DISCUSSION NOTE

Embedding Digital Finance in e-Commerce Platforms during the COVID-19 Pandemic

Early assessment of the impact of COVID-19 on e-commerce and the provision of digital financial services for micro, small, and medium enterprises and low-income consumers

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LIST OF ACRONYMS

AML/CFT	anti-money laundering and counterfinancing of terrorism
FATF	Financial Action Task Force
KYC	Know Your Customer
MFI	Microfinance Institution
MSME	Micro, Small, and Medium Enterprise
PSP	Payment Service Provider

All dollar amounts are US dollars unless otherwise indicated.

EXECUTIVE SUMMARY AND KEY LEARNINGS

1. **e-Commerce played an essential role during the COVID-19 crisis**: At a time when retail commerce was severely hampered by lockdowns and mobility restrictions, e-commerce took on greater importance in helping consumers purchase basic goods and services primarily through digital payments methods, counterbalancing the negative effects of low economic activity in the brick-and-mortar retail sector. e-Commerce platforms in countries where the lockdown effects were not very severe performed better than in countries where restrictions were harsher.

2. **The impact of COVID-19 on e-commerce platforms varied greatly depending on the government policies adopted during the crisis**. Some countries, such as India, experienced short-term disruptions in both physical stores and e-commerce platforms. The short-term impact was generally negative, as vendors in the platforms could not operate their businesses and supply chains were disrupted. The lack of policy differentiation during the lockdown between physical stores and online marketplaces exacerbated the negative effects on the economy. In these countries, the platforms were prevented from delivering products other than essential items. Sellers were not able to access their physical inventories and get products shipped to customers.

3. **Digital transformation and adoption accelerated due the pandemic:** Unique digital shoppers increased in most countries, with a few exceptions where the lockdown policies restricted all types of economic activities including e-commerce. The data available is fragmentary but shows fast growth rates in most regions, from the United States to Africa and the Middle East, reshaping consumer behavior and enterprise operations. On the selling side, online sales are no longer an option, but a necessity for brick-and-mortar businesses. On the consumer side, the COVID-19 crisis has caused a structural shift of demand toward digital commerce that is likely to continue in the years to come. MercadoLibre, for example, registered a 100 percent year-on-year increase for essential goods and pharmacy products. In Africa, Jumia registered a fourfold increase in the sale of grocery items. Amazon's first-quarter sales in 2020 rose by 26 percent year over year.

4. **The crisis might open opportunities for second-generation "niche" platforms that specialize in specific market segments**. In addition to causing disruptions to large e-commerce platforms, the COVID-19 crisis also opened opportunities for new and niche platforms employing innovative business models and catering to segments traditionally excluded from large e-commerce platforms. Several new platforms gained relevance in emerging markets of Africa, Asia, and Latin America, adopting new business models and helping the overall landscape to become more competitive. Platforms such as FarmCrowdy in Nigeria, Twiga in Kenya, and Dunzo in India have been operational for several years. However, they have gained importance and expanded their business models during the crisis, as traditional supply chains are disrupted. Other platforms, such as SafeBoda in Uganda and Helloomarket in Ethiopia, were able to open opportunities for micro and small businesses that are too small and informal to operate in large e-commerce platforms.

5. **The digital payments infrastructure, including the mobile and bank agent networks, are critical for the expansion of e-commerce toward underserved segments.** Most platforms saw the usage of digital payments, notably digital wallet usage, increase. In Africa, Jumia enforced the usage of digital payments in countries such as Kenya, as it temporarily discontinued cash on delivery. Mercado Pago saw a strong increase both in terms of penetration of digital payments and vol-

ume of transactions. On the other hand, countries with low mobile-money penetration and/or not well-established agent networks had to rely on cash payments. For example, in Nigeria, FarmCrowdy had to discontinue mobile payments because disruptions to the agent network made it difficult for sellers to cash out their payments. In Ethiopia, low penetration of mobile money forced Helloomarket to enable cash on delivery for deliveries in Addis Ababa and different forms of cash deposits in banks, post offices, or mobile-money agents outside of the capital.

6. **e-Commerce lending to micro, small, and medium enterprises (MSMEs) declined during the crisis due to worsening market conditions, but platforms provided relief to existing borrowers.** New loan originations to MSME sellers on e-commerce platforms declined in the weeks immediately after the COVID-19 outbreak, as many platforms wanted to limit their exposure to the risk of nonperforming loans. However, existing sellers who already had an established relationship with the platforms were given discounted loan terms to cover losses and economic hardship for short-term loans (between three months to one year) in most markets. In some instances, such as China and Brazil, governments also used the e-commerce platforms as the channel to provide discounted financing to MSME sellers.

7. **Uncertainty about regulatory frameworks for the provision of financial services is a key risk for e-commerce platforms and needs to be prioritized by regulators in the short term.** The uncertainty around the regulatory framework for the provision of e-money wallets and credit to MSMEs is an important risk for the operation of platforms in emerging markets and developing economies. Changing requirements linked to payments and credit licenses and know-your-customer requirements for sellers and customers need to be addressed for platforms to expand.

EMERGING GOOD PRACTICES AND REGULATORY IMPLICATIONS

The surge in usage of e-commerce during the COVID-19 pandemic has accelerated the need for deeper understanding of the risks and opportunities posed by the growing interaction of digital commerce and digital finance. This discussion note identifies several emerging good practices and recommendations based on the country and platform case studies analyzed:[1]

a) Digital financial services are critical for participation in the digital economy. e-Commerce platforms need to integrate seamlessly with the national payment system and offer different payment methods to target different segments of the population.

b) Governments should coordinate with banks and mobile-money providers to ensure that agent networks remain operational in areas where their services are most needed. This may require incentives and/or subsidies to ensure agents' liquidity and financial viability in periods of slow economic activity. Clear policies should also be designed to regulate agents who operate both essential financial services and retail businesses deemed nonessential.

c) e-Commerce platforms can play a key role in facilitating access to credit for small businesses, either directly or in partnership with banks or other licensed lenders. Governments need to develop adequate and proportional regulatory frameworks to encourage innovation and the sound development of this market, including participation in the credit-reporting system, financial consumer protection, and data protection. This would encourage competition and reduce the risk that vendors will "lock in" to the largest platforms in the market.

d) As e-commerce business models have evolved, the role of intermediaries has expanded rapidly to provide financial services that would be typically handled by regulated payment service providers (PSPs). These service providers or intermediaries include non-bank financial institutions and businesses that previously did not issue any financial products (for example, e-money digital wallets) or handle transactions on behalf of the regulated PSPs (for example, e-commerce aggregators).

1. These are considered as "emerging," rather than "established," good practices, as the COVID-19 crisis was still unfolding and data continued to be fragmentary at the time of writing.

e) Regulators need to be aware of emerging risks within the e-commerce ecosystem due to unregulated intermediaries issuing financial products and/or providing services or moving funds on behalf of merchants or regulated PSPs. While no regulatory framework for global e-commerce is commonly agreed upon, awareness of emerging non-bank players within the e-commerce ecosystem and the potential risks posed by them is a good starting point for developing a national-level regulatory framework. The potential risks to the financial ecosystem include the following:

- *Credit and liquidity risks* may arise if the intermediary responsible for collecting funds on behalf of the merchant fails to transfer funds to the merchant account.
- *Operational and reputational risks* may also arise due to operational and security disruptions resulting in reputation risk for merchants.
- *Cyber risks* in the form of data breaches may result in loss of funds or the stealing of sensitive consumer information.
- *Consumer-protection risks* due to loss of consumer funds and the lack of recourse mechanism for chargebacks and refunds. Consumers also face privacy and data-protection risks.

f) Regulators and e-commerce platforms should consider introducing simplified onboarding processes and proportional due-diligence processes to facilitate the enrollment of new merchants while ensuring compliance with rules on anti-money laundering and counter-financing of terrorism (AML/CFT).

1. INTRODUCTION

This study provides an early assessment of the impact of COVID-19 on e-commerce platforms and digital financial services, identifying the opportunities, good practices, and key challenges that have emerged in different regions. The study is based on interviews with some of the largest e-commerce platforms conducted early after the onset of the COVID-19 crisis and an extensive analysis of their corporate media channels, quarterly and annual financial reports, and general media reports. The project team also engaged with new and emerging platforms that leverage digital channels and digital finance to promote participation of MSMEs in the economy in emerging markets, Africa in particular. The study also benefitted from interviews and discussion with industry experts, entrepreneurs' associations, and other players in the field.

1.1 Study Objectives

The focus of the study is to evaluate the impact of COVID-19 on the use of e-commerce platforms across different regions and the role that digital financial services have played in the process. The emphasis is on digital and financial inclusion of consumers and small businesses and their impact on job creation and economic growth.

The following questions are analyzed:

1) **Did e-commerce platforms function efficiently and increase sales during the crisis?** The study looks at the immediate impact of the COVID-19 crisis on e-commerce platforms. Using sales volume data wherever available, it looks at the effects of lockdown policies adopted by different governments on the participation rates of businesses and consumers on these platforms.

2) **Have underserved segments, such as small businesses and low-income households, increased participation rates in e-commerce platforms as a response to the crisis?** The study also looks at the effects of growing e-commerce volumes on underserved segments, especially small businesses and low-income buyers, and whether opportunities for these segments to buy and sell on these platforms increased.

3) **Have e-commerce platforms accelerated the adoption of digital financial services, especially digital credit and digital payments?** The study analyzes the role played by the platforms in providing access to digital financial services, such as digital payments and working-capital loans, and other support services to MSME sellers. The study also analyzes the regulatory environment enabling the provision of financial services through e-commerce platforms and the key challenges therein.

4) **What are the main demand-side, supply-side, and regulatory challenges affecting the growth of e-commerce platforms and participation by disadvantaged segments?** A cross-cutting question analyzed in each section of the paper focuses on key barriers constraining the growth of e-commerce platforms and participation of disadvantaged segments such as small businesses and low-income households. The research focuses on regulatory frameworks, government policies, and digital skills.

1.2 Definition and Categorization of e-Commerce Platforms

In its most basic definition, e-commerce is defined as the buying and selling of goods and services over digital and electronic networks (Reserve Bank of India 2019). e-Commerce could require the integration of diverse technologies and business systems that include but are not limited to Internet-based and mobile-based platforms, cloud computing, electronic data interchange, digital payments, escrowing services, and supply-chain and inventory management, among others. Virtually all e-commerce transactions require access to the Internet in at least one point of the transaction.

e-Commerce can be classified several ways based on its structure and the type of linkages between sellers and buyers. This paper categorizes e-commerce platforms based on three criteria: (i) sales models, (ii) the suite of services provided, and (iii) the type of sellers and buyers involved in the platforms.

1. **SALES MODELS:**[2] The first categorization is based on whether platforms use an inventory or marketplace model of e-commerce:
   a) ***In an inventory-based model,*** the inventory of goods and services is owned by an e-commerce entity and sold to the consumers directly.
   b) ***The marketplace model*** *i*nvolves providing an IT platform or digital or electronic network to act as a facilitator between the buyer and seller. The marketplace model can itself be divided into several types depending on whether the platform performs the transaction or only manages components of it. Large platforms such as Amazon, eBay, Jumia, and MercadoLibre fall under this category.
2. **CORE SUITE OF SERVICES:** The second categorization is based on the types of services provided to buyers or sellers. The ecosystem is complex and evolving rapidly, and platforms are quickly adopting new strategies. Important services include but are not limited to the following:
   - ***Within-platform payments*****:** Most e-commerce platforms allow customers to make within-platform payments through different channels. Amazon, for example, allows diverse payment methods depending on the country of operation, including debit and credit cards, prepaid cards, and PayCode, among others.[3] Jumia allows customers to pay via mobile money, cash on delivery, and cards. Facebook Marketplace recently introduced *checkout* in the United States, which allows buyers to pay within the app through PayPal or credit card. The majority of Facebook Marketplace pages, however, especially those in emerging markets, require buyers and sellers to settle the payment outside the platform. Online classifieds platforms such as Craigslist or Jiji work in a similar way.
   - ***Fulfillment processes*****:** e-Commerce platforms use widely different strategies for fulfillment services such as warehousing, inventory management, and shipping. In Latin America, for example, MercadoLibre provides *Mercado Envíos*, in which the platforms manage orders from customers, store sellers' products in their warehouses, and manage deliveries. *Jumia Express* (fulfillment by Jumia) in Africa and Amazon's *FBA* (fulfilled by Amazon) work in similar ways. On the other hand, other platforms, such as eBay and Facebook Marketplace, have traditionally not provided fulfillment services,[4] while other platforms, such as Etsy and Shopify, allow third-party fulfillment services to integrate with their platforms.
   - ***Customer and seller guarantees***: Another important service provided by e-commerce platforms relates to product returns and money-back guarantees. These services are guaranteed by some platforms. Amazon, for example, provides an "A-to-Z Guarantee" to customers who purchase from third-party sellers. EBay developed a *Money Back Guarantee* policy for their customers, whereas platforms like Etsy allow each seller to decide its own return policies. Other platforms, such as Facebook Marketplace or Craigslist, do not provide such guarantees directly to buyers or sellers.
   - ***Other services***: e-Commerce platforms may provide a variety of other services, such as financial services (for example, loans, insurance, and so on), data services (for example, scoring, sales dashboards, and the like), webpage design, and training, among others.
3. **TYPES OF SELLERS AND BUYERS:** A third criterion commonly used to categorize e-commerce marketplaces refers to the types of users in the platform. This primarily differentiates between business and individual customers and sellers:

2. The definition developed in this paper expands on the 2019 definition developed by the Reserve Bank of India (Reserve Bank of India 2019).
3. Amazon PayCode is a cash payment method available in some countries. This is briefly described in section 3.
4. Note that eBay introduced an end-to-end fulfillment service in 2019.

