Learning by Exporting in Africa: GVCs (indirect exports) versus Direct Exports

Saul Estrin, Department of Management, London School of Economics

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Paper for presentation at the Workshop: Reshaping Global Value Chains: Approaches and Insights from Economics. Rome September 16th, 2024

EXPORTING MODES AS LEARNING STRATEGIES OF AFRICAN FIRMS: THE MODERATING EFFECT OF ABSORPTIVE CAPACITY

Lilac Nachum
Baruch College, City University New York
55 Lexington Avenue, New York, N.Y. 10010-5585
Lilac.Nachum@baruch.cuny.edu

Saul Estrin
Department of Management, London School of Economics
Houghton Street, London, WC2A 2AE
s.estrin@lse.ac.uk

Yuan Hu
Imperial College Business School
South Kensington Campus, London, SW7 2AZ
y.hu18@imperial.ac.uk

Key words: Export strategies, learning, innovation, African firms, Absorptive capacity, GVCs

Acknowledgements
We acknowledge with gratitude comments of participants at presentations at the 2022 Africa Academy of Business and Development Accra Conference, an AIB Fellows Café, and seminars at Strathmore University, King's College London, and Florida International University. We also thank Aya Chacar, Caroline Kariuki, Godfrey Madigu, Klaus Meyer, and Steven Altman for insightful comments on earlier drafts of the paper.

Outline

- Research Issues
- Different models of learning through exporting: spillover effects and learning mechanisms
- Hypotheses
- Data and Results
- Discussion and Conclusion

Principal Finding

In the African context, direct exporting may provide more effective learning opportunities for firms than GVC participation (indirect exporting).

Research Questions

RQ 1: how does the choice of exporting strategies – whether direct or indirect (GVC) – affect the **export** and **innovation** performance of African firms?

RQ2: How does the absorptive capacity of these firms and the broader environment moderate the strength of these relationships?

Africa's Top Export Partners

EFFECTIVENESS OF FIRMS' DEVELOPMENT MODELS: INCONCLUSIVE EVIDENCE ACROSS EMERGING MARKETS

LSE

	Via GVCs	Directly
Success stories	South-East Asia; China's phenomenal growth; Vietnam Taiwan	Japan, South Korea
Less successful ones	Latin America	Millions of SMEs across emerging markets

EFFECTIVENESS OF FIRMS' DEVELOPMENT MODELS: THE EVIDENCE FOR AFRICA

	Via GVCs	Directly
Success Stories	Morocco car industry	Kenya fresh cut flowers
Less successful one	Local firms in Ethiopia	Myriad of M/SME across Africa

1. EXPORT EFFECTS: THE (INCONCLUSIVE) IMPACT OF GVC PARTICIPATION AND FIRMS' UPGRADING

LSE

Upgrading effects GVC Participation

Learning from foreign firms, by observation and knowledge diffusion (absorptive capacity)

- Technology
- Managerial skills

Access to global markets

Gereffi, 2018; Coe & Yeung, 2015; Görg & Seric, 2016; Whitfield, et.al., 2020.

Downgrading effects of GVC Participation

Lock-in in low-cost, low-value added activity

Short versus long-term gains

Humphrey & Schmitz, 2002; Tokatli, 2012; Taglioni & Winkler, 2016; World Bank, 2020

Appropriate for contemporary era?

- Automation
- Resistance to globalization.

1: EXPORT EFFECTS CTD: GLOBAL INTEGRATION : DIFFERENT MODELS OF LEARNING AND UPGRADING:

	Via GVCs	Directly
	SUPPLY	
Specialization	Narrow – focus on one activity within the GVC; Intermediaries	Broad – entire GVCs; Final goods
Suppliers	Few, concentrated in a narrow industrial range	Many, spread across different industries
Upgrading path	Upgrade along the value chain – from low to high value-added activities. Vertical growth	Market growth, scale of operation, expansion of geographic scope (from domestic to regional, global). Horizontal growth
Critical success factors	Costs, speed, flexibility, compliance with lead-firms specifications and standards	Design, innovation, marketing, and branding
	DEMAND	
Customers	Few, typically very large, B2B	Multiple, anonymous, B2C (B2B)
Customers' location	In the home country	Worldwide
Customer relationships	Increasingly relational	Transactional

2: INNOVATION EFFECTS: LEARNING MECHANISMS OF DIRECT AND INDIRECT EXPORTS

	Indirect (Via GVCs)	**Directly**
Learning channels	Knowledge transfer; feedback from buyers	Direct engagement with suppliers, final consumers; remote observation; emulation
Specialization and learning scope	Narrow – focus on one activity within the GVC. Core-competence focus	Broad – across entire value chains
Growth trajectory	Vertical. Upgrade along the value chain – from low to high value-added activities.	Horizontal. Market growth, expansion of scope of operation and geographies (from domestic to regional, global).
Critical success factors	Speed, cost, flexibility	Technological development, brand building, supply chain management
Consumers and nature of engagement with them	Few, typically very large, B2B, predominantly relational, repeated transactions	Multiple, anonymous, B2C and B2B, Transactional relationships
Geography of sales	Focused, concentrated in the firm's home country	Diversified, takes place worldwide

HYPOTHESES:

H1a: In African SMEs, the export intensity of firms that export directly is stronger than that of those exporting indirectly (via GVCs).

H1b: In African SMEs, the innovative performance of African firms that export directly is stronger than that of those exporting indirectly (via GVCs).

