

Promoting e-Commerce: Exploring Opportunities for Small and Medium Enterprises in Pakistan



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CERTIFICATE

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ABSTRACT

In the age of technologies and the fourth industrial revolution, e-commerce is playing positive role of introducing the digital shift in businesses. Recent pandemic is one of the major factors behind this shift. Pakistan is also among the emerging e-commerce markets holding 37th position in the list of large e-commerce markets with the annual growth of 6%. Emerging digital landscape, the market potential of e-commerce along with the increasing inclination of the enterprises and the consumers to shift towards the e-commerce further adds to the motivation behind this research in terms of finding the barriers that exist in Pakistan to promote e-commerce and finding suggestions to address these limitations. Considering the importance and contribution of Small and Medium Enterprises (SMEs) in the economy of Pakistan, this research focused SMEs. Mixed method is used for this research through a quantitative survey of 750 SMEs across Pakistan, key informant interviews, and expert discussions/webinars to supplement the quantitative results of the survey and to capture the point of policy makers as well as experts. Capacity constraints to adopt e-commerce, consumers' behavior and lack of trust, digital divide, lack of access to finance, issues related to the logistics, digital payments, and cross-border trade facilitation are the key issues reported by the SMEs and identified by the experts. Furthermore, extensive efforts and initiatives by the government as well as the private sector are in progress related to these issues, however there is long way to go to expedite these efforts as explained in this research.

Key Words:

e-commerce, small and medium enterprises (SMEs), digitalization, capacity building, e-commerce platforms, customers' rights, logistics

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Promoting e-Commerce: Exploring Opportunities for Small and Medium Enterprises in Pakistan

Chapter 1. Introduction

1.1. Background

E-commerce¹ is an emerging policy interest for Pakistan as Ministry of Commerce; Government of Pakistan launched “e-Commerce Policy of Pakistan” in 2019. Under this policy, government is aiming to improve e-commerce exports by 50%. Another policy target is to facilitate small and medium enterprises (SMEs)² through e-SME initiative. SMEs³ contribution to the country’s economy is significant as it contributes around 30% of GDP in Pakistan (Shah, 2018) also SMEs employ major share of the non-agriculture labor force (80%) (Small and Medium Enterprises Development Authority). Moreover, 25% manufactured goods exports belong to the SMEs (Ministry of Commerce, 2019).

Use of digital technologies by SMEs has potential to reduce the costs, increase productivity and lead to direct and indirect employment creation through a boost in output and exports (Mubarak et al., 2019). Globally, e-commerce added flexibility and sustainability aspect to the small businesses during pandemic. It is also true for Pakistan as during recent pandemic, the restricted movement resulted in increased preference of online sales and purchase (Express Tribune, 2020). Even before Covid, digital landscape in Pakistan was evolving that indicates the increased likelihood to benefit from digital trade boost. For instance, after advancement in telecom sector of Pakistan in 2014 in the form of 3G/4G, remarkable expansion in broadband users is observed from 2% to 30% within 5 years (Ministry of Commerce, 2019). Similarly, the participation of digitally inclined youth bulge of Pakistan that is more than half of the population, in gig economy resulted in Pakistan’s

¹ As defined by World Trade Organization (WTO), e-commerce is “production, distribution, marketing, sale or delivery of goods and services by electronic means”.

² Defined by SME Policy 2007, entities with up to 250 employees, up to 250 million annual sales, and up to 25 million paid up capital are categorized as SMEs in Pakistan.

4th position in the list of growing freelancing markets even before pandemic (Payoneer, 2019). Covid made it possible to make progress in online business as according to ecommerceDB (2021), Pakistan is 37th largest e-commerce market. Karachi Chamber of Commerce and Industry (2019) reported 92% growth (year-over-year) in e-commerce and 93.7% increase is observed in digital payment (2018). According to the data of State Bank of Pakistan, 100% increase in registered merchants and around 89% growth in e-commerce transactions was observed during 2 years, in fiscal year 2019 and fiscal year 2018, respectively (World Bank, 2020). According to the eTijarat Portal, current market size of e-commerce market is USD 4,000 million and 3,003 registered merchants. So, even in normal situation (without Covid), the right policies and required support for the businesses has the potential to promote e-commerce in Pakistan as Statista estimated annual growth rate of 6.09 % and the market volume (estimated) of US\$9,153 m for Pakistan by year 2025.