TABLE 1: Suite of Services Provided by Different e-Commerce Platforms

(Examples of platforms)	**END-TO-END FULFILLMENT**	**WITHIN-PLATFORM PAYMENTS**	**CUSTOMER GUARANTEES** *(for example, returns, money-back guarantees, others)*
Amazon	✓	✓	✓
MercadoLibre	✓	✓	✓
Jumia	✓	✓	✓
Alibaba	✓	✓	✓
eBay	×	✓	✓
Etsy	×	✓	×
Shopify	×	✓	×
WeChat	×	✓	×
Facebook Marketplace	×	×	×
Jiji	×	×	×
Craigslist	×	×	×

a) ***Business to business:*** Platforms such as Alibaba in China and Twiga in Kenya target primarily business supply chains, where enterprises are both the main sellers and buyers in the platform.

b) ***Business to consumer:*** The most widely known type of e-commerce, this is where businesses sell products to individual consumers. Amazon, Jumia, and MercadoLibre all belong in this category.

c) ***Customer to customer:*** This type of platform, often described as *s-commerce* (social commerce), is becoming increasingly common, especially through social media. Platforms such as WeChat and Facebook Marketplace belong in this category.

d) ***Other:*** Customer-to-business, government-to-business, and other types of platforms exist but usually adopt different business models. They are beyond the scope of this paper.

1.2 Study Scope and Limitations

The previous section showed the complexity and heterogeneity of e-commerce platforms. This study is not a comprehensive diagnostic of all e-commerce business models and regulatory frameworks globally, but an analysis of selected platforms and country case studies focusing on the role of digital financial services and the impact of COVID-19. As such, it is important to note that the research is limited in scope. First, the study is based on a series of interviews with selected platforms conducted between April and May 2020; hence, the study is not representative of all platforms and regions. Categories such as the business-to-business e-commerce platforms described above are not analyzed in this paper, while customer-to-customer platforms are analyzed only partially. Second, the research makes an early assessment of the short-term impact of COVID-19 on the market. However, the limited availability of data, combined with the fact that the pandemic is recent and still unfolding, makes the analysis subject to potential errors and biases. It will be important to validate the findings as data becomes available and to conduct further research on areas linked to e-commerce not covered in this note. Finally, the study does not focus, or has limited focus, on such important issues as market competition, consumer protection, data privacy, and gender, among others. These should be prioritized in the future studies.

BOX 1

Overview of the Payments Value Chain in e-Commerce Platforms

Customers use different payment methods for their e-commerce purchases. These include payment cards (credit, debit, and prepaid cards); bank accounts; e-wallets using a prefunded account (for example, PayPal); e-wallets linked to payment cards (for example, pay wallets—Apple Pay, Samsung Pay, and others); digital wallets provided by e-commerce platforms (for example, Alipay, AmazonPay, and the like); and mobile wallets provided by mobile operators, often in association with banks and other PSPs.

To facilitate e-commerce payment transactions, the following types of intermediaries play a role to complete the payment process and provide data analytics, fraud protection, and security solutions to ensure a smooth customer experience:

- **e-Commerce marketplaces** do not store or warehouse their own goods but collect, or aggregate, information about goods and services provided by third-party suppliers and furnish this information through their website or mobile app, allowing consumers to compare prices and features. Amazon, Alibaba, and MercadoLibre are essentially e-commerce aggregators.
- A **payment or merchant aggregator** is a service provider that signs up merchants directly under its own merchant identification number to process transactions through a single master account. One merchant account is used to represent many merchants; in the traditional model, a merchant account is disbursed to each merchant. In this respect, e-commerce platforms such as Amazon and Alibaba are payment aggregators for independent vendors participating in the platform as sub-merchants. It is important to note that aggregators exist for physical merchants in addition to e-commerce.
- A **payment gateway** helps initiate e-commerce transactions or in-app payments. It helps merchants transmits the online payment data securely to the payment processor, continuing the life cycle of the transaction. The gateway is not directly involved in the money flow, but it is a web server to which a platform's website is connected. A payment gateway often connects several acquiring banks and payment methods under one system
- A **payment processor** executes the transaction by transmitting data between the payer, merchant, payer's bank (issuing bank), and merchant's bank (acquiring bank). A payment processor facilitates the transaction, while a payment gateway is a tool that communicates the approval or decline of transactions between you and your customers.
- A **PSP** is a third-party merchant service provider that typically combines the functions of both a payment gateway and a payment processor. It facilitates and helps merchants in accepting online payments. In online shopping, the PSP will provide various methods of payment, including direct debit, bank transfer, real-time bank transfers using online banking, and credit cards. All these intermediaries use the national retail payment systems at the back end for the clearing and settlement of transactions. In most countries, they are not regulated directly by the financial regulator; however, as they play an increasing role in providing payment services and handling financial transactions and customer data, more regulators are coming up with specific regulations concerning intermediaries that facilitate the e-commerce payments value chain.

Two recent examples of regulatory focus include European Union Payment Systems Directive 2 (EU PSD 2), which imposes greater standards on how merchants enforce the security measures needed to safeguard consumer data from misuse, and the Reserve Bank of India's exploration of options for regulating the activities of payment gateways and payment aggregators in managing online transactions.

2. GROWTH OF E-COMMERCE DURING COVID-19

2.1 Context: Growth of e-Commerce before COVID-19

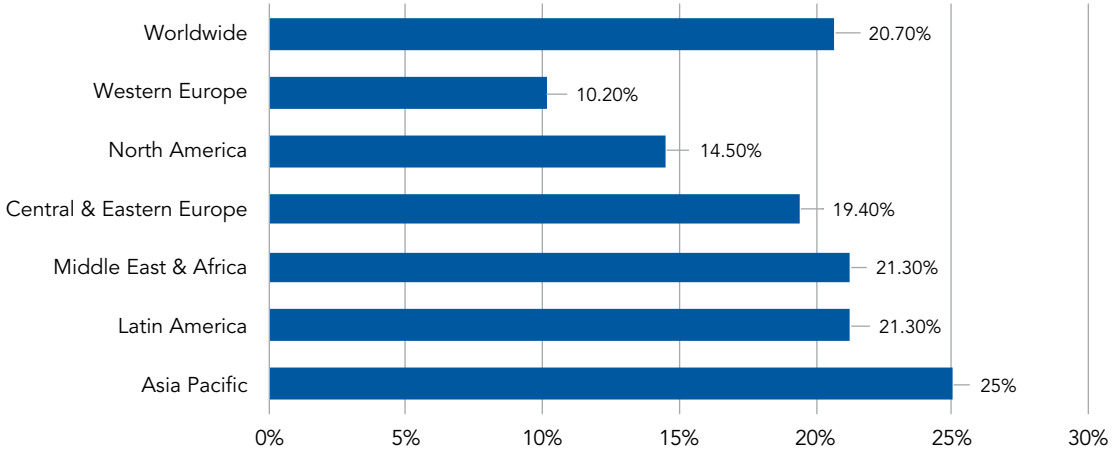
Global e-commerce has grown rapidly in recent years. While retail commerce grew by 4.5 percent to $25 trillion in 2019, e-commerce sales increased by approximately 18 percent during the same period to $3.5 trillion.[5] At the start of 2020, prior to the COVID-19 pandemic, e-commerce was expected to nearly double by 2023 to more than $6.5 trillion. e-Commerce is growing much faster than retail commerce, but its share of total retail commerce is still relatively small, representing 14 percent of global retail sales. Much of the e-commerce growth is attributable to the emergence of large global and regional e-commerce platforms such as Amazon, Alibaba, MercadoLibre, Jumia, Walmart, and others.

e-Commerce has been growing fastest in the emerging economies of Asia Pacific, Latin America, and the Middle East and Africa. Figure 1 shows the growth rates for these regions. Mexico (35 percent), India (32 percent), the Philippines (31 percent), China (27 percent), and Malaysia (22 percent) recorded the highest growth rates in 2019. But growth rates tell only part of the story. China is the global leader in business-to-consumer e-commerce, with an estimated $1.062 trillion in e-commerce sales in 2017. Online sales are higher in China than in the United States, where they are estimated to be $753 billion (UNCTAD 2019). According to *emarketer*, in 2019 China's share of the global e-commerce sales was 54.7 percent, or nearly twice that of the next five countries combined (Lipsman 2019). Apart from China and some other developed markets, where the e-commerce platforms have matured their end-to-end processes, the state of e-commerce in many developing countries is still nascent due in large part to an evolving infrastructure to support payments and customer service, including consumer protection, logistics, and delivery. For e-commerce platforms to expand, consumers also need to build trust in how platforms work, including their return policies and capacity to manage complaints and frauds. This usually requires a combination of adequate market discipline, competition, regulation, and supervision.

2.2 Short-Term Impact of Lockdowns on e-Commerce Platforms in 2020

The short-term impact of lockdowns had two distinct phases: The first phase, in mid- to late March, saw the immediate impact of the crisis, when most governments were hurriedly imposing restrictions on mobility and commerce.[6] The second phase started in late March and lasted until late April or early May, when lockdown restrictions were still on in most markets, but consumers and e-commerce platforms had adjusted to the new normal and e-commerce transactions for groceries and other essential categories surged.

FIGURE 1. 2019 Retail e-Commerce Sales Growth (Percentage Change over Previous Year)



Source: emarketer.com

5. eMarketer, https://www.emarketer.com.
6. Except China, where lockdowns began much earlier. The corresponding period was late January to mid-February.

2.2.1 Phase 1: The Immediate Impact

The immediate impact of the COVID-19 crisis on sales volumes of e-commerce platforms in different regions depended primarily on the policies adopted by governments. Like the rest of the economy, e-commerce platforms suffered most from the immediate consequences of the pandemic; disruption of logistics and supply-chain networks negatively affected platforms. While customer orders surged, especially for groceries and essential everyday goods, e-commerce platforms' ability to keep up with the consumer demand was affected by limitations in supply, logistics, and health and safety concerns among workers.

In Africa, **Jumia's supply chain was disrupted by the national lockdowns and the manufacturing shutdown in China.** The latter affected imports on its Jumia Global marketplace and prevented local sellers from tapping into their international supply chains. Country lockdowns had a severe effect on cargo operations, affecting the platform's cross-border logistics. At the local level, government policies restricted sellers from accessing their inventories, resulting in capacity limitations and restricting their ability to fulfill consumer demand. In countries such as Kenya and Uganda, many restaurants shut down after the imposition of evening and nighttime curfews that affected the food-delivery business. Confinement measures led to a closure of a Jumia's main warehouse in Lagos, Nigeria, and in South Africa, deliveries of fashion items operated by Jumia's partner platform Zando were suspended until the government lifts the confinement (Jumia 2020).

