Global Value Chain Inclusivity: Digital Culture, Literacy and Transformation of MSMEs

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1. Background: International Trade, Global Value Chains and Digital Technology

- Trade has been the engine of global growth for at least the last three decades, halted in 2020 by the pandemic, but rebounding in 2022 and recording a record value of $28.5 trillion (UNCTAD, 2022)
- There is still a lot of uncertainty, especially due to the US-China trade war, the Ukraine crisis, and supply chain disruptions after the COVID-19 pandemic, all rooted in self-interest and may lead to increasing protectionism

- Game changer: Major countries' commitment to Global Value Chains (GVC) and digital transformation of businesses
- GVC is a global system of production and distribution, characterized by the operation of multinational corporations, the outsourcing of widely dispersed productive functions, and the division of labor among nations
- GVC is estimated to account for 70 percent of total global trade (OECD, 2022)

- A new era of trade: a series of innovations that take advantage of the internet to reduce international trade costs (digital transformation), started far before the COVID-19 pandemic (WTO, 2018)
- Internet of Things (IoT), artificial intelligence (AI), 3D printing, and Blockchain have the potentials to change how people trade, who trades, and what is traded

2. Challenges: Making GVC More Inclusive

How to increase the participation of MSMEs:

- Few SMEs involved in the GVCs (Urata, 2021)
- Low labor localization by Chinese firms in Africa (French, 2014) and Kyrgyzstan (Mogilevskii, 2019)
- Only 6.3% of Indonesian MSMEs participate in GVC, the lowest in Southeast Asia (KemenkopUKM (2021)

How to increase the use of local input:

- Purchase of local inputs by foreign investors has been able to encourage specialization and participation in the GVC-case of Sub-Saharan Africa and Vietnam (Amendolagine, et al, 2018).
- GVC exports from Morocco and Tunisia still have low levels of local procurement (OECD, 2018)

How to increase the job opportunities for low-educated labors:

- Local firms that employ skilled people are more likely to participate in GVC (Cieślik, et al, 2019).
- Local worker engagement is lower in countries with low education expenditure (Amendolagine, et al, 2018)

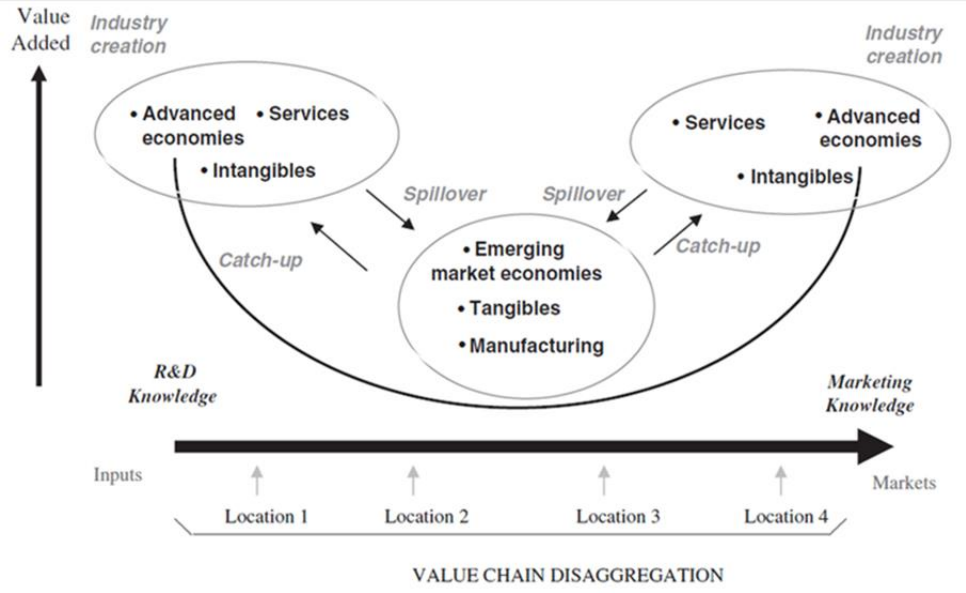
How to spread the economic activities to less developed areas/provinces:

