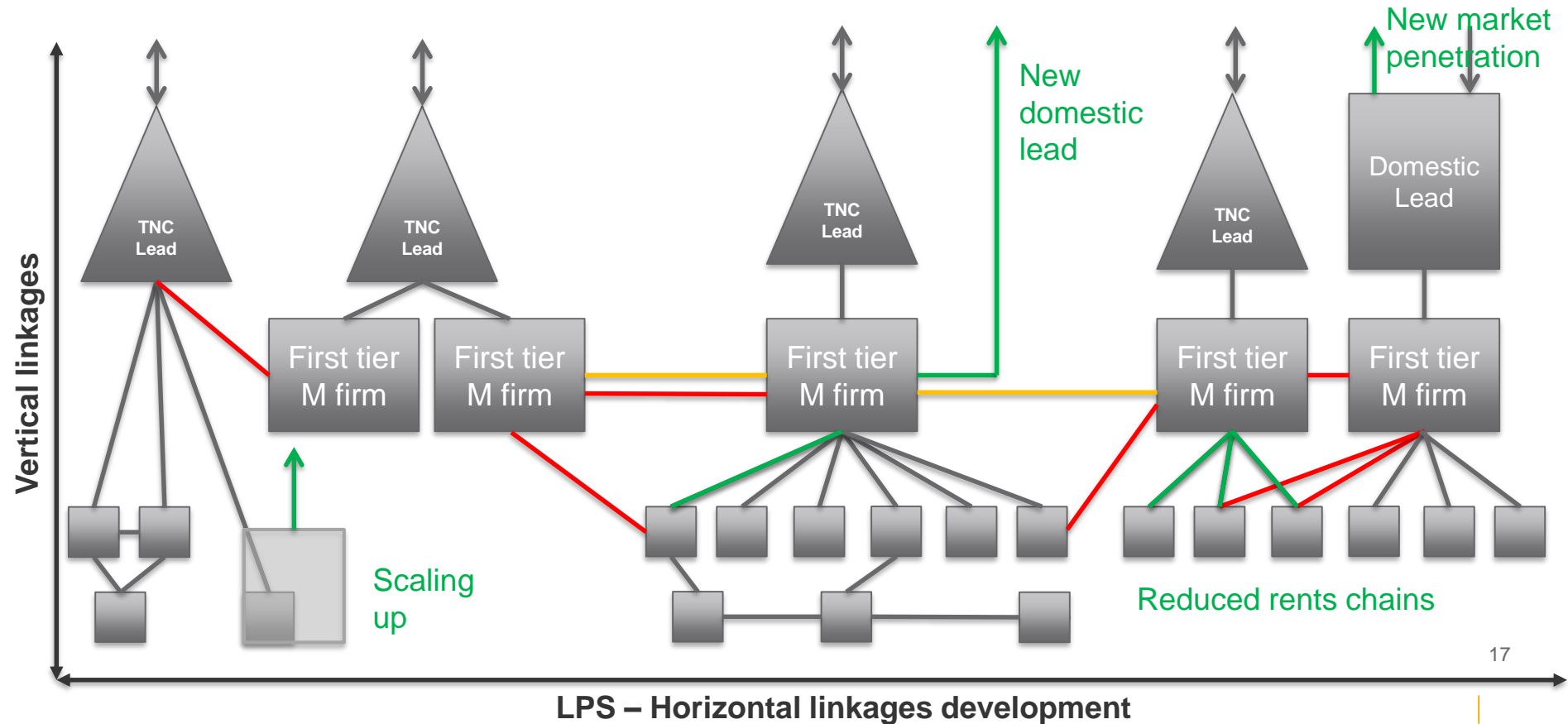
How producers services can contribute to productive capabilities development? A LPS approach



How producers services can contribute to productive capabilities development? A LPS approach

- Offering opportunities for linkages development
- Providing technology and organisational services to improve firm level micro-efficiency, quality standards, organisational processes
- Reducing rent-chains associated with concentration of information and access to markets
- Supporting SME companies in scaling-up and using products as vectors of services
- Offering opportunities for strategic repositioning along the value chain in the face of fierce international competition

By increasing opportunities for production linkages development and technological linkages
By increasing value distribution/creation opportunities (reduced rents chains)



What service policies for production transformation?

- Service policies must start from acknowledging service heterogeneity and the importance of **selective support of knowledge intensive producer services for broader production transformation across sectors (e.g. opportunities in agro-industries, mining, light mfg)**
- Service policies must realise that the organic processes of producer services development in developing countries are limited by their thin production base (limited demand pull and technology push) – thus **need to support producer services development pathways**

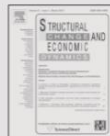
What service policies for production transformation?

- Service policies should be integrated in broader industrial policies to **exploit complementarities in sectors development** (e.g. supporting mining equipment industry, while supporting software service development for sensors actuators, data and digital mining)
- Service policies should **support context-specific technological and innovations capabilities developed around service industries** (for example logistic services, MRO services and reverse engineering for design and customisation)



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