

ARP 70

Digital Inclusion Strategies: Mapping Approaches to Promote Access to E-Commerce Jobs and Entrepreneurship in the Digital Economy among Groups at Risks of Exclusion

Final Report

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List of Abbreviations:

ARP	Applied Research Project
CL	Crowdsourced Logistics
DLP	Digital Labour Platforms
ECOM	National E-commerce Strategy of Rwanda
E-commerce	Electronic Commerce
EUP	Economic Planning Unit of Malaysia
ENCE	Estrategia Nacional De Comercio Electronico
ICT	Information & Communication Technology
ILO	International Labour Organization
IOs	International Organizations
IT	Information Technology
KNES	Kenya National E-Commerce Strategy
MDEB	Malaysia Digital Economy Blueprint
MSMEs	Micro, Small and Medium Enterprises
OECD	The Organization for Economic Co-Operation and Development
S-commerce	Social commerce
SDGs	Sustainable Development Goals
UNCTAD	United Nations Trade and Development
UNHCR	United Nations High Commissioner for Refugees
WEF	World Economic Forum

1/ Introduction:

E-commerce can both be a remedy and a risk to create fair and better income-generating opportunities for marginalized groups who lack access to traditional labour markets. On one hand, e-commerce poses a lower barrier to entry and scale for underserved populations, such as women, the elderly, people with disabilities, and refugees, than traditional labor markets, so many IOs have highlighted their potential to promote inclusion in their reports (ILO & OECD, 2018; ILO, 2021; UNHCR, n.d.). Nonetheless, challenges remain to ensure e-commerce leads to decent work—work characterized by fair income, safety, dignity, and equality for all workers (*Decent Work*, n.d; Ghai, 2003). Inadequate regulatory framework, digital infrastructure, and widespread informality, as well as the digital divide, often result in insufficient labor protections and unequal access to opportunities, especially for those underserved populations. Therefore, a state-led strategy is crucial to promote a safe, effective social and economic inclusion of marginalized groups in this new mode of business.

Few research have examined strategies that can promote the benefits of e-commerce to create jobs while safeguarding against risks. This report hence conducts an exploratory research on e-commerce and inclusive job creation, guided by the following seven research questions:

1. How has the e-commerce sector grown in the past decade and how is it projected to grow in the future?
2. What are the different components of the e-commerce value chain and ecosystem? What do these two terms imply and are they interchangeable?
3. What is the job creation potential of the e-commerce sector? What kind of jobs is the growth of e-commerce generating demand for, both directly and indirectly?
4. How does e-commerce impact small-scale entrepreneurship and freelancing among underserved populations? What are the specific challenges and opportunities faced by these groups to access e-commerce opportunities?
5. How many countries have adopted an e-commerce strategy or are in the process of formulating one?

6. To what extent are jobs, entrepreneurship and other income-generation activities included in existing national e-commerce strategies? What are the key dimensions identified by these strategies to develop e-commerce?
7. What existing e-commerce strategies have been successful in promoting inclusive job creation? What lessons can be learned from these strategies?

We found that e-commerce can generate many and diverse types of jobs, but it may create jobs that lack proper worker protection or are difficult to scale, due to an unequal access to opportunities for small firms and exploitative behaviors of global retail leaders. Flexibility and informality of e-commerce can help marginalized groups circumvent traditional constraints, but informality can slip into vulnerability. Furthermore, digital divide, most prominently the lack of digital skills and access to infrastructure, limits opportunities available for marginalized groups, though underlying reasons for the divide differ significantly across the groups. Inclusion is consistently mentioned in many national strategies, yet most strategies do not well integrate decent work components and overlook some marginalized groups.

The report is structured as follows. It starts with a literature review to understand the job creation potential of e-commerce and its impacts on marginalized groups. A mapping of 24 national strategies follows, accompanied by the analysis of plans that strategies often utilize to promote job creation, decent work, and inclusion. The report then examines five national strategies to probe how they plan to achieve inclusive and thriving e-commerce. The report ends with a conclusion and recommendations for future research and e-commerce strategies.

2/ Methodology:

2.1 Methodology:

For this research, the methodology consists of three main elements. The first part is a literature review to set the background of the research, identify gaps, and provide an overview of the research's aim. The second part involves mapping and analyzing existing national e-commerce strategies, followed by a set of detailed examples of five successful national e-commerce strategies. All the research is based on desk review, using mainly secondary sources.

The literature review consists of answering four research questions that set the background for e-commerce and e-commerce strategies. To answer each question, a thorough desk and literature review was conducted, analyzing numerous research papers and academic studies that are legitimate and will be cited in a reference page.

The creation of the map is based on desk review and available sources regarding active national e-commerce policies. This mapping highlights which countries have already taken initiatives in terms of e-commerce strategies and the inclusion of vulnerable groups. To construct this tool, the team studied 24 national e-commerce strategies but chose to represent the most structured among them (12 out of 24) in the mapping. This judgment was made based on the quality and level of detail provided by the sources found for each national strategy.

This research concludes with a thorough investigation of five successful national e-commerce strategies, with a focus on inclusion and always based on desk review. We defined successful strategies as reports that are structured¹, come from government bodies or international organizations, and had begun implementation before the publication of this research project. Moreover, their emphasis on inclusivity was also an important factor, as we selected strategies that propose solutions for a wide range of marginalized groups.

The notion of decent work is introduced in this report, encompassing various components such as employment conditions, social protection, and workers' rights (Ghai, 2003). These elements include adequate opportunities for work, workplace safety, and healthy working conditions, as well as social and income security. Social dialogue also plays a critical role, enabling workers to exercise their freedom of expression (Ghai, 2003). For our research, we also include actions that can contribute to the creation of decent work components. For example, education can improve workers' chances of securing quality jobs, enhance their negotiating power, and foster more balanced social dialogue by equipping them with the knowledge and skills needed by some e-commerce companies. Thus, human capital is a part of decent work and will be treated as such in this report.

2.2 Risks and Limitations:

There are two major limitations in this study. One is the focus on emerging countries. This report only analyzes 24 national e-commerce strategies. Though no standardized definition of “emerging” exists, most countries that are described as emerging,

¹ "Structured" here means that the strategies were well-detailed and provided a solid foundation for implementation.

such as Brazil, China, and Egypt (ILO, 2025), belong to middle-income to upper-low-income categories. Their strategies are reflective of their needs and financial capacities and thus may not be applicable to the low-income countries that closely work with the ILO.

Another limitation is that we evaluate ‘success’ by the design rather than the implementation. This report aims to capture the recent trends in national e-commerce strategies to assist countries that are designing strategies now; consequently, most strategies were published between 2021 and 2025, and their evaluations have not been released in most cases. Furthermore, some countries do not have online databases, making the assessment harder. Though we used available data published by governments and IOs to track how e-commerce and other relevant indicators changed after the announcement of a strategy, more long-term research is necessary to determine whether a strategy is not only ‘successful’ on paper but also in practice.

3/ E-Commerce: Past, Present, Future:

3.1/ Growth of E-commerce in the Past Decade:

E-commerce is defined as "production, distribution, marketing, sale or delivery of goods and services by electronic means" (WTO, n.d). Almost three decades ago, major e-commerce marketplaces such as Amazon and Ebay were launched. Since then, the e-commerce sector has been growing continuously. There are several factors that enable e-commerce sector growth. Increasing number of internet users and increasing mobile device usage are main enablers for e-commerce growth (Statista, 2024). According to the International Telecommunication Union, the number of individuals using the internet increased significantly in the last decade. In 2014, there were 2.8 billion internet users in the world, but there are 5.5 billion people using the internet in 2024, which is 68 percent of the world population (ITU, 2024b). As a result of technological advancement and increasing number of internet users, between 2000 and 2021, the number of e-commerce users skyrocketed, from fewer than 100 million to 2.3 billion people (UNCTAD, 2024a).

The Covid-19 pandemic boosted the e-commerce sector. According to UN Trade and Development, some of the most significant increases were observed in emerging markets. In the United Arab Emirates, the proportion of internet users engaging in online shopping more than doubled, jumping from 27% in 2019 to 63% in 2020. In Bahrain, this share tripled,

reaching 45% in 2020, while in Uzbekistan, it grew from 4% in 2018 to 11% in 2020 (UNCTAD, 2022).

3.2/ Global Trends:

E-commerce growth differs from region to region. The Asia-Pacific region dominated the 2024 e-commerce market with 45.7% market share and USD 12.8 trillion in revenue (Market.us, 2025). China has the world's largest e-commerce market by volume with 904.6 million e-commerce users (SellersCommerce, 2025).

For the Europe region, some countries have significantly less e-commerce penetration rate. The lowest rates of e-commerce users are found in Moldova (26%), Montenegro (29%), Albania (33%), Bosnia and Herzegovina (35%), North Macedonia (44%), and Bulgaria (45%), while e-commerce penetration rate for Northern Europe is 83% (EuroCommerce, 2024). The combined markets of Latin America, Middle East, and Africa generated 7.6% of all e-commerce activity despite representing 27% of the global population (Market.us, 2025).

3.2/ Future of E-commerce:

Several reports forecast that e-commerce will continue to grow in the following years. The e-commerce market is anticipated to have 3.6 billion users by 2029; the global share of online revenue is expected to grow from 17.31% in 2024 to 21.37% in 2029, while the share of offline revenue will correspondingly decrease. Furthermore, global e-commerce revenues are expected to increase at a compound annual growth rate (CAGR) of 12.9% between 2017 and 2029, with revenues increasing from \$1.5 trillion in 2017 to an estimated \$6.5 trillion by 2029 (Statista, 2024). According to Statista, retail e-commerce sales compound annual growth rate from 2024 to 2029, emerging economies such as Turkey, Brazil, India, Mexico and Russia have the highest growth rate, which is more than 11% percent (Statista, 2024).