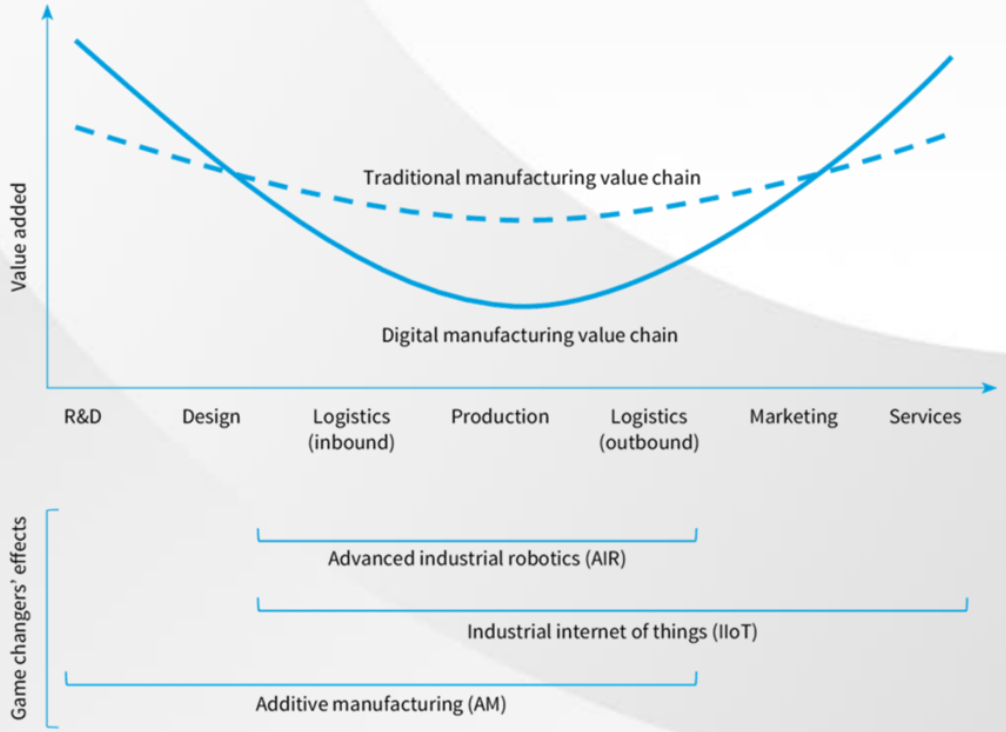
- Most of the GVC activities and participating local companies are in developed areas.
- In Indonesia, multinational companies still prefer investing in Industrial Zones in Java, compared to Special Economic Zones (KEK) outside Java (Ministry of Industry)

How to improve fair distribution of GVC benefits:

- The distribution of benefits along the supply chain is expected to be more equitable and less exploitative (Van Dijk, 2008)
- Unequal distribution of margins along agricultural production chains in Kenya and Uganda (Shively, et al, 2010), Vietnam (Nguyen, et al, 2015) and Colombia (García-Cardona, 2016); and the electronics industry in the United States, Japan, Korea and China (Dedrick, et al, 2010).

Making GVC More Inclusive through Digital Technology



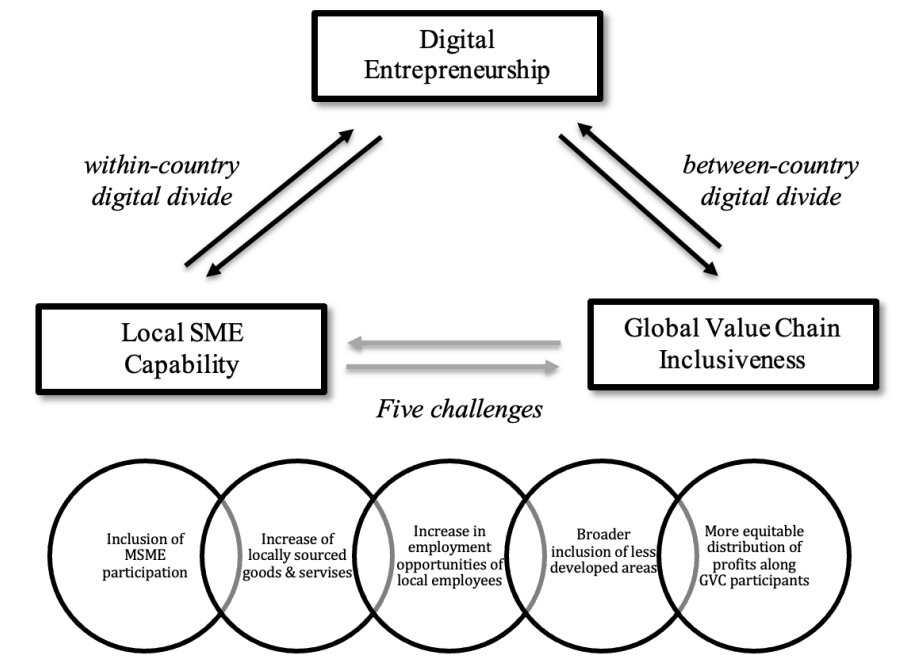


GVC Value-added and Digital Technology

- Digital technology makes value-added in manufacturing even lower and competition in developing countries in manufacturing/production is getting tougher
- Game changer for catch-up of high added value upstream and downstream: Additive Manufacturing and Internet of Things

Source: Mudambi (2008); Fernández-Macías, Enrique, et al. (2018); Balanova & Bodiagin (2019); Yilmaz (2017)

Increasing GVC Inclusivity through Digital Entrepreneurship



Addressing two types of digital divide: **within and between countries.**

1. The Digital Divide within Countries

- Digital Entrepreneurship Ecosystem is needed by MSMEs and entrepreneurs
- The four prerequisite pillars:
  - Culture and Informal Institutions;
  - Formal Institutions, Regulations, and Taxation;
  - Market Conditions and Physical Infrastructure;
  - Associated digital counterparts.