In India, **e-commerce platforms like Flipkart and Amazon suspended their entire operations temporarily when the government first announced the lockdown in late March**. Upon resumption a few days later, their efforts were focused entirely on the delivery of essential medical supplies and groceries. Their activities were also curtailed to top-tier cities like Mumbai, Delhi, and Bengaluru, as mobility restrictions and limited delivery capacity prevented operations in tier 2 and tier 3 cities.

In Latin America, **after suffering a sharp drop in demand in Brazil and Argentina during the first few weeks of the lockdown, leading platforms like MercadoLibre saw sales rebound in April.** The platform registered an increase in number of consumers adjusting to shopping online while social-distancing measures were still in place. In such markets as Mexico, Colombia, Chile, and Uruguay, where government policies were not overly restrictive, after the imposition of lockdown there was a 100 percent year-on-year increase in sales of essential goods and pharmacy products. In Mexico alone, sales of pharmacy and home- and laundry-related products increased 114 percent and 403 percent, respectively. According to the Brazilian e-commerce association ABComm, Brazil's online sales increased 30 percent between April and May 2020 and counted over one million new customers in the country.

In China, where the lockdowns began earlier than in other countries, e-commerce platforms were initially disrupted. Platforms such as Alibaba and JD.com struggled to keep up with consumer demand for groceries and essential supplies due to limited delivery capacity. Several products sold out on these platforms and could not be replenished in time, and other products experienced shipment delays and were undeliverable to many locations. Alibaba even warned during its earnings call in February that some of its businesses that rely on the sale of physical goods would likely see a significant decline in revenues in the current quarter. Retail and restaurant ordering reduced significantly through the middle of February, as many people experienced delays getting back to work after the Chinese New Year. Travel bookings were also down. On the other hand, grocery shopping and delivery went up sharply, as did digital communication tools and video-chat services (Rossolillo 2020).

In the United States, **consumer orders at Amazon have spiked since mid-March**. Unable to keep up with the demand due to worker health and safety concerns, labor force shortages and bottlenecks with cross-border shipments (many Amazon vendors are in China and other countries), the company enforced several policies, including the prioritization of essential supplies and limitations on online grocery deliveries. Non-priority items would take more than two or three weeks even for Amazon Prime members who under normal circumstances would get them within two days.

2.2.2 Phase II: Stabilization Phase and Shift in Demand Patterns

While the pandemic initially introduced short-term challenges to e-commerce platforms, it also began a structural shift in the demand for basic and essential products that may continue in the long term. In many countries, the pandemic caused a surge in demand for online commerce and the contactless delivery of groceries and essential products. Some product categories, such as health products and fast-moving consumer goods, grew particularly fast. Table 2 shows the trend for product categories with high, moderate, and low demand observed across most e-commerce platforms.

Interest in e-commerce grew worldwide, as evidenced by the frequency of Google searches for some of the largest e-commerce platforms. While search trends for the largest e-commerce platforms were stable until the beginning of March 2020, after mid-March Google searches for all platforms were largely positive, reaching a peak around the middle or end of May 2020. Figure 2 shows some initial drops for platforms such as Flipkart and MercadoLibre, probably due to the strict lockdown measures adopted in the initial stages of the crisis in India and some Latin American countries. One of the impacts of the crisis is that the big players could not meet the demand; this led to significant growth among lesser-known e-commerce players, and companies without e-commerce presences rushed to create it. Some of these trends are analyzed in section 3.3.

In Africa, as confinement measures were put in place in a number of countries, Jumia experienced a surge in orders for everyday essential goods. Notably, the demand for groceries increased fourfold in terms of items sold over the same period in the previous year. On the other hand, Jumia food sales were harmed by restaurant shutdowns. This validates their new strategy, initiated in 2019, of refocusing their business on everyday-product categories. On a geographic basis, volumes surged in markets such as Morocco and Tunisia, while lockdowns and confinement measures constricted supply in markets such as Nigeria and South Africa, limiting their ability to meet consumer demand.

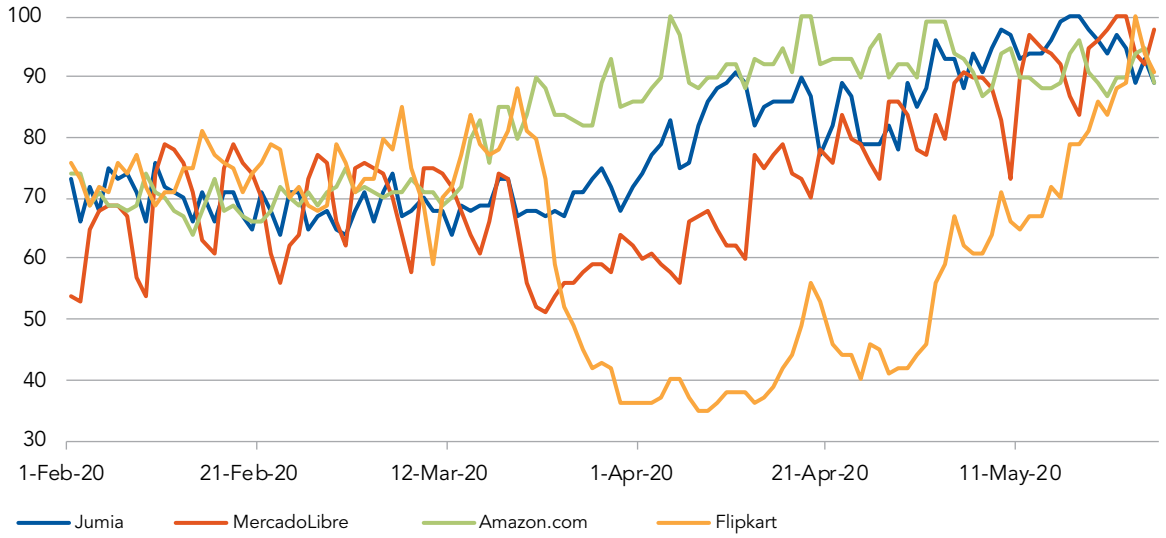
In the Middle East, the uptake of e-commerce grew rapidly in the immediate aftermath of the crisis. In Saudi

TABLE 2: Shifting Consumer Demand on e-Commerce Platforms

PRODUCT CATEGORIES WITH HIGH DEMAND	PRODUCT CATEGORIES WITH MODERATE DEMAND	PRODUCT CATEGORIES WITH BELOW-AVERAGE DEMAND
Groceries and everyday essentials	Toys and games	Travel-related products and services
Essential hygiene, health products, household cleaning	Home furnishings and household goods	Fashion and apparel
School, office supplies, and work-from-home essentials	Cosmetics, beauty, and care	Sporting goods, outdoor equipment
Digital content and entertainment	Insurance and financial services	Jewelry and luxury items
Baby products	Consumer electronics	Automotive or tools

Source: Authors elaborations[7]

FIGURE 2: Google Trends for Some of the Largest e-Commerce Platforms between March and May 2020



Source: Google Trends

7. The table was compiled from multiple sources, but mainly from the earnings reports of platforms covered in the study.
8. Numbers on the Y axis are not absolute values but represent a search interest (worldwide) relative to the highest point on the chart. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular.

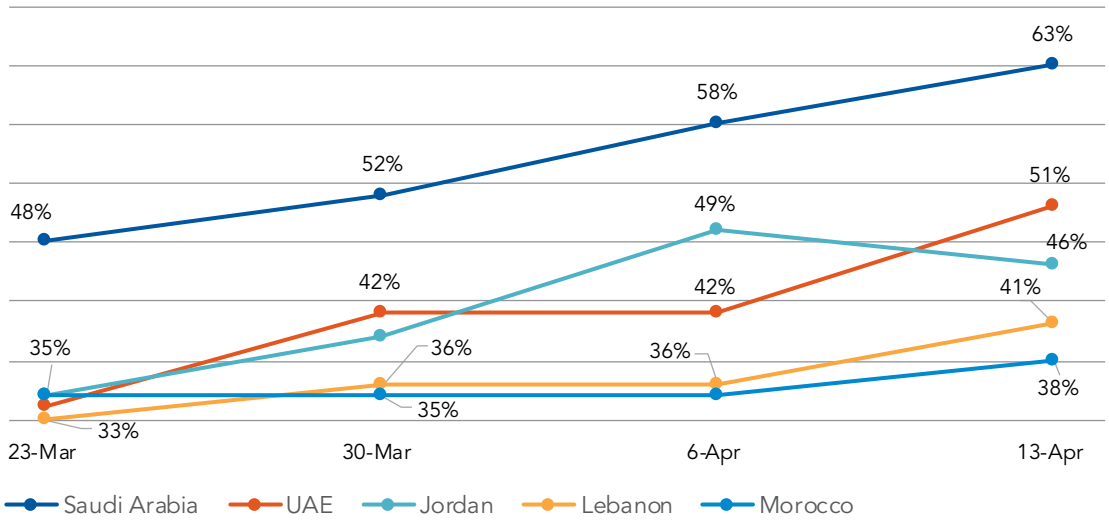
Arabia, the percentage of the population using e-commerce platforms to buy groceries grew from 6 percent in 2019 to 55 percent in April 2020 (Choueiri Group 2020). The grocery products that registered the highest growth rates were basic items such as dairy products (69 percent), fruits and vegetables (67 percent), and bread (62 percent). Other demand-side research in the Middle East suggests partially different estimations but confirms the overall trend of rapid growth. According to Ipsos, countries such as Morocco and Lebanon registered an increase in online sales, reaching approximately 40 percent in April 2020. (See figure 3.)

In Latin America, changes in demand trends led to a shift in sales, as consumers prioritized essential items. Categories such as health, consumer packaged goods, and toys and games showed strong volume growth, exceeding 100 percent year on year in some markets. Conversely, growth rates in higher-ticket nonessential categories such as auto parts and consumer electronics declined markedly. MercadoLibre experienced an increase of 1.7 million active customers a few weeks after the crisis. The e-commerce platform has hired 200 direct employees and 2,500 third-party contractors since the second half of March to strengthen its logistics team and cope with a higher volume of deliveries.

Across China, the growth in aggregate e-commerce sales was lifted by a significant increase in grocery sales. China's largest e-commerce platforms, such as Pinduoduo, Alibaba, and JD.com, registered record sales during the first quarter of 2020, growing by 44 percent, 22 percent, and 21 percent, respectively. Alibaba reached record annual sales of $1 trillion for the year up to March 2020, with 726 million active users in the platform. Sales for JD.com increased to $300 billion, with a 25 percent increase in active customers. Pinduoduo's annual sales increased to $163 billion, with 628 million active customers. According to McKinsey, growth in online sales was driven by essential items such as home cleaning products, groceries, and personal care items (Ho et al. 2020).

In the United States, daily downloads of online grocery apps in March and Aprilat Instacart, Walmart Grocery, and Shipt surged 218 percent, 160 percent, and 124 percent, respectively, compared to mid-February. Walmart overhauled the online shopping experience for customers, merging its popular grocery app with the company's main app, so shoppers could buy all items (for example, food, toys, and tools) in a single app. In April, Amazon put new online grocery customers in Amazon Fresh and Whole Foods on a waitlist to help workers fulfill more online orders, as it was unable to cope with increasing demand despite an increase in capacity by 60 percent. Amazon's waitlist on its online channels ended in mid-May.