4/ E-commerce value chain and ecosystem:

4.1/ E-commerce value chain²:

The e-commerce value chain that allows the production of goods and/or services includes two dimensions: a physical dimension, which includes activities such as

² The e-commerce value chain encompasses various business processes involved from the production to consumption of goods or services bought or sold online.

manufacturing, warehouses, or shipping, and a digital dimension that involves online platforms, customer services, and data management.

According to Meier and Stormer (2009), there are seven components of the e-commerce value chain³: e-products and e-services, e-procurement, e-marketing, e-contracting, e-distribution, e-payment, e-customer service (2009). All these steps lead to a product or service transaction in an e-commerce market between consumers to business (C2B) or business to business (B2B).

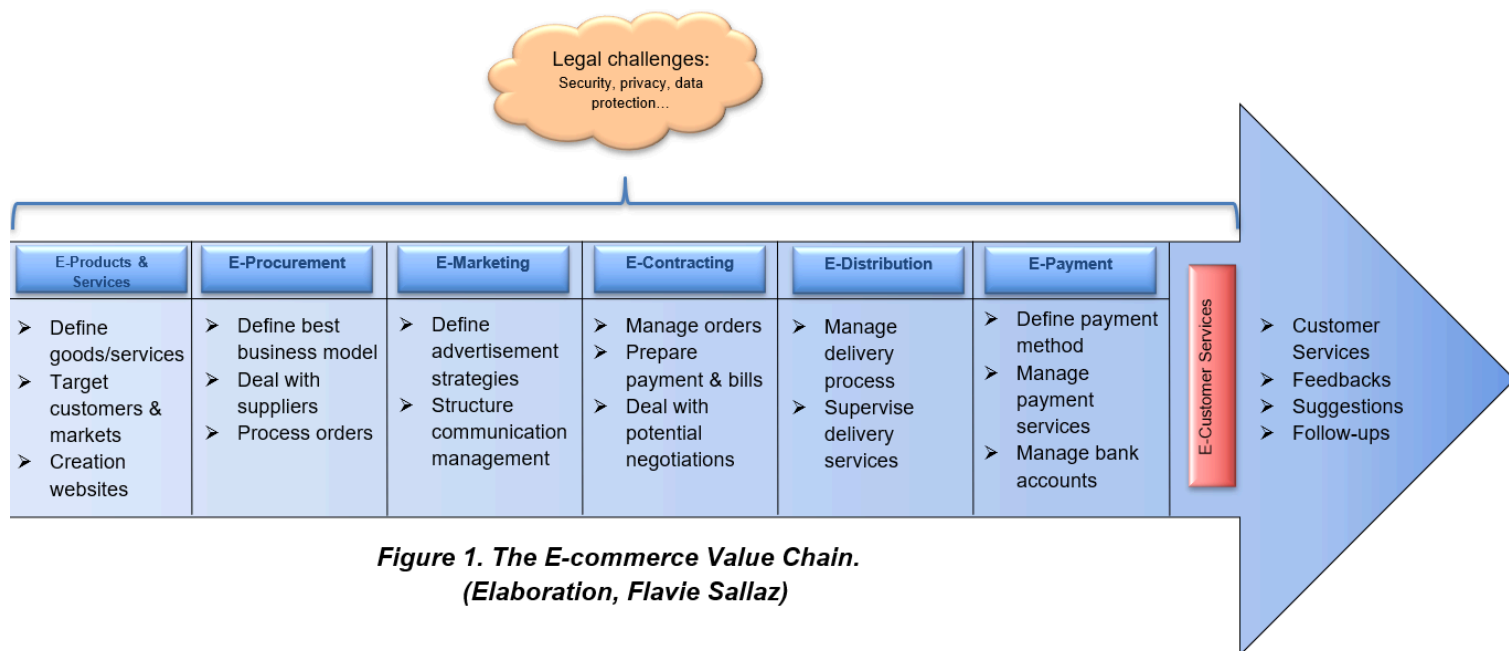


Figure 1. The E-commerce Value Chain.
(Elaboration, Flavie Sallaz)

Furthermore, the e-commerce value chain faces legal challenges throughout the process of creating and marketing a product or service online (Kalia, Arora, et al., 2016). In fact, in this specific case of commerce, discussions and issues can arise on security, privacy, data protection, but also worker protection. Ensuring that these elements are dealt with all throughout the value chain and according to the legal policies proper to the market and the location is essential.

4.2/ E-commerce ecosystem:

A business ecosystem could be defined as a dynamic group of mostly independent economic participants who collaborate to create products or services that collectively offer a comprehensive solution for customers (Reeves and Pidun, 2022). The e-commerce industry has an ecosystem's structure that consists of the activities, the actors, the positions, and the links between each partner (Adner, 2017). These actors are usually manufacturers, retailers,

³ See Figure 1

content providers, and software providers (Wulfert and Dennhardt, 2023). They all have a defined role in the creation of the online good or service but need to work all together to be the most performant possible. The graph below represents a general ecosystem for an e-commerce platform. It identifies the main actors, which are regrouped into four main populations: the core population, the key population, the support population, and the extended population (Liu et al., 2013; Gui et al., 2018). The core population represents the main actors of the process of buying the goods or services, which are buyers (or consumers), retailers/sellers (the ones that sell the products), and platform softwares (where transactions take place), this is the core of the entire ecosystem. The key population is all the actors that take part in the process of providing the product/service to the buyer; transaction service providers, supporting service providers, and derivative service providers. The support population refers to institutions and/or organizations that had or have an impact on the core population and/or the key population. Finally, the extended population includes institutions and/or organizations that do not directly influence the business activities but can impact its growth, maturity, and profitability. All actors of each population are somewhat interacting with each other and are linked to one another. Fundamentally, the e-commerce ecosystem operates on the principles of value sharing between stakeholders and co-evolution of its participants in response to technological and market dynamics (Gui and al., 2018).

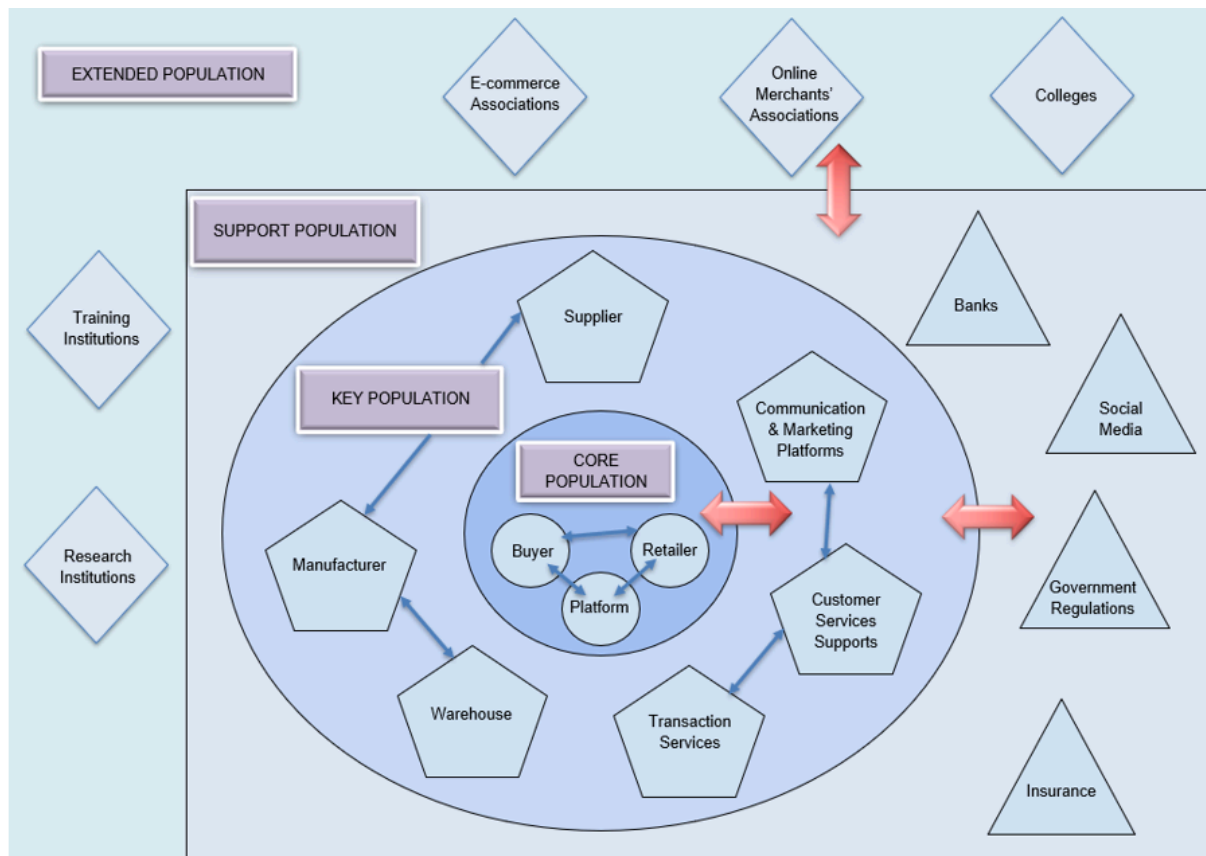


Figure 2. An E-commerce Ecosystem.
(Elaboration, Flavie Sallaz)

As seen previously, e-commerce value chain and ecosystem are two systems that involve actors and activities in the making of products. However, while they can be considered related, they are not interchangeable. In fact, they have different focuses. With the graphs shown above, one can already see that the value chain has a more internal process while the ecosystem is presented as a comprehensive view of all the players (internal and external) and activities that interact with each other to support the e-commerce business. To conclude, value chain can be considered as a part of the ecosystem, but both terms cannot be interchangeable as they draw attention to different aspects of the e-commerce business.

