

United Nations Conference on Trade and Development

**WHAT'S NEXT FOR COMMODITY MARKETS?
INFORMAL INTERACTIVE DIALOGUE ON COMMODITY MARKETS**

Thursday, 31 March 2022, 10:00am - 6:00pm (NY)

Trusteeship Council Chamber, United Nations Headquarters, New York (and online)

The role of the State in technology development & adoption in LDCs and CDDCs in particular

By

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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.



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UNGA Informal Dialogue on Commodity Markets, 2022

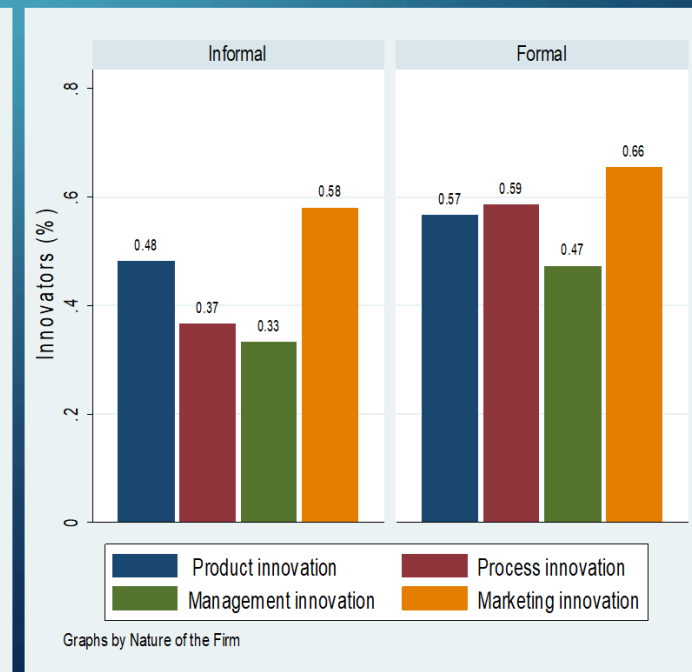
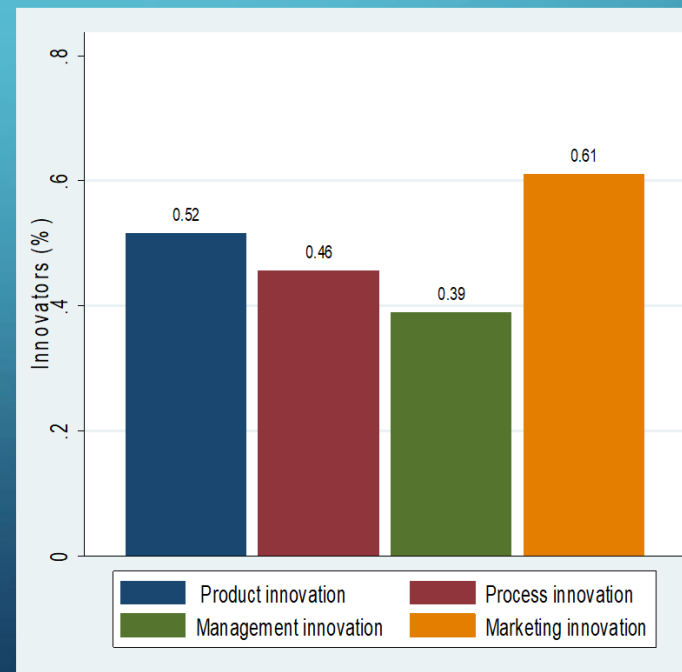
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- The background is a dark teal color with decorative white circuit-like lines in the corners. These lines consist of straight segments connected by small circles, resembling a network or data flow diagram. The lines are most prominent in the top-left, top-right, and bottom-left corners, with some extending towards the bottom-right corner.
- Under-the-radar innovation and challenges to LDCs in an era of disruption
 - Drivers of innovation in Open National Innovation Systems and the role of the state
 - The role of digital tech in post-Covid19 recovery
 - Digital transformation, enabling factors and the role of the state
 - Policy recommendations

Under-the-radar Innovation and Challenges to LDCs in an Era of Disruption

- The prevalence of the under-the-radar (URI) innovation in LDCs (Fu, 2020)
- Firms use URIs to survive and grow under the constraints .
- But LDCs cannot use URIs meet the challenges in 4th IR and other disruptions.

Proportion of Firms Active in Innovations, Ghana 2015.

