



DIGITALISATION AND THE FUTURE OF MANUFACTURING IN AFRICA

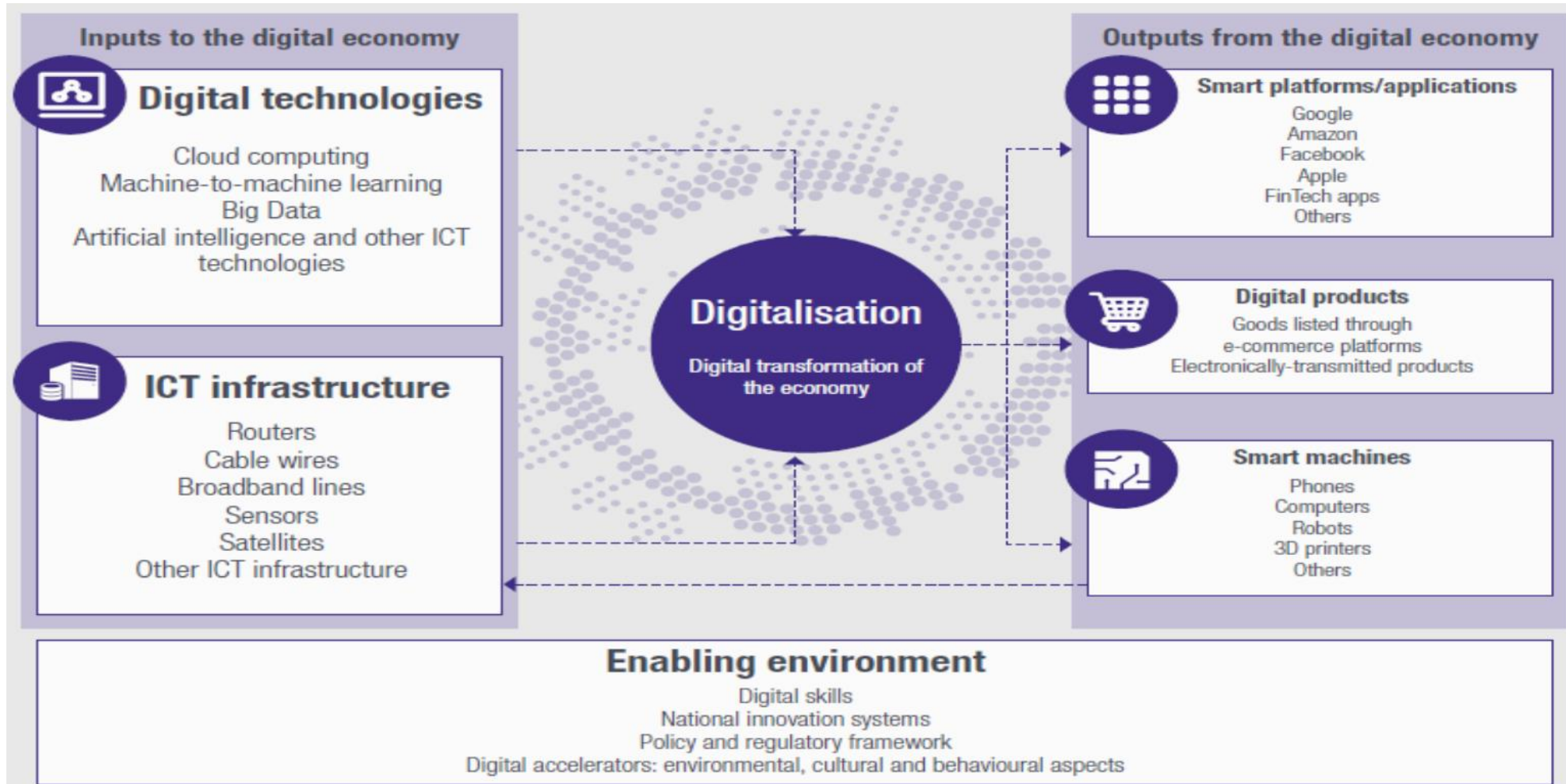


Karishma Banga
19th April 2018

OVERVIEW

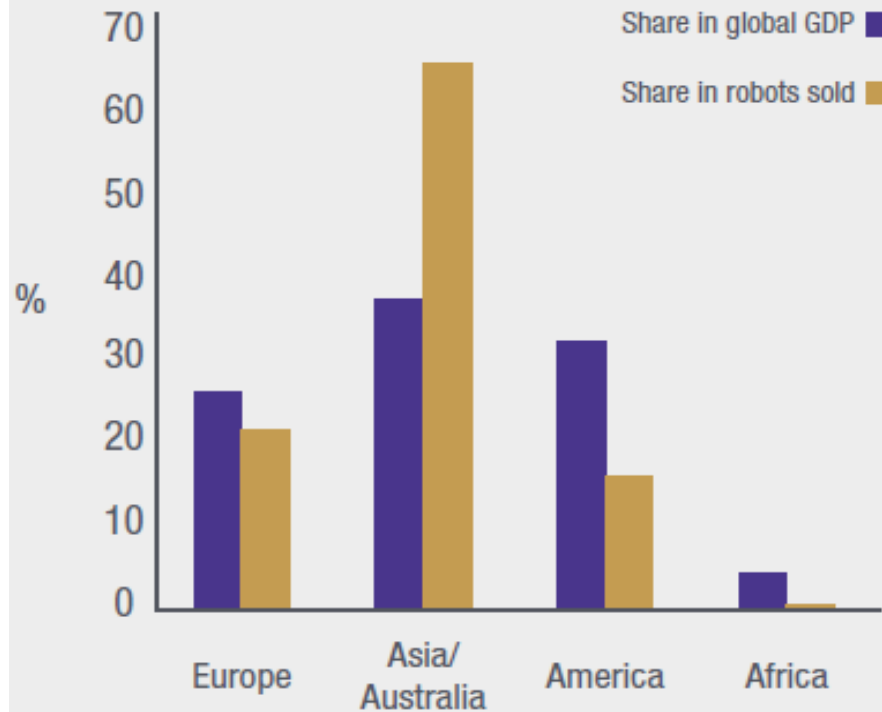
- Conceptualising the digital economy
- Main findings
 - New empirical evidence for low-income countries
- Opportunities and Challenges for African countries in the digital economy
- Policy-approach

WHAT IS THE DIGITAL ECONOMY?