5/ Job creation potential of e-commerce:

E-commerce can transform landscapes for jobs globally. It brought significant job growth across different industries; some were directly involved in the physical movement of products, while others are sectors that contribute to e-commerce indirectly (WEF, 2023), as

Table 1⁴ shows. However, research on e-commerce job creation potential is still incomplete because a difficulty in constructing relevant indicators and the flexibility/informality of e-commerce pose challenges to empirically measure the scale of the job-generating potential

	Industry Name	% of the net job growth in each industry
1	Retail, wholesale, and consumer goods	58
2	Information and technology services	57
3	Employment services	50
4	Government and public sector	44
5	Supply chain and transportation	41

Table 1: The impact of e-commerce on industries in terms of the net job growth.
(WEF, 2023)

of e-commerce.

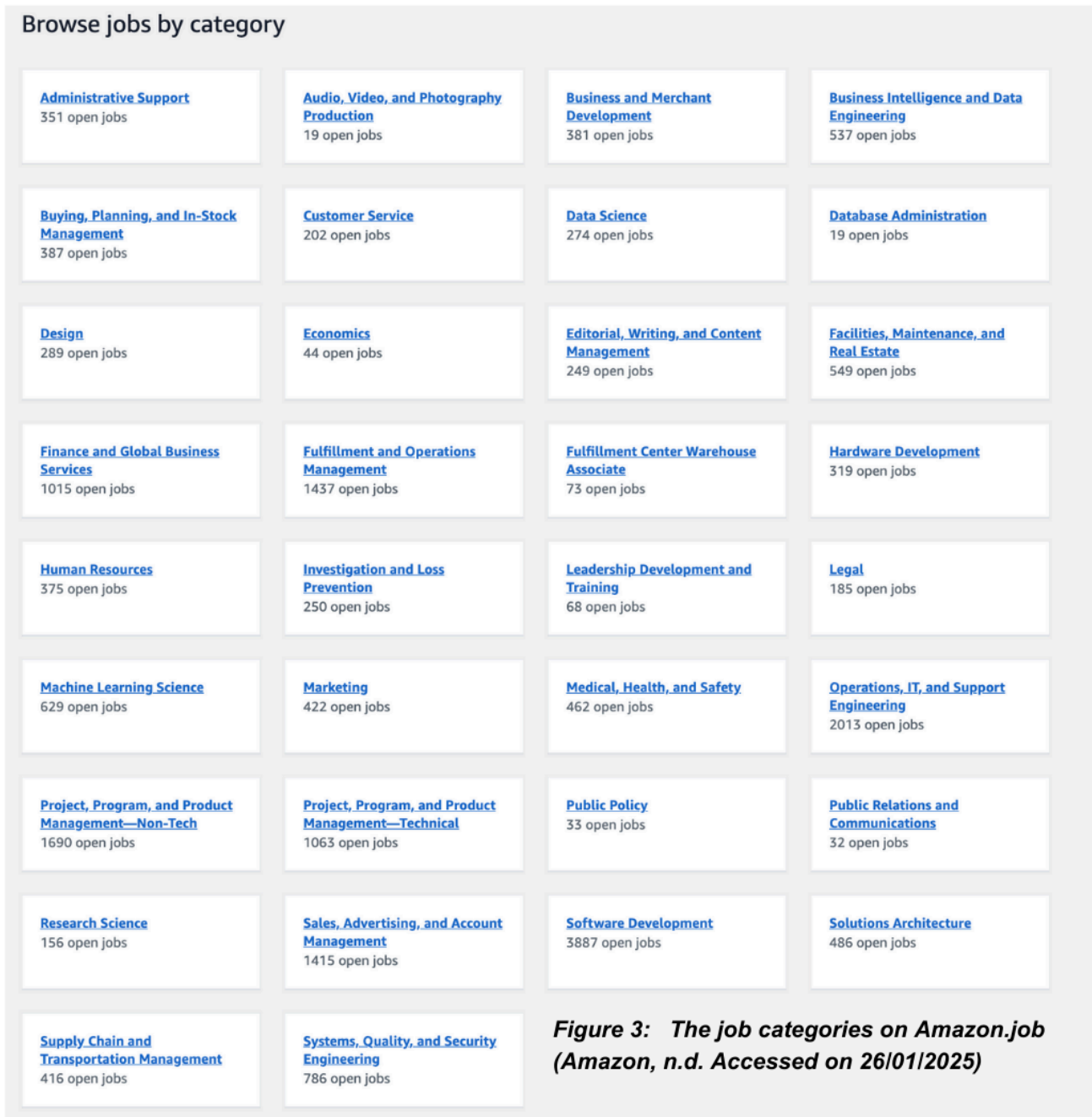
This section focuses on the following sectors within the e-commerce ecosystem: Retailers, Suppliers of products, and Logistics. They are vital players in the e-commerce ecosystem and frequently targeted in national e-commerce strategies. Retailers perform many stages of digital e-commerce value chains via digital platforms, while Suppliers and Logistics are critical to operationalize the physical movement of goods from firms to houses. Though limited in focus, this section explores the general trend that e-commerce brought to jobs in these sectors with attention to the working conditions of those jobs, such as their wages and rights. This section also investigates the potential drawbacks of e-commerce on jobs, namely effects on B&M retail and job instability.

⁴ The numbers on Table 1 are calculated based on the responses to the question: ““Regarding the technologies likely or highly likely to be adopted in your organization, what is their expected impact on job creation in your organization?”” conducted by WEF from 2022-2023 in the Future of Jobs Survey. “Net Effect” is the sum of the share of respondents who predicted the positive change minus the share of respondents who predicted a negative change (WEF, 2023).

5.1/ Retailers:

This section analyzes the job creation potential and risks of online retail platforms. The global value of retail platforms grew 63% from 2019 to 2022 (UNCTAD, 2023), and both global and local retail platforms are very versatile, though the extent differs significantly based on their sizes.

Retailers often perform tasks beyond retail (UNCTAD, 2021). Amazon, for example, internalizes most stages of the e-commerce value chain from e-product to e-distribution, while local platforms also provide training and financial advice to participating businesses



(Morepje et al., 2024). Hence, online retail platforms generate a wide range of jobs, both for IT and non-IT workers. As Figure 3 exemplifies, Amazon advertises many IT-related jobs under different names (Systems, Quality, and Security Engineering), and most of them surpass 1,000 vacancies, demonstrating the strong job creation potential of online platforms for IT workers. Non-IT jobs, such as Transportation and Management are also highly demanded, as the posts for Transportation and Management count 1,437, making it the third most demanded job on Figure 3. Likewise, local platforms also listed IT positions (engineers

and fintech experts) and non-IT positions (analysts, web-designers, and business consultants)⁵; the biggest difference between global and local platforms was that the latter rarely offer logistics services. This is because internalizing logistics requires a significant investment (Shahid et al. 2023b); it requires more drivers and investment in capitals, such as cars and warehouses, while offering consulting may require less people and capitals. However, delivery of goods is often pointed as the biggest challenge for MSMEs, particularly in developing countries due to insufficient infrastructure and road conditions (ibid; Lee and Lee, 2019).

However, there is an imminent risk of worker exploitation within global retail platforms. The global online retail market is in oligopoly, where six online platforms earn 80% of the total sales in the global market (UNCTAD, 2024b). All of them are from the Global North or China. Top performers, like Alibaba, Amazon, and Pinduoduo (ibid), have been accused of forcing workers for extremely long hours or under intense competitions, sometimes resulting in workers losing their lives⁶ (Amnesty, 2023; Elegant, 2021; McLaughlin, 2021). Furthermore, the rise of online retail could negatively affect traditional retail. Goldmanis (2008), Americo and Veronico (2018), and Chava et al. (2022) found that e-commerce prompted the closures of small firms or the layoff of non-wage workers in the United States, South Korea, and Europe. However, Biagi and Falk (2017) and Choe et al. (2023) found no statistically significant impact. Choe et al. (2023) attributed it to the kinds of goods different retailers sell; non-perishable and easily consumable products are more suited to be sold online, so the negative impact in these markets will be amplified.

Therefore, e-commerce led to the rise of many global and local online retail platforms, which are multifunctional and can generate a wide range of jobs. Nonetheless, the exploitation of workers by global platforms, as well as negative impacts on traditional retail, should not be underestimated.

⁵ All covered local platforms are the ones listed on Morepje et al., 2024. Some of the platforms did not have their websites or had career pages, and hence the author reviewed LinkedIn pages of those retail platforms as alternative sources. All LinkedIn pages are accessed on January 31st, 2024.

⁶ For instance, 2 Pinduoduo employees lost their lives, one by suicide. Pinduoduo denied the involvement, the investigation was launched to see the relationship between their deaths and Pinduoduo's working conditions (Elegant, 2021). Amnesty accused Amazon of forcing migrant workers to work in their warehouse under a deceptive contract and extremely poor working conditions, which constitute a violation of human rights (2023).

5.2/ Suppliers:

This section examines the effects of e-commerce on suppliers, particularly on MSMEs because they are often central to the national e-commerce strategies. E-commerce increases MSME's exposure to domestic and international markets and removes intermediaries fees and rent (WTO, 2013; Hackel, 2021; OECD, 2022), which dramatically lowers the cost of starting an online business. Nevertheless, SMEs confront more challenges to adopt e-commerce than large firms for several reasons: limited digital literacy, technology, capital, the lack of delivery methods, and the distrust in online transactions (Morepje et al., 2024; Lee and Lee, 2019). Furthermore, MSMEs typically use more than one channel of e-commerce to sell their goods online, and the usage heavily depends on the size of enterprises. Shahid et al. (2023a) surveyed the usage of three channels of e-commerce (social media, e-commerce marketplaces, and website) in six African countries⁷. 60% of micro enterprises solely rely on social media, whereas 33% of medium enterprises do so. The choice of channels also differ across six countries. In Ghana, only 3% of MSMEs can adopt all channels, while in South Africa, 39% of MSMEs do (ibid).