Source: Fu (2020)

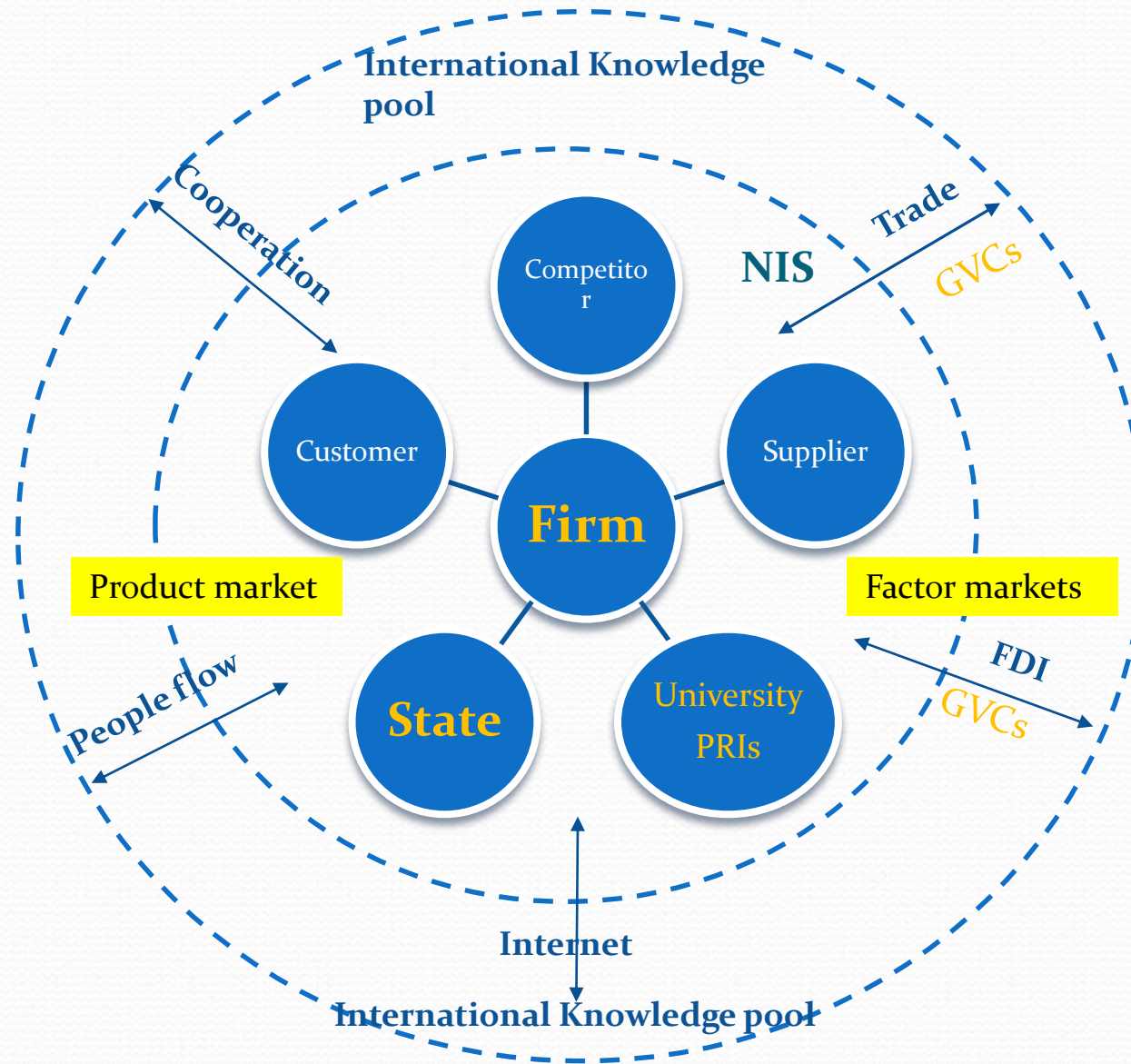


Graphs by Nature of the Firm



Source: Averson & author's own

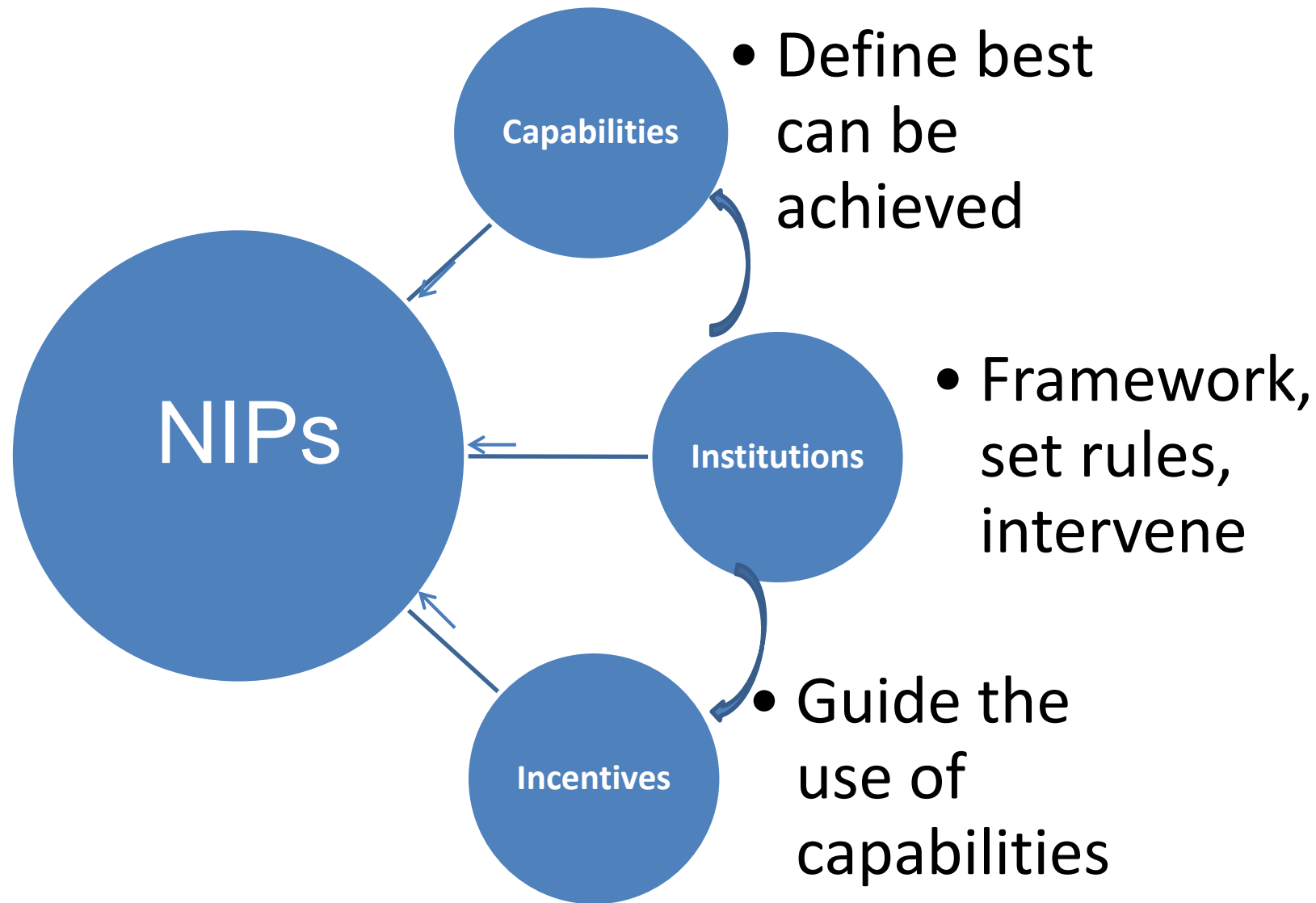
Drivers of innovation in Open National Innovation Systems and the role of the state



Open National Innovation System

- Embedding NIS into the global innovation system
- Foster indigenous innovation while opening up to external knowledge & resources.
- **Multiple driving forces:** the state, the private sector and global forces; at different stages of innovation chain & sector.
- Multiple knowledge diffusion channels.
- A *dynamic* combination evolving over time.

National Innovation Performance



The role of technology in post-Covid19 recovery

- Build back a more inclusive and sustainable world
- Digital technology and inclusive society
- Clean technology and sustainable development
- S&T and more productive agriculture and extractive sectors

Digital windows of opportunity,
enabling factors and the role of the state

A combination of international technology transfer and
indigenous under-the-radar innovative applications

Important for LDCs and CDDCs

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**Indian Agriculture in the Digital Age:
How can it help the farmers?**

Findings From IDMODEL Project

- **Barriers** that hinder the adoption and usage of short-video platforms.
 - ✓ Substandard infrastructure,
 - ✓ The cost of devices/networks
 - ✓ The worries of using mobile APPs (i.e., lack of confidence and security concerns),
 - ✓ A lack of awareness of the opportunities offered by the digital platform

ENABLING FACTORS: Findings From IDMODEL Project