2. The Digital Gap between Countries

- Analysis of G20 members: the five economies that excel in digital entrepreneurship (USA, UK, Germany, Canada and Australia) have large and highly diverse trading relationships.
- On average, 6 of their top 10 trading partners are countries that are either leading or following digital entrepreneurship

Source: Autio, E., Revindo, M. D., Jinjarak, Y., Komlósi, É., Park, D., Petalcorin, C., ... & Tiszberger, M. (2022). T20 Indonesia 2022 Policy Brief: Global Value Chain Inclusivity And Digital Entrepreneurship (No. 202201). LPEM T20 Indonesia.

3. How ASEAN Countries Perceive Opportunities of MSMEs Digitalization

Indonesia	Malaysia	The Philippines	Singapore	Thailand
▪ Digital adoption among MSMEs is showing an increasing trend ▪ The main strength of MSMEs in Indonesia include **large domestic market**	▪ **Ecommerce value soared by 33% to** RM896 billion after registering an income of RM 675billion in 2019 (Department of Statistics Malaysia) ▪ Around 77% of SMEs in Malaysia remain at the basic digitalisation stage, according to estimates by consulting firms. ▪ 53.9% were represented in the World Wide Web in 2019 (37.8% in 2017). ▪ For those that have adopted technologies, only a small minority explored frontier technologies like data analytics (6.3%).	▪ MSMEs should be given the **proper information on digital technologies and their benefits**. ▪ Upgrade the **digital infrastructure**. The country needs to make urgent and substantial improvement in its infrastructure to enable the digital economy to play a key role in its recovery. ▪ Provide financial support to MSMEs. ▪ Reinvent the future by going digital. ▪ Understand factors that precipitate innovations at the firm (micro) level. By focusing on these factors, the country can encourage MSMEs to innovate and embrace the digitization process.	Primarily, for Singapore, the key drivers for digitization are **reducing labour demand, customer engagement, and to expand business across borders**. The government has been focusing on productivity enhancing technologies for MSMEs.	Crucial benefits of digitalization of MSMEs are increase productivity and competitiveness. ▪ New Business Creation: SMEs and Start-Up ○ Related business + service in Supply Chain ○ New form of Labor: **Independent Labor, Part–Time** ○ Opportunity: Education (new skill), Cares, Logistics, Consultant ▪ Business Model Change: ○ Value Creation: Business Canvas ○ Start-Up vs SME ○ Generation Gap Management ○ Integrate Taskforce: Public-Private Partnership (PPP) & Social Enterprise The ultimate goal is MSMES as productivity growth engine, Green growth engine, and Inclusive growth engine to overcome middle -income trap country.

Source: Daya Makara UI (2022)

4. Firm level adoptions: Evidence from a survey on 37.370 MSMEs in Indonesia (1/2)

- The adoption of **digital technology in MSMEs is still limited** to promotion and marketing, ordering raw materials and communication.
- The use of digital platforms in these aspects is still **limited to the use of social media and messaging platforms**.
- The presence of an e-wallet and MSME **financial recording platform is one element of good SMEs governance**. The level of adoption in this aspect is higher for Small Enterprises than Micro and Ultra Micro Enterprises. This indicates the urgency of digital financial records when the business scale gets bigger.

Promotion and Marketing

Average : 86,0%
Small : 84,6%
Micro : 87,3%
Ultra Micro : 85,7%

WhatsApp, TikTok, Instagram, facebook

Ordering Raw Materials

Average : 48,1%
Small : 56,6%
Micro : 50,9%
Ultra Micro : 46,1%

WhatsApp, Gmail, Shopee

Internal Communication

Average : 16,9%
Small : 34,2%
Micro : 24,1%
Ultra Micro : 12,3%

WhatsApp, zoom, facebook

Product Delivery

Average : 10,5%
Small : 12,3%
Micro : 10,7%
Ultra Micro : 10,2%

gosend, SICEPAT EKSPRES, Lion parcel, Grab, paxel, JNE EXPRESS

Recording and Payment

Average : 5,7%
Small : 13,1%
Micro : 6,1%
Ultra Micro : 4,8%

ovo, ShopeePay, QRIS, pawoon, DOKU, BRImo, Volsera

Source: Ministry of Communication and Informatics and LPEM UI (2022)