What are the advantages and drawbacks of these three channels? E-commerce marketplaces, though their sizes vary widely, usually have a larger customer base and thus can significantly extend MSME's market reach. However, they charge commission fees to use, often making popular platforms unaffordable for MSMEs (ibid). A popular alternative is s-commerce, where firms use SNS that are *not* designed for market transactions to sell goods. Furthermore, this channel may be the only option for unregistered firms, which consist 26% of the total sample (ibid). However, s-commerce are typically less equipped with cybersecurity and legal protections than retail platforms; moreover, their customer base is significantly smaller than that of online retail platforms, which hinder scalability and profitability (Liang and Turban 2011; Hasan et al. 2022).

Therefore, e-commerce can help suppliers bypass traditional constraints, yet the global retail platforms are sometimes inaccessible. Instead of those platforms, s-commerce may be more significant to promote job creation and entrepreneurship for MSMEs and marginalized groups. However, there is less literature on s-commerce, and the SNS often used in s-commerce, such as Whatsapp and Tiktok (Shahid et al. 2023a) are run by companies in

⁷ The covered countries are: Egypt, Ethiopia, Ghana, Kenya, Nigeria, and South Africa (Shahid et al. 2023a). The survey covers over 1,500 MSMEs in total. The proportion of unregistered firms diverge across six countries. The Kenyan sample only contains 4% of unregistered firms, while the Egyptian sample contains 41%.

the Global North or China. The regional inequality in the available tools of e-commerce is still evident.

5.3/ Logistics:

Many developing countries and SMEs find logistics the most critical sector that must be developed urgently (Lee and Lee, 2019; Shahid et al. 2023b), and it saw a surge in labor demand after the pandemic (Risberg, 2023). This section explores two trends in this sector and evaluates the quality of jobs created.

The first strategy is internalization, where a firm creates a specialized logistic division⁸ to quickly respond to demand surges (Loewen, 2018). Internalization increased the number of jobs and wages in the warehouses in the United States by adding 401,000 full-time jobs which pay 31% higher wages than working in B&M retail (Mandel, 2017). Nevertheless, logistics is still regarded as a low-skill job on the job market, allowing managers to exercise strong control over their retention and working hours (Mandel, 2017; Loewen 2018). Another risk is the rise of alternatives to human labor in logistics, driven by profit maximization and environmental concerns for car traffic. The alternatives range from AI robots (Spilda et al, 2024) to delivery lockers (Oliveira et al., 2017), but all these alternatives create doubt about the sustainability of new jobs.

The second strategy is crowdsourced logistics (CL) (Shahid, 2023b; Li et al., 2023). It connects businesses with individuals on digital labor platforms (DLPs), typically for a single task (called a gig). CL enables retailers and producers to respond to logistics needs on-demand, but it creates highly-unstable jobs. Some countries do not recognize CL workers as ‘employed’ legally and statistically, allowing CL companies to exploit the legal loophole not to provide adequate working conditions, protection, and workers’ rights (Sinha and Pandit, 2023; Aitken, 2024). However, in reality, CL workers are highly dependent on LBPs that assign them tasks (Caro et al., 2021), and thus a stricter legal framework is required to make CL jobs approach to decent work.

Therefore, e-commerce generates many income-generating opportunities, particularly for IT-workers, MSMEs, and logistics workers. Nonetheless, an ambiguity remains about the quality of jobs created and its accessibility. Furthermore, most research and popular tools for

⁸ Fulfillment is a type of logistics operation that includes warehousing, shipping, and last-mile delivery and sometimes product returns (CCCS, 2017). Literature on e-commerce typically uses two terms synonymously or together as “fulfillment logistics”.

e-commerce, such as platforms, are concentrated in the Global North or China, creating a regional inequality.

6/ Underserved population:

While the previous section discussed job creation potential in general, e-commerce has disproportionate impacts on different groups. Among many underserved populations, this section examines refugees, rural areas, senior citizens, persons with disabilities, and women. They were selected as they were either often targeted in national e-commerce strategies (rural areas and women) or underrepresented (refugees, senior citizens, or persons with disabilities).

6.1/ Refugees:

Digital jobs, including online entrepreneurship and digital freelancing, have “the strong appeal...for refugees”⁹ (Hackel, 2021) because e-commerce allows them to bypass their constraints on mobility and access to labor markets. However, refugees face numerous challenges, including lack of digital skills, access to devices and connectivity, and financial exclusion (ibid), mainly due to the absence of recognized ID.

Refugees, especially women and those under encampment, rely on entrepreneurship for livelihood due to limited formal job opportunities (UNHCR, n.d.; Skran and Easton-Calabria, 2020; Ginn et al., 2022). E-commerce helps refugee entrepreneurs and freelancers to reach outside their immediate surroundings, *as long as* they have a stable online connection. Moreover, e-commerce payment is usually processed via mobile money, ensuring refugees immediate access to income and even foreign currency. Nonetheless, a lack of ID often obstructs access and scalability of refugees’ e-commerce. Some refugee-hosting countries require a recognized ID to purchase SIM cards and open a bank account¹⁰ (Ibid). Moreover, sanctions on host countries can limit refugees’ access to popular platforms and mobile bank accounts (Hackl and Najdi, 2024).

Digital freelancing is gaining popularity among governments, IOs, NGOs, and sometimes multinational corporations¹¹ to support refugees. Some initiatives train refugees not only on digital skills but on soft skills and provide connections to labor platforms, to

⁹ A refugee is defined as “all foreign-born people forcibly displaced by prosecution or conflict and their descendants who are not citizens” (UNHCR, n.d.). However, most programs on Table 2 do not clarify their definitions of refugees.

¹⁰ For instance, Alaa, a Syrian refugee in Egypt, earned income from his website; however, he could not open a bank account without a recognized ID and had to reject an offer for funding (Easton-Calabria, 2022)

¹¹ See Table 2.

ensure the trainees can be employed after their graduation (Easton-Calabria, 2019). Nevertheless, likewise to entrepreneurship, a lack of ID and a bank account can make digital freelancing infeasible or unscalable (ibid). Intersectionality is also critical; female refugee trainees in a digital skill training program explained that they did not intend to engage in a large-scale freelancing, as they must balance work with the childcare and get approval from their family to do so (Alencar & Carmargo, 2023).

Furthermore, DLPs often pose a tradeoff between working conditions and informality that enables freelancing. In most countries, workers on DLPs are not recognized as “employed”, depriving them of social protections and rights as employees - prerequisites for decent work. However, this non-recognition is a loophole that enables work; in 51 countries refugees do not have adequate access to labor markets in practice (Ginn et al., 2021). If digital freelancers are recognized as “employed”, DLPs may be legally banned from hiring refugees. For instance, a Lebanese NGO used to train and hire Syrian refugees, but it was banned from hiring refugee students when the state authority found it and made it illegal (Hackl and Najdi, 2024). Therefore, e-commerce can benefit refugees by allowing them to circumvent constraints on their mobility and legal barriers to access labor markets. These characteristics, however, are rooted in informality of e-commerce entrepreneurship and digital freelancing. Moreover, a lack of ID creates challenges in obtaining SIMs, hardwares, and bank accounts to start and scale business.

Name	Target	Location	Description	Main Organizers and Funders	Source
for Refugee Entrepreneurs					
ekShop	Refugees and people in rural area	Bangladesh	an e-commerce platform that provides technical assistance and delivery for sellers.	a2i, UNDP, the Government of Bangladesh	Easton-Calabria, 2019 a2i, n.d.
Gasa Sky Geeks	Palestinian refugees in Gaza	Gasa	trains Palestinian entrepreneurs on digital skills and business strategies. Graduates can open American bank accounts while in Gaza.	Google, INGO Mercy Corps, Founders&Coders	Easton-Calabria, 2019
Raizes na Cozinha	Refugees	Brazil	trains refugees on technical, managerial, and business skills to run food business using online platforms	Magrafix, Facebook, Uber	Zanforlin, 2022
for Refugee Freelancers					
Digital work initiatives (name not specified in the source)	Venezuelan female refugees	Brazil	trains and employs women for image categorization tasks. Provides computers and childcare during their work.	UNHCR, UN Population Fund, UN women	Alencar and Carmargo, 2022
LevelApp	Refugees	Uganda	assigns microtasks to refugees. Payment are processed via mobile money.	RefUnite, GSMA	Easton-Calabria, 2019 & 2022
Refugee Employment Skills Initiatives (RESI)	Refugees	Keyna, Jordan, Gasa, Somaliland	aplatform that teaches ICT skills and provide online consulting, so that they can earn income through Upwork (an online labor platform)	World Food Program, International Trade Centre, Norweigan Refugee Council	E Aston-Calabria, 2019
the Digital Opportunity Trust (DOT) and Bridge, Outsource, and Transform (BOT)	Refugees and Lebanese youth and women	Lebanon	DOT: a training program for digital skills. Participants will be directed to BOT upon completion. BOT: a digital labor platform for digital services, such as data management, e-commerce listings, and AI training.	UNICEF, ALFANR, LIFE, Deutsche Gesellschaft für Internationale Zusammenarbeit, Drosos, European Bank	Hackle and Najdi, 2024 BOT, 2023

Table 2: E-commerce related Initiatives for Refugees. (Elaboration, Ayaka Ogawa)

6.2/ Rural areas:

E-commerce can have a significant economic and social impact in rural areas by providing new opportunities. It enables small businesses in rural areas to connect larger markets so that they can sell their products and services outside of the local area (Lin, Y., & Li, C., 2023). For instance, in China, e-commerce enabled farmers to reduce production costs and improve production efficiency. As a result, some farmers' income increased significantly, and it reduced poverty. In addition, rural e-commerce also creates new job opportunities since e-commerce also requires online operation, packaging, and digital marketing. It is expected that jobs related to rural e-commerce in China will be more than 30 million. (Zeng, M., & Wei, L., 2021). However, there are challenges that small-scale entrepreneurs and freelancers face such as limited physical infrastructure (internet services, transportation and logistics etc.), limited access to goods and services, lack of human capital, lack of financial inclusion for e-payment (Karine, 2021).