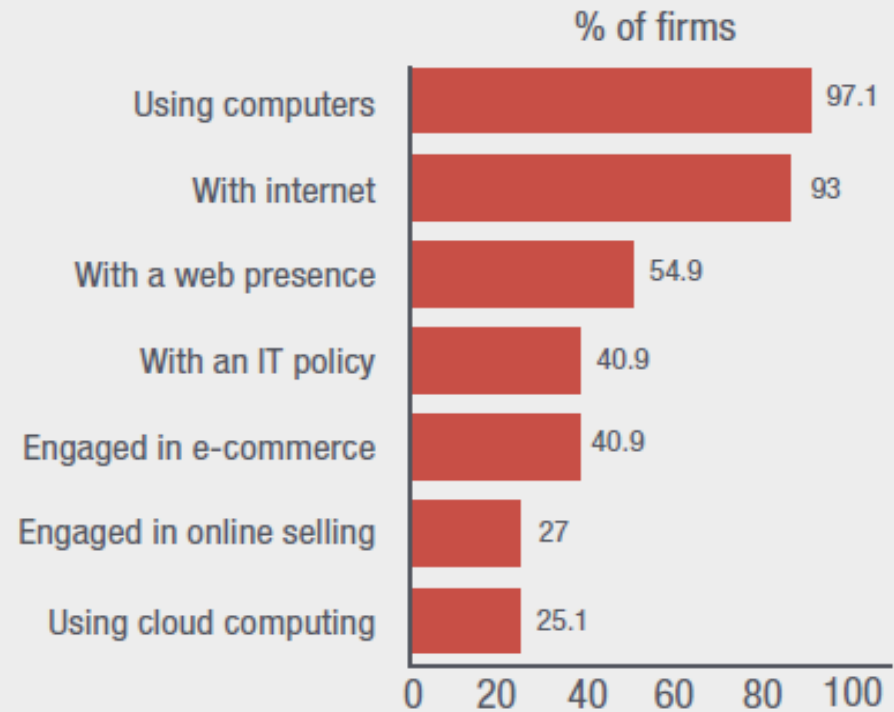


LOW LEVELS OF DIGITALISATION IN AFRICA

Regional share of the number of industrial robots shipped globally in 2015 (%)



Use of internet in Kenyan manufacturing



BROAD FINDINGS FROM ECONOMETRIC MODELLING

Dependent variable; labour productivity in the manufacturing sector of low and middle income countries.

1. Increase in internet penetration, and technological progress in general, increases manufacturing labour productivity
2. Impact of internet penetration is lower for low income countries (and SSA) compared to middle-income countries (and non-SSA countries)
3. Impact of internet penetration increases with skill-development

LOWER IMPACT OF INTERNET PENETRATION IN LICS

Average impact of doubling of internet penetration on manufacturing labour productivity (%)