FIGURE 3: Percentage of Adults Using e-Commerce to Purchase Products They Would Normally Buy in a Store in Middle Eastern Countries (March–April 2020)



Source: Ipsos 2020[9]

9. See full report https://www.ipsos.com/sites/default/files/ct/news/documents/2020-04/COVID-19_mena_consumer_sentiment_tracker_wave_4_regional_report.pdf

TABLE 3: Growth in Alibaba's Annual Active Customers (2019–20)

	MARCH 2019	DECEMBER 2019	MARCH 2020	NET ADDS	
				YOY	QOQ
Annual active consumers (in millions)	654	711	726	72	15

Source: Alibaba 2020b

TABLE 4: Growth in e-Commerce Sales or Staff

PLATFORM	GROWTH IN E-COMMERCE SALES
Amazon, United States (Amazon 2020)	• Net sales increased 26 percent to $75.5 billion in the first quarter, compared with $59.7 billion in the first quarter of 2019 • Hired an additional 175,000 people in March and April to enhance fulfillment and delivery network
Alibaba, China	• e-Commerce sales reached a historic landmark of $1 trillion for the fiscal year,[10] one-sixth of all retail sales in China
Jumia, Africa	• Annual active consumers reached 6.4 million, an increase of 51 percent year over year • Orders reached 6.4 million, an increase of 28 percent year over year • JumiaPay total payment volume was €35.5 million, an increase of 71 percent year over year, and on-platform total payment volume penetration rose to 19 percent in the first quarter of 2020, compared with 10 percent in the first quarter of 2019 • JumiaPay transactions reached 2.3 million, an increase of 77 percent year over year, representing 35 percent on-platform penetration in terms of orders
MercadoLibre, Latin America	• In the first quarter, net revenues at MercadoLibre reached $652.1 million, up 70.5 percent year over year • The company's total payment volume reached $8.1 billion, up 82.2 percent year over year, and its number of consumers increased 1.7 million in March 2020 • Sales of health products increased 1,100 percent in March 2020 • Hired 200 direct employees and 2,500 third-party contractors since late March
Flipkart, India	• Limited Flipkart operations in India hampered growth of e-commerce revenue for Walmart international business[11]

In India, transactions in payment gateways serving e-commerce platforms declined by 30 percent to 40 percent (Bhalla 2020). e-Commerce platforms like Flipkart and Amazon saw reduced sales volumes since the national lockdown began, despite a rise in purchases for essential everyday items and groceries that were limited to large tier 1 cities. This was due to the strict lockdown imposed at the national level in India, according to which e-commerce platforms and businesses could operate only in large cities. The rise in volumes in large cities did not offset the loss of sales in tier 2 and tier 3 cities. In general, online transactions at e-commerce gateways serving smaller online merchants also declined 25–30 percent, primarily due to the lockdown and limitations on interstate movements of goods. For most consumers outside large cities, the purchase of these items shifted to local cash-based sources.

2.3 Policies Adopted by e-Commerce Platforms to Incentivize Usage

To drive participation and usage, e-commerce platforms offered incentives to consumers, workers, and entrepreneurs. To ensure business continuity and service quality during the crisis, e-commerce platforms adopted the following policies to incentivize participation in the platforms:

- Waiving fees on essential items
- Using platforms as gateways for the distribution of government support
- Organizing contactless deliveries
- Incremental benefits to support workers
- Specialized trainings for sellers[12]

10. For Alibaba, the first quarter of 2020 is the fourth quarter of the fiscal year, which runs from April 1 to March 31.
11. Walmart International does business in nine markets: India, China, Japan, Mexico, Chile, Brazil, Argentina, the United Kingdom, and Canada. Flipkart revenues are not reported separately but as part of Walmart International's business.
12. Platforms took on a variety of other initiatives during the COVID-19 crisis, including remote working options for staff, sanitization of warehouses, daily temperature scanning for workers and riders, and several others. These initiatives are not covered in the analysis.

a) ***Commission waivers on essential items:*** Many e-commerce platforms supported customers and sellers by reducing commissions and providing fee waivers on essential items such as face masks and hand sanitizers. Jumia, for example, waived commissions on essential products as part of their *Stay Safe Campaign*. In partnership with Reckitt Benckiser, Jumia waived its commissions to ensure that essential health and hygiene products could be offered without excessive markups. It also encouraged Proctor and Gamble and other brands on its platform to extend discounts and provide free shipping on essential items to make their products more affordable to low-income households. Jumia also partnered with big brands to sell discounted goods or even to make donations of certain critical health products through its platforms. These include partnerships covering multiple countries with such high-profile fast-moving consumer goods brands as Unilever, Proctor and Gamble, Nestle, Beiersdorf, and Coca-Cola. In Latin America, MercadoLibre cut commissions for essential products and protected consumers from speculative price increases. Commissions were eliminated on roughly 1,000 essential products for 100,000 merchants, with an understanding that purchases of these items would be essential for their buyers over the next few months.

b) ***Distribution of government digital vouchers:*** In China, the government played an active role to support the sector. To stimulate depressed retail sales and e-commerce volumes, about 30 local governments provided digital coupons through Alipay and WeChat Pay to incentivize consumers to make purchases. As examples, the city of Hangzhou issued $237 million of such coupons. The city of Beijing handed out vouchers worth ¥12.2 billion ($1.73 billion) in June 2020 (Wu 2020). Alibaba also launched an online shopping festival with ¥1 billion ($144 million) in spending subsidies to offset the impact of the COVID-19 pandemic (Li 2020). As of June 2020, 190 cities in China distributed to their citizens vouchers that could be used in e-commerce platforms. In Brazil, Mercado Pago has engaged in discussions with the Brazilian government to be able to pay the government's emergency aid of R$600 a month to vulnerable informal workers. As the pandemic and ensuing lockdowns has increased participation in the digital economy, regulators and e-commerce platforms should consider introducing measures such as rapid account opening, simplified onboarding processes, and proportional due-diligence processes to facilitate the enrollment of new merchants and consumers while ensuring compliance with rules on AML/CFT (CGAP 2020).

c) ***Increased pay for workers:*** Numerous platforms adopted policies to support workers during the crisis, including higher wages, increased overtime pay, and heightened health standards. Amazon, for example, increased hourly pay for warehouse workers and doubled overtime pay in April and May 2020. In China, platforms such as JD.com and Alibaba opened over 20,000 positions to temporarily hire workers who were laid off in other sectors (for example, retail, restaurants, hotels, and so forth). In India, no direct discounts were provided to consumers in the initial stages as platforms were disrupted, but platforms like Flipkart partnered with Uber to deliver essential supplies to customers in large cities during the crisis. Uber passed on the revenues earned through these rides to their drivers to compensate for a decrease in demand for general ridership. Similar initiatives are also being carried out by BigBasket and Spencer's Retail for the last-mile delivery service in India.

d) ***Specialized training for sellers in the platforms:*** e-Commerce platforms supported small businesses during the COVID-19 crisis with specialized training programs. These programs were targeted primarily at existing sellers in the platforms, to help them ensure health and safety standards and increase understanding of evolving COVID-related policies linked to contactless deliveries, digital payments, and so on. For example, in Nigeria, Jumia developed a dedicated COVID-19 page and FAQ on its vendors hub addressing questions linked to health and safety, the availability of packaging material, and emerging risks, such as delays in supply chains and at drop-off centers, among others.[13] The Alibaba Group launched the *2020 Spring Thunder Initiative* to help MSMEs navigate the crisis, including specialized training programs for export-focused MSMEs and selected manufacturing clusters, and the development of 1,000 Alibaba digitized agricultural centers across China (Zhang 2020). Box 2 provides an overview of regular training programs provided by e-commerce platforms to entrepreneurs.

13. "COVID-19 FAQ," Jumia Seller Hub (accessed April 2, 2020), https://vendorhub.jumia.com.ng/covid-19-faq.

BOX 2

Improving Digital Skills to Expand Participation of Small Businesses in e-Commerce Platforms

More research is needed to assess the availability and quality of training programs aiming to promote digital skills in marginalized segments of the economy. Most training programs encountered in the research aimed at helping entrepreneurs cope with increased health risks and challenges caused by supply-chains disruptions. However, these programs were aimed at entrepreneurs who were already part the platform and needed support to cope with emerging issues. There seem to be few initiatives, either government-led or platform-led, that aimed to improve digital skills and promote participation of marginalized entrepreneurs in e-commerce platforms, particularly youth, women, and rural entrepreneurs. Reaching more marginal segments is likely to require increased efforts and joint initiatives that have a primary goal of expanding economic inclusion.

Some of the largest e-commerce platforms invested in training sellers as part of their growth strategy. In order to help sellers optimize their participation and knowledge of how e-commerce platforms work, some of the largest platforms have developed training materials and initiatives, using different channels to help sellers understand how e-commerce works, build online marketing strategies and communication skills, and ultimately increase sales and customer satisfaction. All of these training programs are platform specific; hence, they have the key goal of increasing seller retention and service quality. Some, however, have more of a developmental focus. Below is a brief description of training programs encountered in the research:

- **Alibaba's TaoBao Villages/TaoBao University**: Over the past few years, Alibaba's Rural Taobao Program has promoted e-commerce in rural areas, encouraging rural returnees to engage in e-commerce activities and establishing "incubators" at the village level. According to Alibaba, by 2018 it had established tens of thousands of village-level service stations. The program provides training in e-commerce through 11 training centers throughout the country and provides online e-commerce training courses for self-learning by entrepreneurs. It also supports rural financial services, such as online payment, digital credit loans, insurance, and other financial services. Furthermore, Taobao University built 11 e-commerce training bases across China and produced a series of online e-commerce training courses for self-learning (World Bank 2019).
- **Jumia University:**[14] Jumia offers training modules, both online and offline, to support sellers in the platform. In Nigeria, these trainings are provided on a weekly basis and cover a wide range of e-commerce topics, such as marketing, sales, and communication, and include specific modules on Jumia's operations, such as how to list products, managing shipping, and understanding account statements.
- **Universidad MercadoLibre (MercadoLibre 2016):** MercadoLibre conducts training initiatives that focus on attracting and expanding the digital skills of sellers. The platform organizes such events as "MercadoLibre Universities" and seller meetings in a variety of countries, giving full-day sessions to advanced users who want to improve their selling skills on the platform.

14. "Jumia University," Jumia Seller Hub (accessed June 19, 2017), https://vendorhub.jumia.com.ng/university.

3. TOWARD INCLUSIVE DIGITAL ECONOMIES? ASSESSING PARTICIPATION OF UNDER-SERVED SEGMENTS IN E-COMMERCE

3.1 Participation of Low-Income Consumers

Several e-commerce platforms registered an increase in first-time users, indicating an expansion of the customer base making online purchases. However, low-income households still seem to be out of reach. Many of the largest e-commerce platforms, such as Amazon, Jumia, MercadoLibre, and Alibaba, confirmed that participation by first-time consumers has increased distinctly since the onset of the pandemic, indicating an expansion among segments that were not using e-commerce previously. However, data on the customer profiles is limited, and discussions with industry experts suggest that this increased penetration is limited primarily to high- and middle-income segments and mostly excludes the lowest-income segments and rural households. This is due to a combination of factors, including wealthier segments' higher familiarity with digital platforms, higher disposable income to face additional costs, such as transport costs, access to Internet data and smartphones, and digital literacy, among others. It is important to monitor the expansion of e-commerce in the near future, as the rapid market developments may draw new lines of inclusion and exclusion to the digital economy and digital financial services.

One of the strategies implemented by platforms is to seek increased geographical coverage and expand the product mix, with increased focus on essential and low-cost items. In Africa, for example, Jumia has expanded its focus on day-to-day essentials and on second-tier cities**.** Jumia has traditionally aimed to offer a range of products to all income segments, including low-income and lower middle-income segments, by offering small-ticket-size items to drive volumes and repeat purchases. Since the end of 2019, Jumia also built a new strategy to focus on fast-moving consumer goods and everyday essential items. Jumia does not have data on the income profile of its customers, but it observed that sales of items typically sold to low-income segments, such as phone credit, did not dip during the recent crisis. Jumia's focus on small towns and rural areas is considerable; 25 percent of packages are delivered in second-tier cities and rural areas.[15] Jumia has also taken special measures to protect low-income consumers from price gouging by monitoring the prices of about 1,000 essential products in each country and taking down offending product listings.

Similarly, platforms in China invested outside of the main urban centers**.** Alibaba has invested heavily to increase penetration in lower-tier cities, where e-commerce use is currently only about 40 percent of the volume in larger cities. The e-commerce platform Pinduoduo, with its "social shopping" model, and JD.com's Jingxi app already cater to lower-income segments by allowing them to team up with cheaper bulk orders and obtain shipping and price discounts. However, these platforms reported issues with sales to these segments due to delivery and sourcing hurdles.