The digital divide of internet usage in urban and rural areas is significantly high. The internet usage in urban areas is 83% whereas in rural areas is 48%. 1.8 billion people live in rural areas who lack internet access (ITU, 2024a). Furthermore, rural areas tend to have poor internet connectivity due to insufficient infrastructure, which makes it harder to operate e-commerce businesses. As product images and videos are an important part of the online shopping experience, which requires high speed of internet bandwidth, better internet services are needed in rural areas (Mei et al, 2021). Secondly, due to a lack of infrastructure for logistics, delivery from rural areas to distant places costs more money and time. Also, lack of e-payment services make it difficult to integrate into the e-commerce sector, especially in rural areas. In addition, the high commission from digital market platforms create obstacles to participate in the e-commerce market (Karine, 2021).

6.3/ Senior Citizens¹²:

While representing almost 15% of the world population (UNFPA, 2012), elderly people (60 years old and above) struggle to find a place in the e-commerce industry, their biggest barriers being the lack of appropriate digital skills and limited access to the internet (Tatnall et al., 2003). As this technology is fairly new, seniors are often overwhelmed by the complexity of the digital industry. However, if they manage to overcome these barriers, they

¹² A senior citizen is considered a person of 60 years old and above. For the purpose of this research, we assume that most people retire in their mid-60s. However, we also base our reasoning on the implicit normative assumption that being productive (economically) is inherently good and expected at any age.

can become adept at these technologies (Smith, 2008), as they recognize real potential in areas such as flexible hours, independence, and continuous learning (Faster Capital, 2025).

When speaking about e-commerce entrepreneurship and freelancing, some challenges arise as the senior population tries to enter this specific market. Most seniors find it difficult to establish themselves in the new technology industry due to a lack of knowledge in the field, as well as the overdominance of youth in the sector (Llorente-Barroso et al., 2024). These challenges can be addressed through the creation of mentorship and training programs for senior citizens (Fernández-López et al., 2022), as well as senior computer clubs (Tatnall et al., 2003). Furthermore, making websites and e-commerce platforms accessible, easy to use, simple to understand, and adaptable to cognitive or mobility limitations is essential for the inclusion of elderly people in the e-commerce industry. In fact, senior citizens can find opportunities to increase their independence through online platforms. For example, by doing their grocery shopping from home or requesting services without having to leave their houses.

Seniors are therefore part of an underserved community in the e-commerce industry, as they often face barriers that slow down their entry into the electronic commerce sector.

6.4/ Women¹³:

Women are unfortunately part of underserved groups in the e-commerce industry. Not many women decide to create their own e-commerce businesses (as freelancers and/or entrepreneurs) due to the many barriers they face: gender stereotypes, cultural norms¹⁴, lack of digital skills, pressure of the male dominance in the workforce, and more (UNESCAP, 2021). Research shows that women, especially those in more traditional and rural settings, tend to feel uncertain and doubtful about their ability to build their own businesses (Priya and Bose, 2021). To remedy this, education in digital literacy and improving their technical skills in the digital industry can help, as well as free training by qualified institutions¹⁵ (Suganya and Thenmozhi, 2020).

However, women, especially those managing family responsibilities, tend to find the new technology industry quite attractive when it comes to balancing their family-work life and their self-satisfaction. In fact, freelancing and entrepreneurship give women the

¹³ It is important to remember that women are not a homogeneous group. Their experiences in e-commerce can vary significantly based on factors such as age, religion, education, social status, and economic background.

¹⁴ Cultural norms here refer to the society's expectations on the attitudes and behaviors of individuals. (Heunermund and Heberle, 2023). These cultural norms can change from one person to another, from a country to another, from a community to another...

¹⁵ UN Women Training Center, Orange Foundation, ILO,...

opportunity to have flexible activities, full authority, and more power in decision-making (Baraku, 2020). Becoming an entrepreneur in the e-commerce industry also gives them the opportunity to generate innovative ideas, increase their creativity, and prove their capabilities (Priya and Bose, 2021). By creating and developing their own e-commerce businesses, women can reach financial stability and independence, which are valuable to them.

6.5/ People with disabilities:

People with disabilities have experienced barriers in many aspects of life, including the workplace. While e-commerce and digital freelancing offer economic inclusion opportunities for people with disabilities, there are significant challenges. It creates job opportunities for people with disabilities who might be excluded from traditional workplaces. Time and location flexibility is one of the key reasons why people with disabilities prefer freelancing. By working remotely, people with disabilities can set their own working hours based on their health needs. It also eliminates transportation barriers and accessibility issues of physical workplaces (Sannon & Cosley, 2022).

Despite these advantages, people with disabilities encounter some unique challenges. A key issue is limited access to basic digital technology. Data from European OECD countries shows a significant digital divide. Persons with disabilities are three times more likely to lack home internet or computer access than persons without disabilities. (ILO, 2022). Also, digital tools and technologies such as websites and softwares are not always designed for people with disabilities. This accessibility issue makes it difficult to benefit from these digital job opportunities. (Olney & Martínez Donoso, 2019). In addition, digital freelancing does not offer stable income due to change in demands and competition. Freelancers also do not have employment benefits such as health insurance and paid leave. Instability and lack of health benefits is especially challenging for people with disabilities (ILO & OECD, 2018).

7/ Mapping of 13 National E-commerce Strategies and Global Trend:

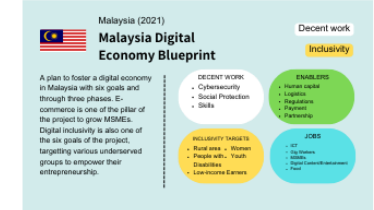
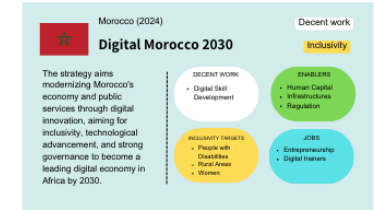
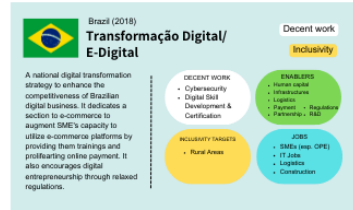
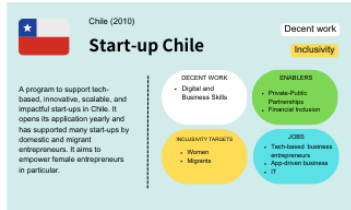
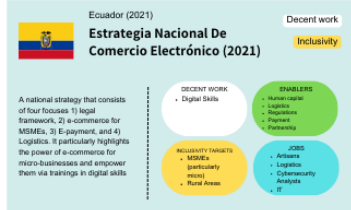
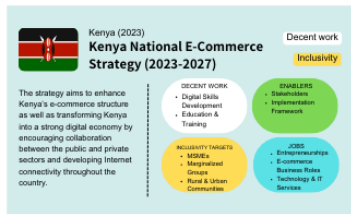
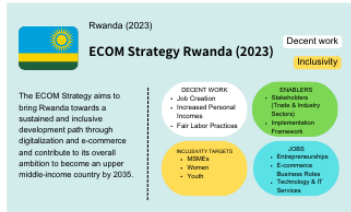
This section will briefly examine the common concepts, jobs, and approaches observed in 24 national strategies. To see the interactive version of the map and all 24 strategies, visit:

https://docs.google.com/spreadsheets/d/1TSP1gRocNEDtn7nwLAh_HZ4n3lushSCQIjDeDpR5N54/edit?usp=sharing

<https://www.canva.com/design/DAGkEWoYcLE/QoKtOA0fUIqGVJobrlToqg/edit>

Mapping of E-Commerce National Strategies

Elaboration, Authors



7.1/ Job Creation:

Among the national strategies researched, all of them mentions or implies job creation. Although it is uncommon among national strategies to suggest a number of created jobs, some strategies have specific numbers of how many jobs will be created. For instance, The Digital Morocco states a goal to create 240.000 direct jobs (Ministry of Digital Transition and Administration Reform, 2024). Another example, Malaysia's Digital Economy Blueprint specifically targets 20.000 cyber security knowledge workers and 30.000 data professionals (EUP, 2021).

Since e-commerce requires involvement of different sectors, namely IT, logistics, finance and education, various job roles are created and involved for e-commerce development. Technical jobs such as software developers and data analysts are the most common jobs that are created thanks to e-commerce. Entrepreneurship and digitalization of SMEs are another priority across national strategies. E-commerce is considered by many countries to be a key factor in the advancement of small businesses. In addition, e-commerce business related roles are created with the growth of e-commerce. These roles include e-commerce managers, digital marketers, customer servicers, and customer service specialists. Some strategies also include freelance job opportunities.

Across continents, almost all strategies acknowledge the need for digital skills improvement. Since digital skills are fundamental to e-commerce, individuals who lack digital skills cannot benefit from e-commerce job opportunities. To solve this problem, some strategies have digital skills education initiatives, including certification programs and platforms. These initiatives also create job opportunities since digital skills trainers and consultants are involved to create these educational programs. Lastly, various jobs and roles are involved in implementing a successful e-commerce strategy. E-commerce relies on logistics and supply chain. Although not all strategies include logistics as job opportunities, countries such as Egypt and Kenya highlight the involvement of logistics (UNCTAD, 2017; State Department for Trade Kenya, 2023). In addition to logistics, regulation and finance are key components of e-commerce, and as e-commerce grows, job opportunities for regulation and finance related jobs increase.

7.2/ Decent Work:

While e-commerce gives economic growth opportunities through numerous job creations, it is essential to ensure that these jobs qualify as decent work. The ILO defines

decent work as the access to quality jobs¹⁶ and maintains that people should be at the center of development. It emphasizes the protection of workers' rights and the importance of an inclusive and sustainable future (ILO, 2025). An international meeting took place in Geneva from the 25th to the 29th of September 2023 at the ILO's headquarters and addressed the impacts of digitalization in the retail sector in terms of decent work and economic recovery (ILO, 2023a). It came to the conclusion that strategies should promote flexibility and enhance productivity but, especially, ensure decent work, which means limiting working time, protecting workers, and facilitating work-life balance (ILO, 2023b). These meetings are designed to prevent growing inequalities and precarious employment in the digital economy.