3.3%

Low-income countries

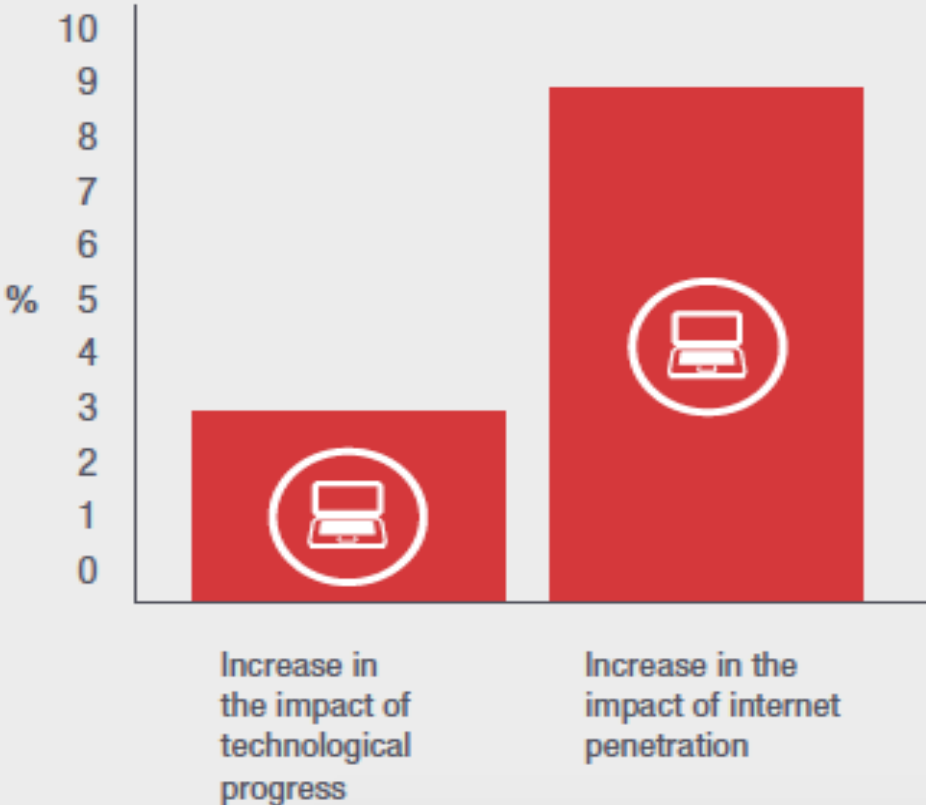


11.3%

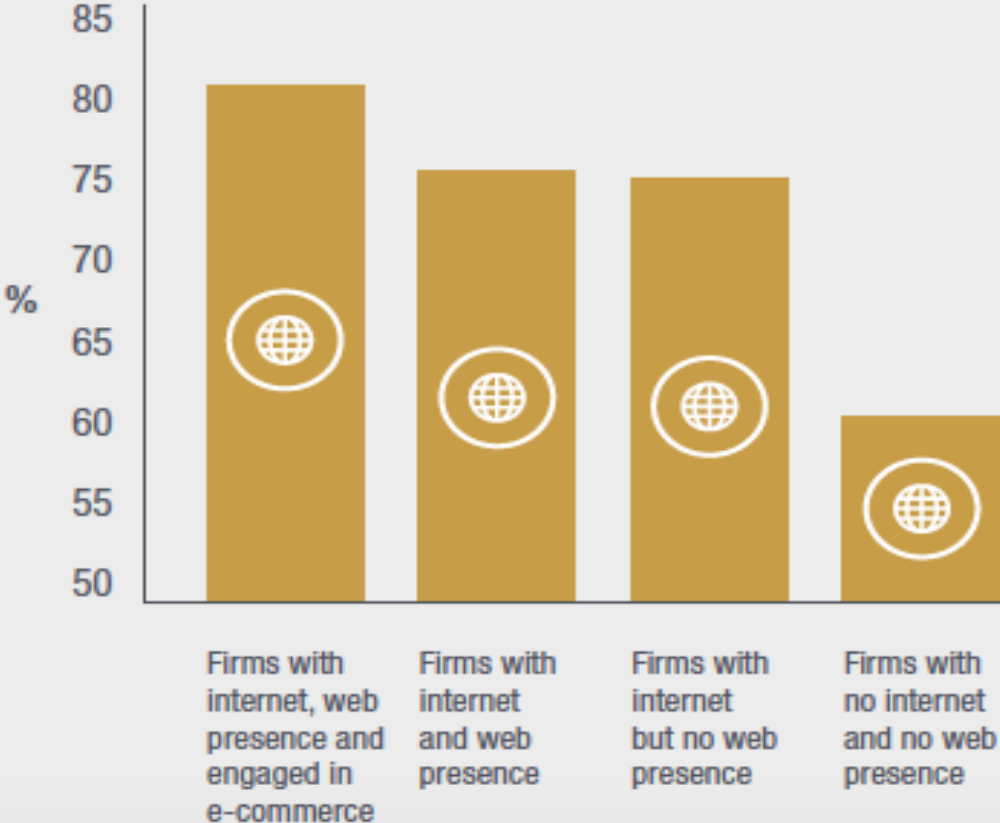
Middle-income countries

IMPORTANCE OF TARGETED SKILLS-DEVELOPMENT

Increase in the impact of digitalisation on manufacturing labour productivity, with one unit increase in Human Capital Index



Share of skilled employment, by level of digitalisation in Kenyan manufacturing firms