To reach new customers, platforms also improved the online shopping experience by developing dedicated apps and offering simplified payment solutions. In the United States, the number of first-time users increased by 25 percent. Many of these consumers are low-income households that normally prefer brick-and-mortar shopping experiences. Walmart has invested in improving services for this segment, developing an omnichannel e-commerce shopping experience at competitive prices that helps fend off competition from other e-commerce platforms and retain its market share for this segment (Greene and Bhattarai 2019). Amazon has its PayCode product for low-income segments that were previously not e-commerce users. This payment option allows cash-oriented consumers to shop first and get a QR code PayCode at checkout, which they use at a Western Union agent to pay with cash.[16] In Egypt, Fawry provides an e-payment solution through its network of over 100,000 service points (for example, automated-teller machines, mobile wallets, retail shops, and so forth) in over 300 cities.[17]

Similarly, in Latin America and India, first-time users of e-commerce platforms increased**.** In Latin America, quarantines and shelter-at-home orders have forced many people to try the platform out of necessity. Unique active users on MercadoLibre grew 30.9 percent in the first quarter of 2020, reaching 43.2 million.[18] Most of the growth came during the first few weeks of the lockdowns, when consumers had to adjust their shopping habits. In India, platforms increased penetration in lower-income segments. Prior to the national lockdowns starting in March 2020, both Amazon and Flipkart saw 50–80 percent

15. Data collected in an interview in April 2020.
16. "Amazon PayCode Frequently Asked Questions," https://www.amazon.com/b?ie=UTF8&node=19449282011.
17. "What Is Fawry Pay?" (accessed August 14, 2020), https://fawry.com/fawrypaymerchant.
18. MercadoLibre first-quarter 2020 earnings report.

growth in new lower-income segments, as more consumers in smaller cities gained access to faster Internet and there was wider penetration of smartphones (Sen 2018). Efforts to improve penetration included investments in infrastructure, financing, and the launch of a local-language version of the app. Amazon Easy stores in small towns also helped improve the shopping experience for customers not familiar with e-commerce. Like the situation in the rest of India, sales to this segment were impeded by lockdown restrictions.

3.2 Participation of MSMEs

The participation of MSMEs in platforms increased during the pandemic. Available data on the number of new registrations of MSMEs in e-commerce platforms is limited. Many platforms reportedly registered an acceleration in participation of MSMEs selling essential items, both with new registrations and with increased participation of MSME who already had an existing account, as traditional brick-and-mortar businesses with limited or no e-commerce presence are moving quickly to embrace digital commerce. Nevertheless, rigid lockdown policies in countries such as India restricted online commerce and had a negative short-term effect on the participation of MSMEs in e-commerce. After the prolonged lockdown, it is still unclear whether small businesses will have the capacity and resources to fully integrate online sales as part of their growth strategy.

In China, participation of small businesses in e-commerce platforms grew in rural and poverty-stricken counties. According to the government, in the first quarter of 2020, online commerce in poverty-stricken counties grew faster than the national average for rural areas. China's has over 800 poverty-stricken counties. According to data from the Ministry of Commerce, poor counties registered online sales of ¥56.6 billion (about $8.02 billion) in the first quarter, up 5 percent year on year. The pace is 1.9 percentage points higher than the average growth of China's rural areas. Sales of agricultural products from these poor counties through e-commerce platforms surged 49.7 percent to ¥8.32 billion in the three-month period (Xinhua 2020). This was made possible by improvements to the logistics value chain that allowed agricultural products to move from remote areas to markets faster.

Alibaba's group experienced a 719 percent increase in first-time users in their Taobao Live channel. The channel allows stores to engage with customers in live-streaming sessions. As physical stores shut down, live streaming allowed businesses to maintain customer relationships through alternative marketing channels. In early February, Taobao Live removed barriers for new merchants to join the service, waiving all service fees. This encouraged merchants and traditional brick-and-mortar stores to use Taobao live-streaming technology to engage with customers and make up for losses incurred during the COVID-19 crisis. As a result, the number of merchants utilizing Taobao Live for the first time surged 719 percent in February compared to January (Alibaba 2020a), and the level of engagement continued in the following months (Robbins 2020).

In Latin America, e-commerce platforms registered increased participation of MSMEs. To facilitate the transition from offline to omnichannel, MercadoLibre reduced listing fees for new sellers. This also helped stimulate the depth of assortments on its marketplaces. According to the Brazilian Electronic Commerce Association, more than 80,000 retailers shifted to online sales between March and April 2020 through several platforms (Abcomm 2020).

In India, the extended national lockdown had negative effects on the economy and prevented small businesses from participating in e-commerce platforms. Even before the pandemic struck, both Flipkart and Amazon were actively recruiting MSME sellers on their platform. Amazon intended to invest a billion dollars in India to promote the participation of MSMEs in the e-commerce platform and expand the digital economy. Nevertheless, Amazon's entry in the Indian market faced unprecedented protests from the small business community and received a generally cold reception from the political class (Govindarajan, Srivastava, and Enache 2020). The government introduced a set of regulations in December 2018 that prohibit e-commerce platforms from marketing products from sellers in which they have an equity stake. In February 2019, the government introduced data localization laws that disadvantage international players in the Indian market (Kass n.d.). After the onset of the COVID-19 crisis, the government's national lockdown restricted e-commerce deliveries to essential products and shut down service deliveries, malls, and market complexes. At the time of writing, the lockdown is still in effect, but the removal of all restrictions on online retail is planned as part of India's *Lockdown 4.0* from May 31, 2020.

3.3 "Second-Generation" e-Commerce Platforms for Underserved Segments

In addition to causing disruptions to large e-commerce platforms, the COVID-19 crisis also opened opportunities for new and niche platforms employing innovative business models and catering to segments traditionally excluded from large e-commerce platforms. While some platforms emerged directly *as a response* to the COVID-19 crisis to support local businesses affected by the lockdown, other digital platforms were established

before the crisis and recently expanded their business models to include the sale of grocery and essential items. This segment is largely heterogenous and fast evolving; hence, this study does not aim to provide a comprehensive analysis or taxonomy. Rather, the objective is to look at case studies and to discuss how different players are leveraging digital channels to target segments that are traditionally underserved.

We observed the following three trends:

First, new platforms are gaining traction in sectors where large-scale platforms have failed to achieve widespread coverage, including agricultural value chains. In particular, in Sub-Saharan Africa, digital platforms such as Twiga Foods in Kenya and FarmCrowdy in Nigeria have supported agricultural supply chains to leverage digital platform to access markets.

- **In Kenya**, Twiga Foods is a mobile-based business-to-business marketplace connecting over 17,000 farmers to over 8,000 small- and medium-size vendors in agricultural value chains. Since the onset of the COVID-19 crisis, Twiga Foods expanded its focus from business to business to business to consumer, partnering with Jumia Kenya to sell baskets of assorted fruits and vegetables directly to consumers. Twiga leverages M-Pesa to enable mobile payments, and it also piloted a blockchain-based digital credit product in partnership with IBM Research.
- **In Nigeria**, FarmCrowdy is an *agritech* platform operating a network of over 800 aggregation centers and sourcing produce from over 25,000 small-scale farmers since it started in 2016. The platform does not deal with farmers on an individual basis; rather, it selects crops and locations to invest in and then engages with farmers associations or community leaders to enter into commercial agreements. Once farmers and crops are identified, FarmCrowdy provides inputs such as seeds and fertilizers as well as technical support to individual farmers. FarmCrowdy registered a 20 percent increase in the first quarter of 2020 compared to the same period in 2019 due to the increased interest of consumers in online commerce solutions. FarmCrowdy also provides a link to a sister crowdfunding platform called *CrowdInvest*, in which individual investors can fund FarmCrowdy initiatives. The platform's ultimate buyers can be large-scale firms, including both those in Nigeria and international importers, as well as individual consumers in the local market. The target segment among local consumers are skilled members of the working class and the lower middle class, especially those who are tech savvy and relatively better educated.

Second, new business models are emerging due to the convergence of ride-hailing apps, e-commerce providers, mobile-money platforms, and social media. (See Box 3.) The research shows that convergence between different business models is growing; platforms that initially focused on transports, logistics, or mobile payments are expanding operations and providing e-commerce functionalities.

- **In Uganda**, SafeBoda operated since 2014 as a ride-hailing platform for motorbike taxis. In April 2020, Safeboda announced a partnership with the United Nations Capital Development Fund to provide an e-commerce platform to connect over 800 small-scale market vendors and 300 merchants to consumers using the fleet of motorbike taxis available on the platform. Safeboda in 2017 introduced a prepaid digital wallet that can be topped up via mobile money and enables access to discounts, among other benefits. In partnership with Finca Uganda, Safeboda provides a dedicated savings-and-loan account for drivers to purchase the motorbikes, but the platform has yet to develop a lending product for e-commerce vendors. The loan product uses Safeboda's know-your-customer (KYC) and transaction data to enable identification and credit scoring of prospective borrowers.
- **In Kenya** the platform Sendy expanded its business proposition from providing transportation services, such as cargo and lorries, to delivering basic items such as groceries, produce, drinks, and gas from outlets that have signed up with the service. So far, Sendy Go has signed up one of Kenya's large supermarkets, Naivas, and a fruits and vegetables market (Ngara Market). The service enables small-scale vendors to sell their basic fresh products via the app. For payments, the app leverages the M-Pesa mobile-money platform.
- **In Ethiopia**, the Belcash group in 2019 established a new platform called Helloomarket that embeds its mobile-money solution HelloCash. Helloomarket is in its early stages, and as of May 2020 it had signed up approximately 1,000 vendors, 300 of which approached the platform after the onset of the COVID-19 pandemic. Women reportedly represent approximately 70 percent of sellers and 45 percent of consumers in the platform; most of them are 25 to 35 years of age. The platform facilitates deliveries at the national level, using local transportation such as

motorbikes and taxis in Addis Ababa, and the post system for deliveries outside the capital. According to the platform, over 50 percent of its deliveries so far have been conducted outside the capital.

- **In India**, Dunzo works on a similar business model: customers can create a list of whatever tasks they need to get done, including picking up and dropping off, sending packages, and ordering food, groceries, medicines, or bike taxis. Delivery is available 24 hours a day, seven days a week in most of the urban areas it operates in, and orders are delivered within 60 minutes.

Third, evidence is growing of partnerships between fintech platforms and local markets to promote micro-enterprises to expand online sales during the times of crisis. The COVID-19 pandemic triggered initiatives to help local stores and producers leverage digital channels to survive the pandemic. Most of these initiatives are in their initial stages, and it is unclear whether they will consolidate into viable and financially sustainable platforms in the years to come. Nevertheless, they show the increased interest of MSMEs to participate in the digital economy[19]

- **In Brazil**, for example, the fintech platform Stone, in partnership with the digital platform Collact, developed an initiative called *Compre Local* that allows customers to locate and buy items from the small businesses in their neighborhoods.[20] The platform introduced a simplified payment solution, whereby entrepreneurs can produce a payment link and send it via SMS or WhatsApp to customers, who can then complete the payment from their phone.
- **In Nigeria and Kenya,** the PSP Flutterwave has set up an e-commerce portal called Flutterwave Store to help brick-and-mortar businesses respond to the COVID-19 crisis. The platform allows businesses to set up online shops with relatively simple steps, and it provides access to a digital payments solution. Businesses can also access delivery services from partners such as Sendbox in Nigeria and Sendy in Kenya.[21]

TABLE 5: Examples of New and Niche Platforms That Employ Innovative Business Models and Focus on Traditionally Underserved Segments

COUNTRY	PLATFORM	MAIN FOCUS	PAYMENT METHODS	CREDIT	COVID-19 RESPONSE
Kenya	Twiga Foods	Agriculture (business to business)	Mobile money	Digital credit (piloted with IBM Research)	Launched business-to-consumer solution in partnership with Jumia
Kenya	Sendy	Transport, deliveries, logistics (business to business)	Mobile money	-	Launched grocery deliveries in partnership with stores and supermarkets
Nigeria	FarmCrowdy	Agriculture	Cash on delivery, mobile money	Linked to crowd-funding platform CrowdInvest	Increased demand to participate in the platform. Had to discontinue mobile payments due to disruption in agency network
Kenya/ Nigeria	Flutterwave	Payments	Online payments	-	Launched Flutterwave Market to help MSMEs digitize their business
Uganda	SafeBoda	Motorbike taxis	Prepaid e-wallet, cash on delivery	Loan for motorbike purchases in partnership with Finca Uganda	Launched grocery and restaurant deliveries via motorbike taxi fleet
Ethiopia	Helloomarket	General merchandise	Mobile money, cash on delivery, deposits at agents or bank branches	Plans to partner with banks for credit product	Increased interest from vendors and sale of essential items
Brazil	Compre Local	Local grocery stores and restaurants	Payment link via SMS and WhatsApp	-	Started to support local businesses affected by the lockdown

19. Another newly emerging platform in India called bharatemarket.in, focused on kirana stores, was launched by the Confederation of All India Traders during the pandemic. The platform has signed up 6,300 retailers in 90 cities and will levy no commission on sellers and no delivery charges on consumers once it begins taking orders. The platform has been announced in 2020 but has not yet launched.
20. See https://cuidedopequenonegocio.com.br (in Portuguese).
21. The Flutterwave Store has a pan-African focus and is available in all African countries. In Kenya and Nigeria, it has also partnered with the delivery firms Sendbox and Sendy (Salaudeen 2020).