The analysis conducted for this research revealed that while some e-commerce strategies present elements that support decent work (such as social protection, fair wages, unemployment insurance, non-discriminatory policies, and trade unions), most do not include adjustments or advancements in this area. It appears that they tend to direct their purposes to economic and financial growth, leaving behind the social dimensions needed to achieve Sustainable Development Goals (SDGs) 8 (Decent Work and Economic Growth) and 10 (Reduced Inequalities). In Chile, for instance, a bill (No. 21.431) was created to protect Chilean platform workers by defining key concepts and standards for work. It sets a minimum salary, allows trade unions, obligates platforms to use non-discriminatory algorithms, and gives many rights in terms of social protection (working time, service information, and safety and health-related prevention) (Fairwork, 2024; Arriagada et al., 2021). However, established bills or actions like Chile's remain rare.

For this research, the development of employers' skills could be considered as an improvement of human capital and therefore be part of decent work advancement. In this case, it can be observed that almost all the national strategies studied are emphasizing digital skills development. However, this focus can also be interpreted as an economic objective rather than an SDGs alignment. Furthermore, the study revealed that many e-commerce national strategies prioritize economic growth over elements that ensure decent work. The use of the Internet, its accessibility, and the improvement of IT infrastructures are the most emphasized throughout most of the strategies, which put economic development in the center of these strategies rather than the people.

To conclude, there is still a gap between economic and social development within e-commerce national strategies, which indicates misalignments with sustainable development

¹⁶ Quality jobs are jobs that promote dignity, equality, fair income and safe working conditions (ILO, 2025)

goals (especially SDG 8 and 10) and therefore a slowdown toward an inclusive and sustainable future. Nevertheless, international organizations such as the ILO make sure that decent work is being taken into consideration via meetings (like the one mentioned above), research, fieldwork, and global advocacy. Nevertheless, governments can also be a major player in the reinforcement of decent work principles and should, in future initiatives, reorient their economic competitiveness toward social objectives. This shift would help bridge the gap between economic and social development and therefore contribute to the achievement of SDGs 8 and 10.

7.3/ Inclusion:

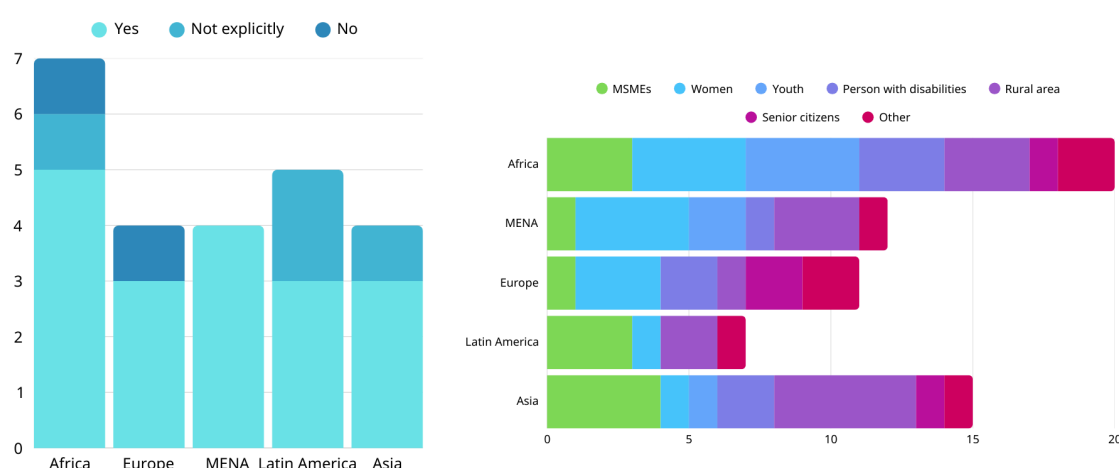


Table 3: The Frequency of Mentions of "Inclusion/Empowerment" and the Frequency of Mentions of Different Marginalized Groups in a National E-Commerce Strategy. Elaboration, Ogawa.
 ※"Not explicitly" means that while a strategy does not explicitly include the word "inclusion" or equivalent, it has a focused action plan for marginalized group(s). Other includes: low-income households, informal sector, migrants, and refugees

A majority of strategies make references to inclusion or incorporate the empowerment of marginalized populations as a key objective. To achieve inclusion, the strategies often propose financial inclusion, educating digital and business skills via online platforms, and improving connectivity by enhancing broadband infrastructures. All of them are crucial not only to start e-commerce or digital freelancing, but to maintain well-beings in this highly digitized society.

However, most strategies do not consider the specific causes behind the digital divide of marginalized groups. For example, both women in urban areas and people in rural areas are often deprived of stable access to the Internet. The lack of connectivity in rural areas, however, largely owes to the inadequate broadband infrastructure (Mei et al., 2021), whereas

women living in cities may be prohibited to use the Internet by their communities (Alencar & Carmargo, 2023). The two groups require different approaches to improve connectivity, yet most strategies focus on enhancing the broadband infrastructure. Furthermore, some marginalized groups are consistently underrepresented. MSMEs, rural areas, and women get the spotlight, while refugees, migrants, and senior citizens are rarely mentioned. The negligence might be because some states do not consider refugees and migrants as ‘citizens’ of states, or they are considered less economically productive than other groups like (young) women and MSMEs. However, this prioritization can further enlarge the digital divide faced by the overlooked groups.

8/ Examples of Successful E-commerce Strategies

This section presents an in-depth examination of five e-commerce strategies, with emphasis on how they integrate job creation, decent work, and inclusion in the strategies. We mainly analyzed the strategies’ designs and intentions that can be inferred from the texts of the strategies, and not implementation. Section 8.5 presents the recent trajectories of some key indicators of e-commerce, but the trajectories and strategies remains a correlation rather than causation.

8.1/ Overview:

Kenya: The Kenya National E-Commerce Strategy (KNES) aims to enhance Kenya’s e-commerce structure as well as transform Kenya into a strong digital economy by encouraging collaboration between the public and private sectors and developing Internet connectivity throughout the country. With an emphasis on inclusivity, this strategy works toward achieving accessible services for all Kenyans. The KNES is built on pillars designed to be foundations for Kenya’s e-commerce development. With them, the Kenyan government hopes to build one of the strongest e-commerce markets on the African continent.

Rwanda: The National E-commerce Strategy of Rwanda (ECOM) aims to transform Rwanda into a strong, sustained, and inclusive regional e-commerce hub by 2035. The strategy will promote innovation and inclusivity, create jobs, and improve trade to boost Rwanda’s economy. The expected goals from the successful implementation of this strategy include the increase in the purchases of goods and/or services by Rwandans, the increase in the use of e-commerce by ten or more employees’ businesses, and finally the increase in the “turnover

coming from the e-commerce sales in businesses of all sizes as measured by those formal businesses with ten or more employees” (UNCTAD, 2023). The Rwandan government wants to build a safe and robust e-commerce ecosystem that will enhance the economy of its country while giving opportunities to underserved social groups.

Ecuador: Estrategia Nacional De Comercio Electrónico (ENCE) is a national strategy announced in 2021 to develop e-commerce through four pillars: legal framework, MSMEs, E-payment, and Logistics. MSMEs are central to ENCE, and it outlines a detailed plan to support them by equipping them with both skills and knowledge to prevent exploitation by large platforms and by promoting financial inclusion.

Malaysia: Malaysia Digital Economy Blueprint (MDEB) seeks to foster a thriving digital economy in Malaysia with six goals. Malaysia is distinctive from other strategies in their commitment to inclusivity. MDEB announces that inclusivity is one of their three designing principles (EUP, 2021). This commitment is reflected in its integration of gig workers; furthermore, their learning platform emphasizes job matching and is offered both online and offline, which are uncommon in many strategies we covered.

Egypt: The "National E-Commerce Strategy for Egypt" aims to leverage e-commerce to boost economic growth, export competitiveness, and job creation. It proposes six sub-strategies and associated megaprojects to address these challenges and capitalize on opportunities, focusing on empowering businesses, formalizing the informal sector, strengthening the ICT sector, improving logistics, stimulating e-payments, and building consumer demand.

8.2 Job Creation:

Country	Jobs Created	Jobs Involved
Kenya	<ul style="list-style-type: none"> • E-commerce Business Roles • IT services • Digital Content Creators 	<ul style="list-style-type: none"> • Regulatory and Compliance Jobs • Financial Services Providers
Rwanda	<ul style="list-style-type: none"> • Web Developers • Software Engineers • Product Managers 	<ul style="list-style-type: none"> • Market Researchers • Training Services (e.g. consultants, e-commerce trainers)
Ecuador	<ul style="list-style-type: none"> • Entrepreneurs and Micro-Businesses (mainly artisans) • Business Consultants • Financial Experts 	<ul style="list-style-type: none"> • Educators and Researchers • Postal Service (Mainly the National Post of Ecuador)
Malaysia	<ul style="list-style-type: none"> • IT services • Data Scientists and Cybersecurity Experts 	<ul style="list-style-type: none"> • 13 Different Industries (e.g. Agriculture, Construction, and Tourism. See P85 of EUP (2021) for More)
Egypt	<ul style="list-style-type: none"> • Entrepreneurs • Software Developers • E-commerce Business Roles 	<ul style="list-style-type: none"> • Logistics • E-commerce Consultants • Trainers

**Table 4: Jobs Created and Involved in the Different National E-Commerce Strategies
Elaboration, Authors.**

Kenya: The result of this strategy can be classified into two types of jobs: those involved in its creation and the ones created by its implementation. The new entrepreneurial opportunities that it will create are the most significant and will be valuable for the youth and MSMEs, especially. Indeed, enhancing access to finance with training on financial literacy, on fundraising skills, and e-payments. Other jobs that will be created from this strategy will concern e-commerce business roles, technology and IT services, digital content creators, etc. On the other hand, the jobs that are involved in the creation of this strategy will regard regulatory and compliance jobs, financial services providers, or training services.