Firm level adoptions: Evidence from a survey on 37.370 MSMEs in Indonesia (2/2)

- The adoption of end-to-end digital technology in MSMEs **at the advanced level is still low**. It can be seen from the minimal use of financial management, HR, access to capital, Customer Relationship Management, and Enterprise Resource Planning applications.
- Apart from the lack of adoption of the end-to-end aspects above, positive developments can be seen in terms of variations in the use of applications and platforms for MSMEs that have adopted technology in the above aspects. The use of platforms/applications for MSMEs is very diverse, thus opening up development potential for tech-enablers in the future.

Financial Management

Average : 1,3%
Small : 4,2%
Micro : 1,5%
Ultra Micro : 0,8%

HR Management

Average : 1,3%
Small : 4,6%
Micro : 1,7%
Ultra Micro : 0,8%

Capital

Average : 1,0%
Small : 1,4%
Micro : 1,5%
Ultra Micro : 0,7%

CRM

Average : 1,8%
Small : 2,4%
Micro : 1,1%
Ultra Micro : 1,4%

ERP

Average : 0,04%
Small : 0,17%
Micro : 0,06%
Ultra Micro : 0,02%

Source: Ministry of Communication and Informatics and LPEM UI (2022)

Technology Intervention Menu based on MSMEs Digital Adoption Class

Example:

- In quadrant 1 (digital leader), although digital adoption is high on average, the utilization is still basic. Thus, it is still called a “digital-leader”, not a “digital-native”/”digital-champion”.
- Therefore, the main objective of quadrant 1 is not only SUSTAIN (maintaining the level of digitization), but also deepen (exploring more advanced digital technology).

SMEs DIGITALIZATION INDEX		Technology	
		Low	High
Business & Finance	High	**DIGITAL OBSERVER** **DIGITAL-PUSH** 1. Basic technology assistance 2. POS equipment assistance 3. Assistance and training on the urgency of digital technology 1. Basic digital training 2. Virtual expo 3. On-boarding marketplace assistance	**DIGITAL LEADER** **SUSTAIN AND DEEPEN** 1. Advanced digital training 2. Cloud-computing rental subsidies 3. Assistance in access to capital via digital platform 1. CRM and ERP usage training 2. Innovation labs 3. 4.0 . technology introduction
	Low	**DIGITAL BEGINNER** **BASIC ACCESS-PUSH** 1. Initial internet access support 2. Initial entrepreneurship support 3. Providing basic production and digital infrastructure 1. Basic digital training 2. Basic entrepreneurship training 3. Conditional cash-transfer / financing (digital-related grant)	**DIGITAL ADOPTER** **BUSINESS-PUSH** 1. Digital promotion training 2. Mentoring and business-coaching 3. Conditional cash transfer / financing (business related) 1. Postage subsidies 2. Virtual Expo 3. Business incubator

Source: Ministry of Communication and Informatics and LPEM UI (2022)

5. Way Forward

- ASEAN's economic potential as the epicentrum of growth:
  - Security and political stability
  - Internal market size

- Digitalization could strengthen MSMEs and entrepreneurship in ASEAN, however, several challenges to be addressed:
  - Digital divide between member states
  - Digital divide within each member states

- Proposed policy intervention:
  - Building digital literacy and culture
  - End-to-end digital technology adoption
  - Digital infrastructure: Improving the business climate and competition in the ICT sector
  - Security of personal data and online transaction
  - **Beyond digital technology adoption: supply chain financing, quality management**

What Happens If GVC and Digital Technology Adoption Fails to Improve Inclusivity?

- Overall, global free trade benefits the all parties involved. However, global competition can be **painful for local businesses and workers** and in some cases, may **generate anti-globalization sentiment**. **The pool has simply grown larger**.
- While exploring benefits of globalization and venturing across borders, giant multinational companies often pose a **serious threat to the local companies and workers of the host country by intensifying the competition for them** (Masroor & Asim, 2019).
- **MSMEs and workers in less developed countries** are particularly more vulnerable due to their limited investment and skill in digital technology, which had previously insufficient to remain competitive in the domestic market.
- As a result, the host country's government may pursue **protectionist policies** aimed at protecting local businesses or workers from large firms or foreign competition, resulting in **anti-competitive behavior** and **anti-trade or anti-globalization sentiment** (Jenkins, 2004; Held & McGrew, 2007).
- These policies, however, are frequently detrimental to both parties' overall economic performance because the benefits of international trade are no longer sustainable.
- Thus, **ensuring the presence of ecosystem that enables equal digital participation (including infrastructure, culture and literacy) is crucial for sustainable development**

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