BOX 3

The Growing Role of Social Media Platforms in e-Commerce

The COVID-19 crisis has accelerated innovation around integration of e-commerce and social media platforms. Although an in-depth analysis is beyond the scope of this paper, it is important to acknowledge key trends and opportunities for further research.

Social media platforms developing payment functionalities

WeChat, a leading Chinese social media platform and the fifth most-used platform globally, developed WeChat Pay, which is used to pay for goods and services at merchant stores, within merchant apps, and on the web. Additionally, merchants can offer loyalty cards and coupons to their customers through the WeChat app. WeChat Pay has an average of 800 million active users monthly and processes an average of one billion transactions monthly. Forced to close down all of its stores in Wuhan, cosmetics company Lin Qingxuan shifted to WeChat and realized a 200 percent increase in sales (Williams 2020). During the pandemic, local governments in China leveraged WeChat Pay to distribute stimulus relief vouchers to encourage immediate spending, thereby jumpstarting the economy. In the first quarter of 2020, it is estimated that WeChat Pay accounted for 39 percent of China's mobile payment market of $7.7 trillion (Hong 2020).

As of February 2020, WhatsApp had over two billion users globally. In 2018 WhatsApp launched WhatsApp Business to connect small businesses with subscribers. WhatsApp Pay, developed to enable financial transactions on the social media platform, was piloted in India in February. The National Payments Corporation of India has now granted a phased access to the Indian market. The first phase targets 10 million users. It is believed that Facebook's partnership with Reliance Jio's e-commerce platform JioMart would tap into the wide subscriber base held by Facebook (about 270 million subscribers) and WhatsApp in India.

Partnerships, mergers, and acquisitions of e-commerce and social media platforms

Brick-and-mortar and e-commerce merchants have utilized social media platforms primarily as advertising channels. Typically, interested consumers would place orders for products on a social media platform, and they would then pay for the orders in cash on delivery, or they would be redirected to the merchant's website to complete payment. Following the exponential growth of e-commerce as a result of the pandemic, social media platforms have shown increasing interest in venturing into e-commerce. In May 2020 Facebook partnered with Shopify, BigCommerce, WooCommerce, and several other e-commerce platforms to give small businesses the opportunity to expand their online presence through a new functionality called "Facebook Shops." The service aims to allow businesses to create online stores on Facebook and Instagram for free and to connect with customers through WhatsApp, Messenger, or Instagram Direct (Facebook for Business 2020). Customers can place an order and make a payment either through the newly introduced "Checkout" option without leaving the app (only in the United States), or they are redirected to the website of the business (Facebook 2020). In India, PayU, a digital payment tech company, has made it possible for merchants to leverage Facebook, Twitter, and WhatsApp to reach customers and complete transactions through a PayU-enabled payments link in real time. In Italy, Nexi, a leading paytech company, started offering its merchants free use of its pay-by-link service, which enables consumers to make hassle-free payments via social networks, e-mail, and text.

Regulatory challenges and consumer concerns

The growing presence of social media in the e-commerce ecosystem has raised concerns and challenges from regulators. For example, Brazilian regulators suspended WhatsApp payments a week after its launch citing anticompetitive concerns arising from Facebook's partnership with card processor Cielo (Mondato 2020). In India, it took two years for WhatsApp to receive regulatory approval by the National Payments Corporation of India for a phased rollout of their payment product (PYMNTS 2020). The delay was due to compliance issues with India's data-processing and data-localization rules (Kalra 2019). More research is required to understand the risks posed by social media platforms playing a role in digital payments and e-commerce.

4. THE ROLE OF DIGITAL FINANCIAL SERVICES IN E-COMMERCE

4.1 Overview of Payments and Credit Products via e-Commerce Platforms

Financial services such as payments and credit are increasingly being embedded in e-commerce platforms through a variety of business models. All of the largest e-commerce platforms introduced payment and credit solutions for sellers and buyers. The product proposition is diverse, and the level of penetration is closely linked to the quality of the regulatory frameworks and financial infrastructure. Many impediments to the use of e-payments are linked to the lack of efficiency and interoperability of the national payment systems, poor agent network infrastructure, or outdated and poorly structured regulatory frameworks. Some of these obstacles are linked to restrictions on the establishment of non-bank payment providers, disproportional KYC requirements, or other barriers to entry.

In the United States, Amazon developed both payment and credit solutions for customers and sellers in the platform. On the credit side, *Amazon Lending*[22] provides short-term business loans to sellers in the platform; loan amounts vary from $1,000 to $750,000, and annual interest rates range from 6 percent to 16 percent (Megaw , 2019). Amazon prequalifies sellers depending on their transaction history and track record on the platform, and it may require additional documentation as part of its customer due diligence. Amazon does not use traditional financial information such as credit scores to determine the seller's eligibility for their loan products. As such, it can be an attractive option for sellers who have a low credit rating and don't qualify for other small business loans (McIntyre 2020). However, it also means that positive repayment histories are not shared outside of the platform, affecting sellers' ability to improve their credit ratings and access loans from other institutions. After the fast growth of the program in 2015 and 2016, the total volume of lending seems to have stalled. According to the 2017 and 2018 annual reports, the program's outstanding credit was estimated at $692 million in 2017 and $710 million in 2018 (Amazon 2018), but the most recent annual report (2019) does not provide updates on the volume of lending.[23]

On the payment side, Amazon provides its payment solution *Amazon Pay* in 18 countries in Europe and the United States. Amazon has also recently piloted a new type of credit card for low-income consumers trying to establish or rebuild their credit called Amazon Credit Builder. To obtain it, consumers deposit funds, and the amount they deposit becomes their credit limit. The downside is that its 28.2 percent interest rate is much higher than 25 percent, the median rate for retail cards (Greene and Bhattarai 2019).

In China, Ant Financial was established in 2014 as a spinoff of the Alibaba Group and within five years became the world's biggest fintech, reaching over a billion users. Ant Financial's operations started in 2014, when the Alibaba Group rebranded its flagship payment product Alipay as "Ant Financial," focusing on expanding the product proposition to Chinese consumers and MSMEs. As of 2020, Ant Financial provides an extraordinary variety of financial products to its customers. In addition to its core mobile payment platform Alipay (mobile wallet and payment app), Ant Financial provides Huabei (a virtual credit card), Jeibei (consumer loan services), MYbank (a cloud-based private bank), Ant Insurance (mobile-based insurance products), ZOLOZ (a biometric identity-verification platform), Ant Fortune (a wealth-management app), and Zhima Credit (credit-scoring services, among others). As of 2020, Ant Financial had over a billion customers, more than 10 times as many customers as the largest US banks—with less than 10 percent the number of employees (Iansiti and Lakhani 2020).

In Africa, Jumia introduced both lending and payment solutions to its customers and MSMEs. Jumia Lending offers loans to sellers on the Jumia Platform in Nigeria, Kenya, Ivory Coast, and Egypt. In almost all countries, Jumia lends in partnership with licensed financial institutions such as Microfinance Institutions (MFIs) or banks. Jumia acts as a facilitator that originates the loan application on behalf of the seller and provides data related to the creditworthiness of the seller based on their transaction history on the platform. Kenya is the only country where contract law allows the platform to lend directly to sellers. In the future, Jumia plans to provide scoring data in anonymized form to potential lenders and display the pre-approved offers directly on the Jumia seller platform. Jumia also offers the payment solution Jumia Pay,[24] which offers consumers an option to link a digital wallet

22. There is limited official information on Amazon's credit product. The study uses primarily media reports and information that sellers shared in online platforms such as https://sellercentral.amazon.com/ and on the product page https://sell.amazon.com/programs/amazon-lending.html.
23. According to media reports, Amazon Lending entered into a partnership with Bank of America for its lending program (Kim 2018).
24. As of March 31, 2020, JumiaPay was live in 7 of the 11 markets in which Jumia operates: Nigeria, Egypt, Morocco, Ivory Coast, Ghana, Kenya, and Tunisia.

with credit cards or bank accounts either directly or via third-party aggregators for countries with large volumes of payments. Jumia currently does not offer full e-wallet functionalities in any of its markets. For example, in Nigeria and Egypt, e-wallets are provided through agreements with licensed banks, providing cashback and top-up options similar to vouchers whose primary purpose is to encourage consumer loyalty. Funds cannot be withdrawn or transferred from JumiaPay except for customer refunds, but they can be used for future purchases on the platform.[25] In Nigeria and Egypt, 54 percent of orders placed on the platform in the fourth quarter of 2018 were completed using JumiaPay. The payment solution complies with the Payment Card Industry Data Security Standard (PCI DSS).

Similarly, in Latin America, MercadoLibre offers payment and credit solutions in most countries of operation. Mercado Pago is a stand-alone digital payment platform used by consumers and businesses in Latin America to send, receive, and finance payments online. It was originally created as an online payments solution integrated into MercadoLibre but has since expanded its services to include other e-commerce merchants. Mercado Crédito offers credit to sellers on MercadoLibre and to customers using Mercado Pago in Brazil, Argentina, and Mexico. MercadoLibre has provided more than $610 million in working-capital credit lines to more than 270,000 companies in Latin America and offered around $200 million in consumer loans.

TABLE 6: Mercado Credito Volumes and Value of Lending since 2016

Countries of operation	3
Number of borrowers (thousands)	270
Working capital to sellers (US$, millions)	610
Consumer loans (US$, millions)	200

Source: Statista[26]

A brief summary of the main payments and credit products is provided in table 7.

4.2 Regulatory Enablers for Financial Services via e-Commerce Platforms

As e-commerce business models have evolved, the role of intermediaries has expanded rapidly to provide financial services that would typically be handled by regulated PSPs. These service providers or intermediaries include non-bank financial institutions and businesses that previously did not issue any financial products (for example, e-money digital wallets) or handle transactions on behalf of the regulated PSPs (for example, e-commerce aggregators). Regulators need to be aware of emerging risks within the e-commerce ecosystem due to unregulated intermediaries issuing financial products and/or providing services or moving funds on behalf of merchants or regulated PSPs.

New types of non-bank financial institutions are introducing new types of risks in the e-commerce ecosystem. While no global e-commerce regulatory framework has been commonly agreed upon, awareness of emerging non-bank players within the e-commerce ecosystem and potential risks posed by them is a good starting point for developing a national-level regulatory framework. The potential risks to the financial ecosystem include the following:

- *Credit and liquidity risks* may arise if the intermediary responsible for collecting funds on behalf of the merchant fails to transfer funds to the merchant account.
- *Operational and reputation risks* may also arise due to operational and security disruptions, resulting in reputation risk for merchants.
- *Cyber risks* in the form of data breaches may result in loss of funds or the stealing of sensitive consumer information.
- *Consumer-protection risks* due to loss of consumer funds and the lack of recourse mechanisms for chargebacks and refunds. Consumers also face privacy and data-protection risks.

e-Commerce platforms must comply with country-level regulatory frameworks for the provision of payments and e-wallets services and credit products. Payment and credit products provided by different platforms must

25. Form F-1 (accessed June 11, 2020), https://www.sec.gov/Archives/edgar/data/1756708/000119312519071692/d650749df1.htm.
26. "Key Figures on Mercado Crédito in Latin America as of December 2019," Statista (accessed June 11, 2020), https://www.statista.com/statistics/1114939/latin-america-mercado-credito.