Rwanda: One of the main goals of the ECOM strategy is to create jobs in order to increase household incomes and improve Rwandans standards of living. Many jobs are expected to emerge from this strategy, such as web developers, software engineers, and product managers, that will help build and run e-commerce platforms. Other jobs in digital marketing, sales, logistics, supply chain management, customer services, etc., will also be created and will contribute to Rwanda's economic growth. Moreover, entrepreneurs and small businesses are going to benefit from the creation of this strategy since it will facilitate their market penetration. The job involved in the implementation of the strategy will be related to training (e.g., consultants, e-commerce trainers), regulation and policy actors, or market researchers, as well as innovation managers that will help integrate e-commerce technologies in the market.

Ecuador: ENCE plan to educate micro-businesses and artisans on digital literacy, finance, and advantages and disadvantages of e-commerce platform options, calling them as “objeto prioritario” (MTSI, 2021, 17). These information sessions can encourage entrepreneurship but also increase jobs for business consultants, financial experts, researchers and educators to design and implement the program. Furthermore, ENCE highlights mobile bank account ownership and logistics, underscoring the importance of trust. This can increase jobs for cybersecurity and financial analysts. Nonetheless, logistics primarily focus on improving the service of the National Post of Ecuador by introducing new digital apps (ibid) and do not elaborate on human workers. It is unclear whether ENCE will have positive or negative impacts on the number of jobs in the logistics sector.

Malaysia: MDEB’s uniqueness is its commitment to job matching. Its learning platform, MYFutureJobs, is a government-run platform for upskilling and reskilling of workers. Unlike other learning platforms, it offers services offline as well so that people who do not have stable access to the Internet in their houses can use it. Furthermore, the platform also holds career counselling, annual career fairs, and open interviews, and a company can customize the training program on the platform so that the training more closely reflects their needs (EUP, 2021). Job creation cannot be achieved solely from the human capital growth of workers, as employers must be able and willing to hire workers. Including job matching in its design can potentially help workers not only develop their skills but also help them actually land in a job. Therefore, MDEB may be more effective than other platforms that merely teach digital skills.

Egypt: Creating job opportunities and entrepreneurship is a key objective of Egypt National E-commerce Strategy. It is expected that job opportunities will be created in various sectors such as ICT and logistics. As the number of e-commerce businesses increases, as a result of that, e-commerce operation related jobs such as customer service representatives, accountants, digital marketers. The strategy seeks to build a strong IT sector that supports e-commerce, which leads to jobs in software development for creating e-commerce applications and solutions, and jobs in IT infrastructure and cloud computing for managing and providing hardware support of e-commerce business . The strategy makes special reference to growing the fintech industry, which would result in the creation of specialist financial technology jobs. Furthermore, with the project “Empower youth and SMEs for e-commerce”, the strategy aims to help unemployed university graduates to help SMEs build websites or create online stores. The project includes creating a local Arabic freelance

marketplace to link independent contractors with small businesses in need of assistance with e-commerce.

8.3 Decent Work:

Kenya: While the KNES is significantly oriented toward economic and financial growth, there are elements that contribute to enhancing decent work and working toward equal and fair opportunities to enter the Kenyan e-commerce industry. Indeed, the emphasis on training and teaching digital skills in the strategy can contribute to human capital gain and so enhance work opportunities for the citizens. Moreover, the strategy points out the importance of building trust and respecting consumers' and merchants' rights (State Department for Trade Kenya, 2023), which should participate in improving different decent work components such as working conditions and improved workers' rights.

Rwanda: Like Kenya's strategy, Rwanda's ECOM seems to direct its main goals toward growth for its economy especially. However, through the creation of apprenticeship programs, skills development training, and university courses, the strategy wants to improve its human capital and help workers to reach higher remuneration and better working conditions, in line with their new digital skills. Moreover, the legal and regulatory framework proposed in the strategy puts an importance on reducing cybersecurity breaches, which is essential to protect consumers but also workers' privacy and help foster better working environments.

Ecuador: ENCE includes 3 schemes that can foster decent work, but their impact is likely to be indirect because all except one targets MSMEs, not workers. The first one is skill training, which teaches digital and business skills and provides certifications upon completion. The certificates could be used to prove their qualifications and avoid jobs that are too underqualified for workers. The second is platform knowledge transfer, where ENCE informs MSMEs about advantages and disadvantages associated with each platform in Ecuador (MTSI, 2021), to help entrepreneurs make informed choices and avoid using risky platforms. Additionally, ENCE provides templates and guidelines for online contracts to promote reliable transactions; however, it is unclear if these contracts cover only B2C and B2B or also employment contracts. If it does, then those standardized contracts can set the minimum standards about the rights and treatment of workers. Overall, while ENCE has potential to support decent work, its impact is ambiguous. This is because their focus is MSMEs; in fact, *empleados* (employees or workers in Spanish) appeared only once in the text.

Malaysia: MDEB proposes a social protection scheme for gig workers, who are included only in strategies of Greece and Malaysia. 40% of Malaysians engage in the gig economy (EUP, 2021), so ensuring “**gig workers are protected** [emphasis as original]” (ibid, 32) is their priority.

MDEB employs both demand-side and supply-side approaches to achieve it. It creates a specialized teaching platform GigUp and subsidizes training on existing private learning platforms to support reskilling and upskilling of gig workers. MDEB also encourages private firms to expand their worker protection schemes to gig workers by providing firms financial incentives. Reskilling and upskilling alone will be unlikely to equip social protections to gig work, as the lack of social protection does not come from qualifications of gig workers, but rather from firms’ reluctance to accept gig workers as legitimate employees, which incur them more costs. This point, however, is acknowledged by MDEB and it is at the stage to confirm if the demand-side approach (financial incentives) would be feasible.

Egypt: The strategy focuses on creating jobs and improving people's skills. It includes various programs for skill development, training, supporting IT professionals, and helping young people and small businesses through e-commerce. These efforts are meant to prepare the workforce for the digital economy. The strategy supports inclusive economic growth and aims to improve people’s well-being, in line with SDG 8 on 'Decent Work'. However, it gives less attention to other important parts of decent work, such as working conditions, social protection, and workers’ rights.

8.4 Inclusion:

	INCLUSION TARGETS				
	KENYA	RWANDA	ECUADOR	MALAYSIA	EGYPT
MSMEs	✓	✓	✓	✓	✗
Women	✓	✓	✗	✓	✓
PWDs*	✓	✓	✗	✓	✗
Rural areas	✓	✓	✓	✓	✓
Seniors	✓	✓	✗	✗	✗
Refugees	✗	✗	✗	✗	✗
Youth	✓	✓	✗	✓	✓

*People with disabilities

Table 5: The Inclusion Targets of the Different National E-Commerce Strategies
Elaboration, Authors.

Kenya: One of Kenya National E-commerce Strategy's main goals is to provide opportunities to vulnerable groups such as MSMEs, women, youth, persons with disabilities, rural communities, people over 60 years old, and lower-income groups. In fact, making sure these vulnerable groups have equal opportunities to enter the e-commerce market is stated as a pillar with defined strategic goals enhancing inclusion. The vision for the Kenyan e-commerce market aims at two outcomes: increasing internet access across the country and making e-commerce platforms more affordable and accessible to any social groups, any locations, any business sizes, and any sectors (State Department for Trade Kenya, 2023). Key point indicators are going to be used to evaluate the actual internet penetration among the underserved groups cited previously.

Rwanda: Women, youth, older people, and persons with disabilities are the emphasized targeted groups for inclusion in the ECOM strategy. Also, making sure MSMEs and rural communities are given equal opportunities is an objective of this strategy. The emphasis on inclusivity is especially going to be centered on ICT skills' development with the delivery of appropriate training in business skills, skills development, and capacity development projects. Women are going to be one of the main beneficiaries of the implementation of this national e-commerce strategy with the promotion of women's ownership and access to digital devices by offering affordable technologies and mobile service packages (UNCTAD, 2023) that will

allow them to enter more smoothly into the e-commerce market and give them opportunities to create their own digital company.

Ecuador: ENCE features the empowerment of MSMEs through financial inclusion and skill training, though its action plan does not address different needs of marginalized groups. In Ecuador, one-third of the population does not own a bank account, and women, low-income households, and rural areas (World Bank, 2021; Gamboa et al., 2021). ENCE, however, only mentions rural areas, arguing the need to build bank branches there. The words “mujeres (women)”, “poor/low-income (pobre/bajos ingresos)” or equivalent were never mentioned¹⁷. Account ownership is crucial to process online payment and to save and scale one’s business so financial inclusion can dramatically expand the income-generating activities of entrepreneurs and freelancers from marginalized groups. While Ecuador refers to many measures for financial inclusion, more granular strategies will merit them to improve the strategy’s effectiveness to address different needs.

Malaysia: MDEB’s Goal 5 “Create an Inclusive Digital Society” makes a direct reference to inclusivity. This goal involves four action plans, each targeting specific marginalized group(s). The first is the public-private partnership for digital literacy training programs for rural residents, calling private sectors, academia, and volunteers to partner with the state. The second is to produce a centralized database and indicator of the digital divide in Malaysia (the Digital Inclusion Index Malaysia), in order to track and research the state of digital divide in Malaysia over the implementation. The third is to lower the cost to adopt e-payment methods for MSMEs. The fourth plan is to establish a digital platform to promote entrepreneurship among the bottom 40% of earners, women, and people with disabilities. The platform emphasizes teaching business skills and financial literacy rather than digital skills. MDEB is unique from other strategies because it recognizes subgroups in ‘marginalized groups’ and shows a partial customization to address their needs. MDEB is also distinctive in their conscious efforts to track the progress.