HYPOTHESES: Moderating effects of absorptive capacity on learning effects

H2: The moderating effect of the *learning environment* on the relationship between exporting strategy and innovation is stronger for direct exporters than for indirect exporters.

H3: The moderating effect of *strong appropriability regimes* on the relationship between exporting strategy and innovation is stronger for direct exporters than for indirect exporters.

H4: The moderating effect of *firms' stock of knowledge* on the relationship between exporting strategy and innovation is stronger for direct exporters than for indirect exporters.

H5: The moderating effect of *managerial experience* on the relationship between exporting strategy and innovation performance is stronger for direct exporters than for indirect exporters.

DATA AND METHOD 1

44,765 African firms from 46 African countries included in World Bank Enterprise Surveys (WBES) conducted from 2006 through 2020 yielding 69 country-years.

- 22,537 observations after excluding foreign-owned firms and firms with missing observations. Exporters =4394

Dependent Variables

- DV1 – *Export intensity* - export % of total sales
- DV2- *Firms' innovation* – count as to whether or not (0) the firm introduces new products or new processes (1) or both (2)

DATA AND METHOD 2

Independent Variables

- Main IV –Direct exporters/Indirect Export via GVC/both (2,152 firms direct export only; 1308 export indirectly only; and 934 do both)
- Moderating effects: firms/institutional characteristics
  - learning environment operationalized by the global innovation index (GII)
  - PR protection is measured by the property rights index of the Heritage Foundation
  - Firms' stock of knowledge is operationalized by R&D investment (Yes/no)
  - Managerial experience is operationalized by the number of years the firm's top manager has been working in the firm's main sector.

RESULTS H1a and H1b

Export Intensity and GVC (Heckman model: level 2)

:	**export intensity**
Indirect export -GVC	-19.522
	(4.741)
	[0.000]

Innovation and GVC (ordered logit)

Indirect export	0.381***
	(0.061)
Direct export	0.476***
	(0.053)
Direct + indirect	0.671***
	(0.071)

Moderating effects of absorptive capacity at the country level

1. Learning environment: no significant moderating effects

Learning environment (H2)	0.065***
	(0.006)
Learning envir. * Indirect export	0.005
	(0.017)
Learning envir. * Direct export	0.010
	(0.013)
Learning envir. * Direct + indirect	-0.001
	(0.022)

2. Appropriability regimes: positive effects on GVC and direct exporting

PR regime (H3)	0.006***
	(0.002)
PR regime * Indirect export	0.011**
	(0.005)
PR regime * Direct export	0.015***
	(0.004)
PR regime * Direct + indirect	-0.001
	(0.006)

Moderating effects of absorptive capacity at the firm level

3. Firm stock of knowledge: negative moderation for GVCs

Knowledge stock (H4)	1.689***
	(0.051)
Knowledge stock * Indirect export	-0.409***
	(0.149)
Knowledge stock * Direct export	-0.147
	(0.122)
Knowledge stock * Direct + indirect	-0.527***
	(0.161)

4. Managerial experience : Positive moderation for GVCs

Manager experience (H5)	0.001
	(0.002)
Manager experience * Indirect export	0.012**
	(0.006)
Manager experience * Direct export	0.003
	(0.004)
Manager experience * Direct + indirect	0.016**
	(0.007)

Discussion: Main Result

Findings challenge the commonly-held view regarding participation in GVC as the most effective development path for emerging market firms (Gereffi, 1999, 2018; Murakami, & Otsuka, 2020)

WHY? THE AFRICAN CONTEXT AS BOUNDARY CONDITIONS

Specifically Africa's comparative advantage in natural resources diminishes investors' incentives to invest in local capability development and undermines learning opportunities via GVC participation

- African firms concentrated in low value-added activities
- large gap between the knowledge base of African firms and that of the global brands investing in Africa further undermines learning opportunities

Discussion: contingent effects on learning at the country level

1. **Learning environment (H2):**

Weak contingent effects explained by poor learning environment: shortage of R&D funds and small pool of human capital. Limited learning opportunities of value in export markets, regardless of exporting mode

2. **IPR regime (appropriability) (H3):**

Clear positive direct and moderating effects similar for both export modes. IPR a key element building absorptive capacity for all forms of learning by exporting, slightly stronger for direct exporters

Discussion: contingent effects on learning at the firm level

3. Firm stock of knowledge (H4):

Direct effect positive: R&D increases innovation.

But for indirect exporters, R&D has a negative effect. Perhaps because African firms severely resource constrained. Or that R&D is in informal firms or is highly market specific.

4. Managerial Experience (H5):

Positively moderates indirect exporting (GVC). Confirms strong impact of managerial experience on performance found in studies of African firms - supports view that managerial capabilities have high premium in countries with weak institutions.

Overall

Both country level factors and firm specific characteristics influence the process of learning by exporting, whether the mode is via GVC or direct. National and organisational absorptive capacity are both critical to the spillover process.

Conclusions: Does Africa "need to grow like China?"

- Our findings cast doubts on role of GVC-based model in Africa , in contrast to East Asia.
- This is probably explained by the limited interest of both global brands and African firms.
  - The continent's infrastructural and institutional deficits diminish global brands' interest in locating export-oriented production in Africa.
  - Africa's tradition of working in small-scale trade and comfort with informality undermines the interest of African firms in participating in GVCs
  - The failure of Africa to attract the millions of GVC jobs leaving China in search for low-cost alternative