- Investment in digital infrastructure - accessible
- Significant price reductions in broadband and mobile phone – affordable
- Institutional support. Regulations introduced to safeguard the rights and interest of parties involved in e-commerce
- Technological advancement: short videos better satisfy users' demands for expression and communication. Also AI to help improve videos, and remove videos that violate the regulations.
- Threshold level / basic Digital skills

Policy recommendations

1. There is a role of the state in helping LDCs in laying the foundation for technology development and adoption.
2. Development of an Open National innovation system: Two drivers
3. Strengthen education, R&D and development of STI capabilities
4. Policy to help society to harness STI benefits & reduce risks (UNCTAD, 2017)
5. Facilitate access to digital technology: improve infrastructure & lower costs.
6. Design bespoke training programs, esp. for women and youth.
7. Raise awareness and inspire people.
8. Strengthening regulations to guide the direction of technical change

Global partnership & tech. transfer



- 2030 global Sustainable Development Goals (SDGs)
- UN Commission on Sci & Tech for Dev (CSTD)
- UN Technology Transfer Mechanism (TFM)
- UN Technology Bank for LDCs
- UNIDO, UNCTAD, WIPO, ITU, UNESCO (ind + STI, ind+uni)
- UN Partnership Accelerator

Reference

- Fu, X. (2015) *'China's Path to Innovation'*, Cambridge University Press.
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- Fu, X., Ghauri, P., Ogbonna, N. and Xing, X. (2022) 'Platform technology and entrepreneurship in the base of the pyramid'. *Technovation*.