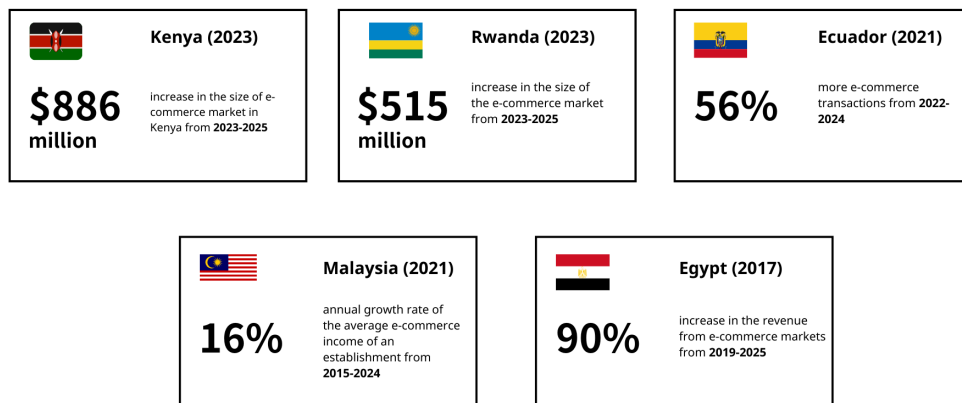
Egypt: Inclusivity is one of the main goals of the strategy with special targets on rural areas, women and youth. Rural inclusion is addressed through the "Rural E-commerce Development Initiative" megaproject. This initiative seeks to bring the opportunities of e-commerce to rural communities by providing training to rural micro and small enterprises

¹⁷ Except on page 19, where ENCE states to launch “proyectos de genero (gender projects)” (MTSI, 2021, 19). There is no further articulation about the projects.

on how to start or improve selling online. In addition, creating an e-commerce platform for farmers is planned. The strategy aims to improve ICT infrastructure and e-payment services in rural areas. Acknowledging the importance of logistics in e-commerce, the strategy aims to extend the network of post-services for shipping and delivery. For women and youth, the strategy plans to create a network for women and youth interested in e-commerce and digital market opportunities in order to help them connect and collaborate.

8.5 Implementation:

E-commerce Related Indicators



Inclusion Related Indicators

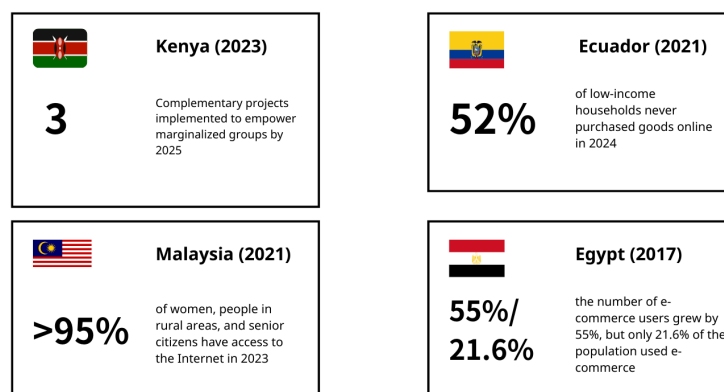


Figure 4: How did the e-commerce market and inclusivity change after the year of the announcement of the strategies? (Elaboration, Authors)

Kenya: KNES was envisioned to put Kenya as one of the African leaders in the e-commerce market. Kenyan internet users surpassed 27.4 million at the start of 2025 (Kemp, 2024),

compared to 17.86 million in 2023 (Kemp, 2023), which automatically enhances the online industry and places Kenya as the third-largest e-commerce market in Africa (Sirima, 2024). Thus, the country's e-commerce market is expected to reach \$886 million by the end of 2025 (Cysparks, 2025). Therefore, from an economic standpoint the strategy seemed to be efficient. On the inclusivity goal, it seems that women, youth, SMEs, and rural communities have been the marginalized groups that benefited most from the KNES, especially through programs (Shetrade, DigiKen, or Strengthening Digital Communities Project) complementary to the national e-commerce strategy.

Rwanda: Since the launch of Rwanda's ECOM strategy, the country has experienced growing activities in the e-commerce industry. In fact, revenue of this specific market is projected to reach \$515.73 million by the end of 2025 (Statista, 2025a). With that, the online presence of hundreds of firms, including MSMEs, grew tremendously, showing real commitment to this new type of business (EIF, 2024). The Rwandan government also greatly participated in developing initiatives alongside its national strategies, fostering inclusivity and equality, such as the Ihuzo program that fosters e-commerce digital skills for women and MSMEs especially (UN Women, 2023).

Ecuador: While the e-commerce sector in Ecuador is steadily growing in Ecuador, the indicators for e-commerce inclusion are not. The number of e-commerce transactions dramatically grew by 56% from 2022 to 2024, though no statistics on the number of MSMEs are available. Nevertheless, almost 52% of low-income households never purchased goods online in 2024, and the percentage of people with a financial account only increased from 72% to 83.6% in 2022 to 2024 (CECE & UEES, 2022 and 2024). Although these figures only reflect the usage of e-commerce by customers, if few poor households have access to a financial account or e-commerce, the number of MSMEs and marginalized groups who use e-commerce is likely to be limited. Thus, Ecuador must promote social inclusion via e-commerce.

Malaysia: MDEB, launched in 2021, focuses on job matching and inclusion of marginalized groups. Malaysia performs extraordinarily well in inclusion. The number of establishments that use e-commerce grew annually by 7.4% , and over 95% of people, including rural areas, women, and senior citizens, had access to the Internet in 2022 to 2023 (DOSM, 2024). However, job matching remains a challenge. MYFutureJobs recorded 575,044 job seekers, yet only 125,956 jobs were posted in October 2024 (Radhi & Sallehuddin, 2024). Despite

progress in digital inclusion, Malaysia must boost job creation to balance labour demand and supply.

Egypt: Since the National E-Commerce Strategy launched in 2017, e-commerce sector has been growing. Revenue of the e-commerce market in Egypt has increased from 0.96 billion dollars in 2019 to 1.83 billion dollars in 2025 (Statista, 2025b). The number of users of e-commerce in Egypt increased from 5.17 million in 2019 to 8.05 million in 2025, meaning 21.61% of Egypt's population are using e-commerce. (Statista, 2025c). To integrate more SMEs and businesses in rural areas into e-commerce, Egypt Post introduced financial service for e-commerce. Since 2016, the post's service offerings have dramatically increased from 15 to over 170 in 2025. In terms of logistics, Egypt Post is developing an extensive network of over 4,600 post offices throughout the country (King, 2025). The e-commerce sector is growing in Egypt; however, Egypt was ranked 134th among 146 nations In the World Economic Forum's 2023 Gender Gap Report (Allam, 2024). Thus, Egypt must address the significant gender gap to ensure that this growth is inclusive by improving women's economic participation and opportunities within the digital economy.

9/ Conclusion:

9.1 Key Insights:

E-commerce is rapidly growing worldwide, establishing a complex ecosystem of actors and generating a wide range of jobs. However, some of these jobs are marked by informality and poor working conditions, partly due to the oligopolistic structure of the market and insufficient regulations over emerging strategies in e-commerce. E-commerce also has a mixed impact on marginalized groups, such as refugees, rural communities, senior citizens, women, and people with disabilities. While e-commerce can help these groups overcome time and mobility barriers to access work, many lack necessities for e-commerce such as internet access, devices, digital literacy, and e-payment options. The root causes of these digital divides vary across groups.

We analyzed 24 national strategies, most of which highlight inclusivity and target entrepreneurs and MSMEs. Common approaches in the strategies include digital skills training, improved connectivity, and financial inclusion. However, most strategies overlook three elements. First, they rarely address jobs outside entrepreneurship and IT, limiting our understanding of broader job creation potential. Second, they fail to promote decent work,

highlighting only training of workers without addressing working conditions or the responsibilities of employers. Third, strategies unevenly feature marginalized groups. While MSMEs, women, and rural areas are often highlighted, refugees, migrants, and senior citizens remain peripheral.

Thus, while e-commerce holds great potential as a job creator in the digital era, its benefits are not automatically inclusive or equitable. Governments, enterprises, and international organizations must take more active steps to ensure that e-commerce generates decent and accessible jobs for all.

9.2 Recommendations for Future Research and Strategies:

Based on our analysis, we propose these recommendations for the following stakeholders:

1) National Governments of Emerging Countries

- Target and examine the e-commerce's impact in terms of jobs, not only in terms of industries.
- Mention the job creation outside retail, IT, entrepreneurs, and logistics through e-commerce
- Collaborate with stakeholders involved in protection of workers (such as trade unions, Ministry of Labour, and NGOs) to incorporate decent work elements in the strategies
- Include the groups that are currently underrepresented, such as refugees and migrants.
- Discuss with global enterprises to prevent their potentially-exploitative use of power over MSMEs and workers

2) ILO (and other IGOs)

- Advise the national governments to refer to decent work elements and inclusion of underrepresented groups
- Propose a tailored solution to address specific needs of different marginalized groups to the national governments and advocate for more equal representation of different marginalized groups
- Develop a multilateral guideline to protect enterprises and workers from risks in e-commerce, such as exploitation by global firms, legal barriers to access basic necessities of e-commerce.

3) Researchers

- Research jobs generated by e-commerce outside retail, IT, entrepreneurs, and logistics
- Use employment-related indicators (such as wages, number of workers, and working conditions) to measure the impact of e-commerce rather than sales and profits.

4) Enterprises

- Stop exploitative behaviours towards their workers and participating businesses, which are often observed in retail and logistics sectors.
- Encourage the national governments to open labor market opportunities for marginalized communities to have more diverse talent.

Disclaimer: Artificial intelligence was used in this research paper to assist with grammar, formatting, and language refinement.

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