TABLE 7: Credit and Payment Products Provided by e-Commerce Platforms

	CREDIT	PAYMENT
Amazon (United States)	**Amazon Lending** offers short-term credit to qualified sellers in the platform so that they can finance additional inventory to sell through the Amazon marketplace. The Amazon Lending platform does not check credit ratings, and loans are provided on an invitation-only basis to sellers who have reached a certain milestone. Amounts range from $1,000 to $750,000.	**Amazon Pay** is an online payment method that uses the payment methods stored in a customer's Amazon account to pay for goods and services on Amazon or other websites accepting Amazon Pay.
Alibaba (China)	Alibaba's affiliate company Ant Financial provides a variety of loan products to MSMEs, including virtual credit cards, consumer loan services, and full cloud-based banking solutions (that is, MYbank). In the United States, as part of a program called **Pay Later,** it provides loans to MSMEs up to $150,000 with Kabbage, using big data and machine learning.	**Alipay** is a digital wallet that allows users to pay using a mobile app, online (Alibaba and other websites), and at POS terminals.
Jumia (Africa)	**Jumia Lending** offers loans to sellers on the Jumia platform. These are provided by MFIs or banks, and Jumia acts as a facilitator that originates the loan application on behalf of the seller and provides data related to the creditworthiness of the seller based on their transaction history on the platform. The lender may do additional due diligence. Financial services are currently available to sellers in Nigeria, Kenya, Ivory Coast, and Egypt. There are plans to provide the scoring data in an anonymized form to potential lenders and display the pre-approved offers directly on the Jumia seller platform in the future.	**Jumia Pay**[27] offers consumers an option to link a digital wallet with credit cards or bank accounts via third-party aggregators. Jumia currently does not offer full e-wallet functionalities in any of its markets. In Nigeria and Egypt, e-wallets are provided through agreements with licensed banks, providing cashback and top-up options similar to vouchers whose primary purpose is to encourage consumer loyalty. Funds cannot be withdrawn or transferred from JumiaPay except for customer refunds, but they can be used for future purchases on the platform.[28] In Nigeria and Egypt, 54 percent of orders placed on the platform in the fourth quarter of 2018 were completed using JumiaPay.
MercadoLibre (Latin America)	**Mercado Crédito** offers credit to sellers on MercadoLibre and to customers using Mercado Pago in Brazil, Argentina, and Mexico. It has provided more than $610 million in working-capital credit lines to more than 270,000 companies in Latin America and offered around $200 million in consumer loans.	**Mercado Pago** is a stand-alone digital payment platform used by consumers and businesses in Latin America to send, receive, and finance payments online. It was originally created as an online payment solution integrated into MercadoLibre but has since expanded its services to include other e-commerce merchants.
Flipkart (India)	The Flipkart MSME loan program is called **Loan Capital;** MSME sellers can obtain loans up to $400,000 at an interest rate of 9.5 percent for a period up to 12 months. About 100,000 sellers are eligible for this through loans from 10 banks and non-bank financial institutions. Flipkart is currently in the process of applying for a non-bank financial company license.	Flipkart's digital wallet ***PhonePe*** is a bank account–backed digital wallet integrated with India's Unified Payment Interface, allowing users to transact directly from their bank account and not store funds in their mobile wallet. Customers get cash back when using this wallet for shopping.
Twiga Foods (Kenya)	Twiga is currently piloting its own short-term credit solution for vendors and engaging with financial institutions to partner on a credit product.	Uses Safaricom's M-Pesa platform.
FarmCrowdy (Nigeria)	Linked to crowdfunding platform **FarmInvest**. The separation of the crowdfunding and e-commerce platforms is due to an ongoing initiative to regulate crowdfunding in Nigeria.	Uses mobile payments and cash. Mobile payments were discontinued during the COVID-19 pandemic due to the disruption of the agent network infrastructure.

comply with diverse regulatory frameworks in different countries and evolving licensing requirements. Uncertainty around regulatory requirements is perceived to be a key risk for platforms in emerging markets and developing economies. Simplified KYC requirements for onboarding of MSME sellers and streamlined requirements for providing credit and payment services are needed for these platforms to expand.

4.2.1 Licensing Requirements for e-Wallets, Payments, and Credit

According to Jumia's investor's prospectus, inconsistency in the country-level financial regulations is a key risk for the platform and a reason for consumers' lack of trust in digital financial services.[29] Among the key risk factors, Jumia lists a variety linked to financial-sector regulation and infrastructure, such as (i) failure in the national payments system; (ii) deterioration in the performance of

27. As of March 31, 2020, JumiaPay was live in 7 of the 1 1 markets in which Jumia operates: Nigeria, Egypt, Morocco, Ivory Coast, Ghana, Kenya, and Tunisia.
28. Form F-1 (accessed June 11, 2020), https://www.sec.gov/Archives/edgar/data/1756708/000119312519071692/d650749df1.htm.
29. Form F-1 (accessed June 11, 2020), https://www.sec.gov/Archives/edgar/data/1756708/000119312519071692/d650749df1.htm.

third-party payment aggregators; (iii) changes to payment card networks or bank fees, rules, or practices; (iv) credit card or payments-related frauds; (v) allegations and lawsuits concerning AML/CFT; (vi) change in requirements or arbitrary revocations of licenses, permits, or approvals to operate financial services; and (vii) risks related to emerging data-protection laws.

In order to comply with diverse (and evolving) country-level regulations, **Jumia has structured its payment and lending solutions differently in each country**. For example, Kenya is the only country where Jumia acts as a direct lender, as contract law allows them to operate without any specialized licenses.[30] Jumia has a license to lend in the city of Lagos, but in Nigeria, it provides its lending service in partnership with financial institutions. In Nigeria and Egypt, e-wallets are provided through agreements with a licensed bank, providing cashback and top-up options similar to vouchers, and the primary purpose is to encourage consumer loyalty. Funds cannot be withdrawn or transferred from JumiaPay except for customer refunds, but they can be used for future purchases on the platform. In Nigeria and Egypt, 54 percent of orders placed on the platform in the fourth quarter of 2018 were completed using JumiaPay.

In Latin America, **MercadoLibre lists regulatory requirements as important risk factors for the use of its payment solution Mercado Pago (MercadoLibre 2020)**. According to the SEC prospectus, Mercado Pago is already compliant with national regulation in Brazil, Argentina, Mexico, Chile, and Uruguay and will be subject to new regulations in Colombia. The platform claims not to have license requirements under the existing statutes in Argentina, Peru, and Colombia. Changing licensing requirements and regulations could cause the platform to shut down Mercado Pago or to suspend the business temporarily. Due to the national regulation, *Mercado Credito* lending products are provided through corresponding banking agreements in Brazil, while it is in the process of obtaining a license in Mexico linked to its recent Fintech Law.

4.2.2 Know-Your-Customer Regulation

Evolving anti-money laundering and KYC regulatory frameworks are perceived as risk factors by several platforms globally. The Financial Action Task Force's (FATF) 2017 recommendations on "anti-money laundering and terrorist financing measures and financial inclusion" require countries to conduct comprehensive risk assessments to assess the money-laundering and terrorist-financing risks associated with particular customer groups, delivery channels, and specific national contexts. Unlike physical stores, e-commerce platforms do not implement face-to-face onboarding or interaction with their customers; hence, it is more difficult to verify their identities. According to the FATF guidance, the identification of lower-risk situations should be consistent with the country's assessment of its overall risks of money laundering and the financing of terrorists. This assessment should take into account the impact of financial exclusion on the economy, the existence of unregulated services, the attractiveness of illicit transactions, and the vulnerability of excluded people to financial crime and exploitation. Where such risks are present, FATF recommends the use of proportional KYC requirements, including the use of alternative means of identification and tiered and simplified customer due diligence, among others (FATF 2017).

KYC and AML/CFT regulation varies greatly from country to country. In Africa, Jumia implemented internal group-wide KYC policies and procedures, and it complies with all applicable country-level AML/CFT regulation. So far, the platform has not been subject to fines or penalties. However, the group considers both the risk of not detecting fraudulent customers and the risk of tightening government regulations important, as they could affect its reputation, costs, and capacity to serve customers. Regulation is diverse and evolving. For example, in Egypt, Jumia is subject to regulation developed by the government and enforced by the Egyptian Information Technology Industry Development Authority in the context of online transactions and KYC. In Ghana, the Bank of Ghana has lobbied for new rules that would require e-money issuers to join a central registry and enforce anti-money laundering and data-protection standards.

In Latin America, Mercado Pago is subject to diverse anti-money laundering laws and regulations in different countries. In Argentina, for example, MercadoLibre has been registered at the Argentine anti-money laundering authority (*Unidad de Información Financiera*) since 2016, and it is therefore subject to AML/CFT reporting obligations linked to the issuance of prepaid cards and card-aggregator activities. The diversity and evolving regulations linked to KYC is considered a risk for Mercado Pago, as it could impose costs on the platform and increase the difficulty to reach customers. In particular, new regulation may require e-commerce platforms to conduct further identification and verification of their customers as they

30. Note that the proposed Financial Markets Conduct Bill 2018 seeks to regulate consumer lending by requiring the licensing of all credit providers regardless of whether they take deposits from the public. The bill was published to receive comments from the public but is yet to be introduced to Parliament.

TABLE 8: Regulatory Frameworks for Payments and Credit Products Provided by e-Commerce Platforms

PLATFORM	REGULATORY FRAMEWORK FOR PAYMENTS	REGULATORY FRAMEWORK FOR LENDING
MercadoLibre (Mercado Libre 2020)	*Mercado Pago*	*Mercado Credito*
Brazil	Authorized payment institution by the Central Bank of Brazil since 2018.	Currently, loans are provided through corresponding banking agreements with partner financial institutions, as Mercado Credito is not licensed as a financial institution in Brazil. In 2018, Mercado Credito filed an application with the Central Bank for authorization to incorporate a financial institution in the modality of a savings-and-loan association.
Colombia	Required by regulators to comply with requirements enacted in 2014–15 and then in 2018 to regulate account opening, cash management, and risk policies, among others.	Credit product unavailable in Colombia.
Uruguay	Mercado Pago's subsidiary obtained a registration at the Central Bank of Uruguay in 2016 to provide payments and collections services.	Credit product unavailable in Uruguay.
Chile	Submitted applications to obtain licenses to act as a prepaid card issuer and payment card operator in June and December 2019.	Credit product unavailable in Chile.
Mexico	In March 2018, Mexico enacted a new law that regulates both crowd-funders and providers of wallets and money-transmittal services (the "Fin-tech Law"). Under the Fintech Law, institutions that provide money-transfer services, digital credit, and crowdfunding services are required to obtain a license. Mercado Pago applied for such a license in September 2019 and is currently under review at the Comisión Nacional Bancaria y de Valores.	Applied for a license in September 2019 under the Fintech Law. (See the previous column for details.) The application is under review at the Comisión Nacional Bancaria y de Valores.
Argentina	A January 2020 law requires PSPs to register by April 2020 and comply with a variety of requirements linked to the provision of users' information and use of customer funds, among others. Mercado Pago is registered with the anti-money laundering authority.	Intends to apply for a license for its peer-to-peer lending business as required by regulation.
Jumia[31]	*JumiaPay*	*Jumia Lending*
Nigeria	Introduced in 2016. No direct PSP license, but an agreement with an existing licensed bank. Has applied for a PSP license in 2019.	Has a license to operate as a direct lender in the city of Lagos but currently does not offer any direct lending. Partners with several licensed institutions, such as QuickCheck Credit.
Kenya	Introduced in 2018. No direct PSP license, but a partnership with Safaricom M-Pesa.	Kenya is the only country where Jumia acts as a direct lender, as contract law has traditionally allowed them to operate without any specialized licenses.
Egypt	Introduced in 2018. No direct PSP license, but an agreement with an exist-ing licensed bank. No intention of applying for a license because Egypt permits PSP activity only in connection with a licensed sponsoring bank.	Jumia provides loans through agreements with licensed third-party lenders.
Ghana	No direct PSP license, but an agreement with an existing licensed bank. The Bank of Ghana issued regulatory revisions for electronic money issuers in 2019 that require e-money issuers to join a central registry and may enforce additional regulation for AML and data protection for over 150,000 active mobile-money agents.	Jumia provides loans through agreements with licensed third-party lenders.
Ivory Coast	No direct PSP license, but an agreement with an existing licensed bank. A PSP license would require a minimum capital requirement of €450,000.	Jumia provides loans through agreements with licensed third-party lenders.
Flipkart (Sen 2019)	*PhonePe*	*Loan Capital*
India	Obtained a license in 2014 (prior to being acquired by Flipkart in 2016) from the Reserve Bank of India for the issuance and operation of a semi-closed prepaid payment system.[32]	Currently providing loans through agreements with banks and non-bank financial companies. Flipkart is in the process of applying for a non-bank financial company license to offer credit products such as buy-now-pay-later features, checkout finance, and working-capital loans to sellers.
Alibaba	*Alipay*	*Alibaba Lending (various)*
China	Obtained license by the People's Bank of China in 2011 as a third-party payments provider.	Alibaba's finance subsidiary *Zhejiang Ant Small and Micro Financial Services* obtained a banking license in 2014 from the China Banking Regulatory Commission through its 30 percent stake in *Zhejiang Internet Commerce Bank* (Tong 2014).