OPPORTUNITIES FROM DIGITALISATION IN AFRICA

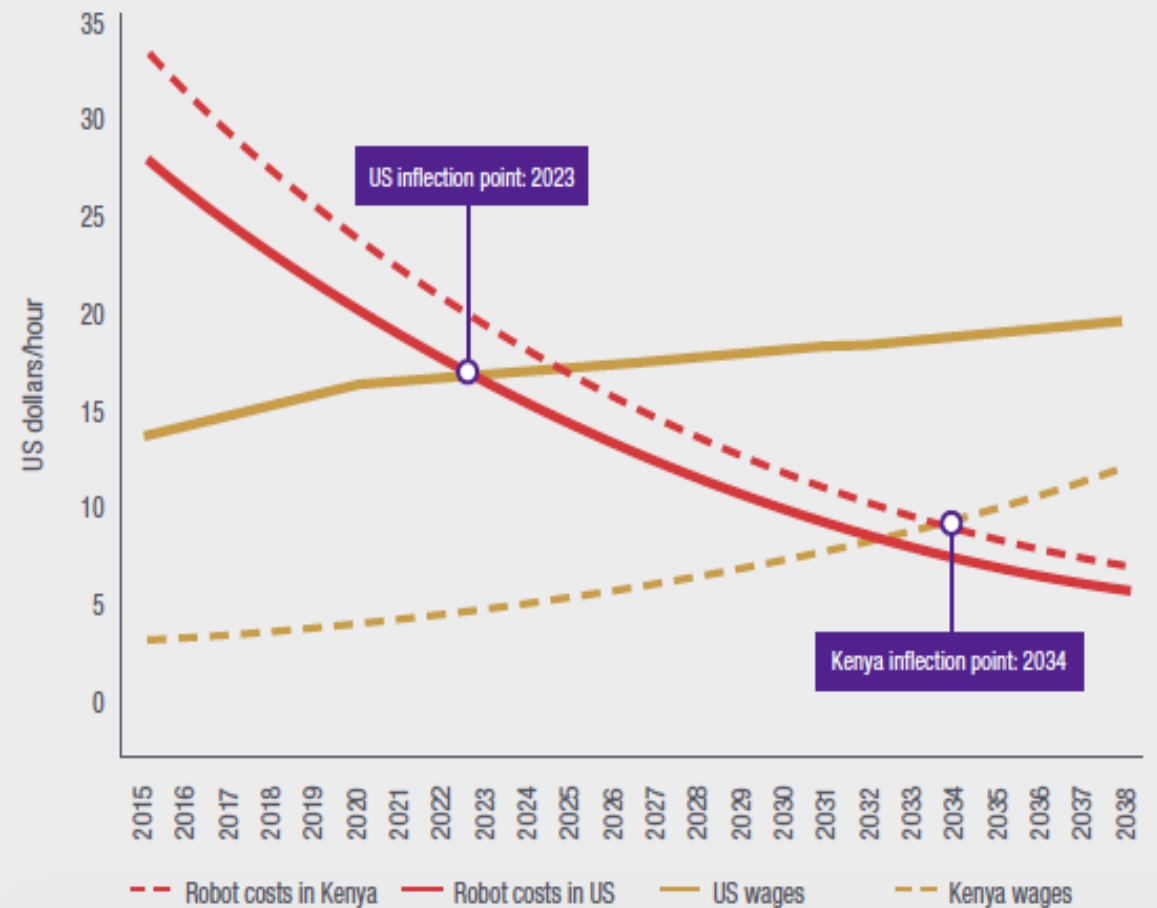
- Lowering costs of trade and coordination; increasing GVC participation
- Lowering costs of production and entry into the export market
- Improvements in productivity; boosting output and exports.
- Case studies; Funkidz and A-Z factory

A to Z Factory in Tanzania



CHALLENGES FOR AFRICA IF THE DIGITAL DIVIDE PERSISTS

- Re-shoring; cost of capital is rapidly falling in developed economies, while wages in developing countries are rising.
- 250,000 jobs have already been re-shored to the US since 2010.
- 126 African jobs lost per US company re-shored.
- Slow-down of convergence in growth for developing countries.



CONCLUSION

A two-pronged approach is needed in Africa;

Boost traditional manufacturing	Digitalise manufacturing
Window of opportunity for 15-20 years	Invest in internet and digital technologies
Build industrial capabilities to move into higher-value added manufacturing	Targeted skills-development
Address basic constraints to manufacturing; leapfrogging not possible without improving infrastructure, roads, ports etc.	Promotion of technological innovations, well embedded innovation hubs, and effective PPPs.

THANK YOU!

You can read the full report at :
<https://set.odi.org/digitalisation-manufacturing/>.