31. Form F-1 (accessed June 11, 2020), https://www.sec.gov/Archives/edgar/data/1756708/000119312519071692/d650749df1.htm.
32. Publications, Reserve Bank of India (accessed June 11, 2020), https://www.rbi.org.in/scripts/publicationsview.aspx?id=12043.

open accounts, which would increase costs and compliance risks to the platform.

In India, the Reserve Bank of India in 2019 developed "Guidelines for Payment Gateways and Payment Aggregators," a discussion paper that could affect e-commerce platforms that operate payment-aggregation services. The guidelines would require e-commerce marketplaces acting as payment gateways and payment aggregators to other merchants stop the activity within three months. If they desire to pursue this activity, they must create a separate entity complying with all the relevant regulations. According to the draft guidelines, payment gateways and payment aggregators will have to undertake KYC checks. They will also be required to undertake background and antecedent checks on merchants, ensuring that they do not have a history of fraud, fake sales, or sales of prohibited items (Reserve Bank of India 2019).

4.3 Financial Services in e-Commerce Platforms during the COVID-19 Pandemic

Despite uncertainty regarding regulatory frameworks, the COVID-19 pandemic has accelerated the use of digital payments on most e-commerce platforms, especially in countries with efficient payments and agents' infrastructure. As a result of both the increased number of first-time users on e-commerce platforms and the reluctance of e-commerce platforms to accept cash on delivery to avoid physical contact with buyers, the use of digital payments for e-commerce platforms has increased since the onset of the pandemic. In addition to internationally branded payment cards and digital wallets, e-commerce platforms provide their own digital wallets for online payments. The next sections look at payments and credit.

4.3.1 Payments via e-Commerce during the COVID-19 Pandemic

The COVID-19 crisis has reinforced the role of digital payments for economic and financial inclusion. The onset of the COVID-19 crisis had a significant impact on how payments are made in e-commerce platforms. These are likely to be sustained in the long-term. The research found that growth in digital payments was linked to the quality of the ecosystem, particularly the agency network. Countries with a weak mobile-payments ecosystem had to rely on cash during the COVID-19 crisis.

We identified two main trends:

First, the fear of contagion has encouraged e-commerce platforms to adopt digital payments in most countries, moving away from cash-on-delivery solutions and opting for mobile wallets or in-app payments. Prior to the crisis, Jumia's cash on delivery constituted between 70 and 90 percent of its payments. Since the pandemic, Jumia discontinued cash on delivery and enforced digital payments in such countries as Kenya that have well-developed ecosystem. In India, Flipkart's PhonePe introduced contactless delivery of groceries from nearby stores amid the coronavirus lockdown. To minimize contact, the PhonePe app has enabled contactless payments by requiring users to scan a QR code at merchants accepting PhonePe. (They have over 10 million merchant acceptance points in India.) They have also introduced a "Pay Now" feature on the stores' pages, enabling customers to make the payment remotely from within the PhonePe app without having to scan a QR code.[33]

In Latin America, the COVID-19 lockdowns initially led to drop in sales during the second half of March, as businesses and consumers had to adjust to the new normal. After the initial period of slow activity, sales on e-commerce platforms increased in April, as more consumers got accustomed to shopping online and bought more purchases in bulk. The platform also saw a steady increase in first-time users during this period. Volume of payment transactions at Mercado Pago grew 127 percent due to high levels of online payments used on the Mecado Libre platform during this period. Ninety-four percent of all payments on the e-commerce platform come from consumers using Mercado Pago online wallets. Mercado Pago unique wallet payers grew over 155 percent year over year throughout Latin America; Mexico led with 252.8 percent growth, and the number of payers in a quarter surpassed a million for the first time.

A second finding is that in countries where the payments ecosystem is weak or agent networks were forced to close during the lockdown, e-commerce platforms have to rely largely on cash. While Jumia was able to discontinue cash on delivery in countries such as Kenya, other platforms had the opposite effect and were forced to switch back to cash because merchants were unable to withdraw their money from agents. For example, FarmCrowdy in Nigeria discontinued mobile payments because the agent network was disrupted, and sellers could not easily cash out their payments.

33. In addition to accelerating the use of digital payments, PhonePe has also started offering users of the digital wallet a COVID-19 hospitalization insurance policy called Corona Care, which is purchased directly via the PhonePe mobile app. Geared toward the population that does not have access to insurance, the product requires a one-time payment of approximately $2–3 and covers between $650 and $700 in hospitalization charges. The only caveat is that this is open to age groups 18–55, but no medical tests are needed before purchase.

In Ethiopia, low penetration of mobile money forced Hello Market to rely on cash-on-delivery payments for deliveries in Addis Ababa and different forms of cash deposits in banks or mobile-money agents outside of the capital. In contexts where agents play a critical role for the delivery of welfare payments and other basic services, governments should coordinate with banks and mobile-money providers to ensure that agent networks remain operational in areas where their services are most needed. This may require incentives and/or subsidies to ensure agents' liquidity and financial viability in periods of slow economic activity. Clear policies should also be designed to regulate agents who operate both essential financial services and retail businesses deemed nonessential (Hernandez and Kim 2020).

4.3.2 Lending via e-Commerce during the COVID-19 Pandemic

The COVID-19 crisis forced e-commerce platforms to adopt a variety of new policies, balancing the need to manage increased risks and forbearance for struggling borrowers in the short term. There is limited data to assess the impact on volumes and values of credit, but the research has shown that e-commerce platforms responded to the crisis with increased forbearance for borrowers, decreased exposure to new loans, and a variety of rapid responses to aid struggling vendors on the platform.

We observed the following three trends:

First, many platforms decided to provide at least some forbearance to existing MSME clients—eliminating late fees, instituting debt moratoriums, and taking other measures. Sellers who already had an established relationship with the platforms were given discounted terms for short-term loans, often between three months to one year, to cover losses and economic hardship. In the United States, the coronavirus pandemic hit small businesses hard, and many of them are also sellers on the Amazon platform. With Amazon focusing on shipping essential items or reducing shipping volumes, some small merchants complained that they might struggle to repay their Amazon Lending loans if they could not make sales. Amazon paused its merchant loan repayment for over a month during this period (until April 30). In Brazil, MercadoLibre extended a 30-day grace period for repayment of loans for more than two million consumers and eliminated late fees for more than 150,000 merchants to alleviate the financial burden faced by them. It is also extending a $144 million credit line to help Brazilian MSME businesses facing a sharp drop in the economic activity caused by the pandemic. Loans will help MSME sellers on the platforms in Brazil.

In India, Flipkart is offering special offers on loans that sellers can avail through Flipkart's Growth Capital program. A three-month moratorium period has also been implemented on existing loans availed through the program, relieving sellers of making a payment during the period. Any additional amount on a seller's existing loans sanctioned during this period will have an extended financial limit with a six-month moratorium period. Additionally, the platform has offered other concessions to sellers, including providing its sellers the flexibility of choosing to work or not work during the lockdown period, without any impact on performance metrics; a health insurance plan specific to COVID-19, to cover the sellers along with their families and employees; and waiving storage fees for April, under its Fulfilled by Flipkart service, which allows sellers to store their inventory in Flipkart Fulfillment Centers for faster deliveries.

Second, e-commerce platforms were reluctant to lend to new MSMEs during the crisis due to the increased risk of nonperforming loans. Although the data available is limited, discussions with platforms highlighted that new loan originations to MSME sellers on e-commerce platforms declined in the weeks immediately after the COVID-19 outbreak, as many platforms wanted to limit their exposure to the risk of nonperforming loans. In Latin America, the MercadoLibre credit platform Mercado Credito decreased loan originations to sellers and consumers and saw a 16.5 percent decline over the previous quarter. For a large part, the decline was intended to manage their financial exposure to merchant and consumer credit amid a global pandemic. In India, the lockdown forced millions of businesses to discontinue operations partially or fully, making them unviable for new financing and forcing them to rely on their own savings or informal credit sources to manage liquidity during the downturn.

Third, the crisis triggered rapid responses from platforms to help firms affected by the crisis, which was possible thanks to their access to data. In China, Alibaba is offered $2.86 billion in loans via its affiliate, Ant Financial's MYBank, to help companies affected by the coronavirus. This includes preferential terms to firms located in Hubei: a zero-interest rate on a 90-day loan and a 20 percent discount on rates for a one-year loan. In Hong Kong, Alibaba and HSBC offered rapid-approval loans for 1,800 MSMEs operating in Tmall to recover from low sales during the pandemic. Loans up to $500,000 are being offered with an interest rate of one percent until June 30. No documents or collateral are required to get the loans, but applicants provide Cainiao (a data aggregator) with inventory information and operational status for data analysis.

5. CONCLUSIONS AND RECOMMENDATIONS

The paper has provided an overview of the role of e-commerce and digital financial services during the COVID-19 crisis. This is a fast-evolving and complex ecosystem that involves interrelated regulatory frameworks linked to trade, finance, logistics, data protection, and consumer protection, among others. This paper analyzed only selected areas of the e-commerce ecosystem, particularly those related to financial services and linked to the COVID-19 pandemic. It did not analyze deeper structural issues, such as competition and contestability in e-commerce markets, gender and digital capabilities, and the regulatory frameworks for financial consumer protection, data protection, cybersecurity and others. Further research should be conducted on these topics.

The list below summarizes the main policy recommendations.

a) Policy maker understanding of the importance of e-commerce to the economy is critical at a time when the retail commerce is adversely affected. Lockdown policies should take into account how an e-commerce supply chain works and ensure that various elements are treated as essential categories. The availability of low-cost data services and access to learning opportunities for digital skills drive usage of e-commerce on mobile apps or the Internet. Development of an end-to-end curriculum through universities or other educational channels on how to sell on e-commerce platforms—this includes sourcing, branding, marketing, and customer fulfillment—is critical for the growth of the digital economy.

b) Digital financial services are critical for participation in the digital economy. e-Commerce platforms need to integrate seamlessly with the national payment system and offer different payment methods to target different segments of the population.

c) Governments should coordinate with banks and mobile-money providers to ensure that agent networks remain operational in areas where their services are most needed. This may require incentives and/or subsidies to ensure agents' liquidity and financial viability in periods of slow economic activity. Clear policies should also be designed to regulate agents who operate both essential financial services and retail businesses deemed nonessential.

d) e-Commerce platforms can play a key role in facilitating access to credit for small businesses, either directly or in partnership with banks or other licensed lenders. Governments need to develop adequate and proportional regulatory frameworks to encourage the sound development of this market, including participation in the credit-reporting system, financial consumer protection, and data protection. This would encourage competition and reduce the risk that vendors will "lock-in" to the largest platforms in the market.

e) As e-commerce business models have evolved, the role of intermediaries has expanded rapidly to provide financial services that would be typically handled by regulated PSPs. Regulators need to be aware of emerging risks within the e-commerce ecosystem due to unregulated intermediaries issuing financial products and/or providing services or moving funds on behalf of merchants or regulated PSPs.

f) While no global e-commerce regulatory framework is commonly agreed upon, awareness of emerging non-bank players within the e-commerce ecosystem and of the potential risks posed by them is a good starting point for developing a national-level regulatory framework. Risks to the financial ecosystem include (i) credit and liquidity risks, (ii) operational and reputation risks, (iii) cyber risks, and (iv) consumer-protection risks.

g) Regulators and e-commerce platforms should consider introducing simplified onboarding processes and proportional due-diligence processes to facilitate the enrollment of new merchants while ensuring compliance with AML/CFT rules.

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