But there is long way to promote e-commerce for SMEs as lack of enabling environment in terms of existing issues related to the infrastructure such as availability of internet and its slow speed, absence of international online payment systems, consumer protection, among others need to be addressed (World Bank, 2020). Lower ranking of Pakistan by United Nations Conference on Trade and Development (UNCTAD) Business-to-Consumer (B2C) Index (2020) at 116 out of 152 with the score value of 32.5 also reveal that Pakistan needs to put more efforts in this regard. It is much easier for the larger firms to shift to the online mode of business because they can easily manage both financially as well as capacities development and awareness. European Commission Report (2020) also stated that more than 50% of the large businesses have been in the process of digital transformation after Covid. It becomes difficult for smaller businesses to adopt e-commerce because of their inability to bear the cost to shift online and capacity constraints. So, the SMEs' which contribute significantly to the GDP in Pakistan, digital transformation can create significant impact in economy by addressing the issues to adopt and sustain e-commerce.

Other studies on barriers to e-commerce in different countries include lack of data security and lack of customers' trust (Amornkitvikai, et al., 2022), lack of ICT infrastructure and required skills (Lawrence & Tar, 2010). Similarly, Fleenor (2011) reflected the issues of internet connectivity and access in Malaysia, Africa, and India and digital divide in Brazil. These issues are also relevant to the context of Pakistan that is the country with lack of digital access, lack of customer trust, and

capacity constraints. However, there is need to understand the local perspective of Pakistan, the policy support in terms of consumer protection, locally contextualized strategy for e-commerce, cross-border facilitations among other matters.

1.2. Statement of the Problem

As explained earlier, Pakistan is the country with gaining interest in e-commerce both on policy as well as the public side and Covid set to be as one of the push factors in this regard. Alongside, the barriers including lack of digital and financial access, capacity constraints, lack of cross-border logistics and consumer protection hampers the e-commerce to flourish in Pakistan which is a country with most of the population as digitally inclined youth that can be turned in to a potential online buyer. With this perspective, this thesis is an attempt to elaborate the experiences of the firms which are practicing online business particularly the type of limitations they are facing, the perspective of the digital platforms which provide services to the firms with the intention to adopt e-commerce. As policy sphere to provide enabling environment for e-commerce also require special attention, this piece of research will also provide policy updates along with the required policy actions in Pakistan.

1.3. Objectives

In the background of the potential benefits of e-commerce, objectives of this research are to:

- Identify the pattern of SMEs to adopt e-commerce
- Identify the barriers that SMEs face regarding adopting e-commerce as a viable option for trade such as digital infrastructure, regulations, and capacity building and others.
- Suggest way forward to address challenges and barriers to support SMEs' e-commerce

1.4. Significance of Research

This research will help to provide evidence-based suggestions required for the digital transformation of SMEs in Pakistan and capitalize on already existing policy efforts including e-Commerce Policy of Pakistan, Digital Pakistan Policy, and Pakistan e-SME Program.

Existing e-Commerce Policy covers key elements of capacity building, connecting e-SMEs to online marketplaces, building collaborations and partnerships for human resource development and financial access. As mentioned before, this research will provide way forward on addressing the implementation gaps to achieve the policy targets.

Similarly, engagement of private sector and broader stakeholders will provide insightful analysis of existing initiatives and resources that can be tapped further to build collaborations to accomplish e-commerce policy targets effectively.

1.5. Organization of Thesis

This research includes 5 chapters, starting with the introduction and objectives in Chapter 1, followed by the conceptual framework and methodology in Chapter 2 and literature review in Chapter 3. Chapter 4 provides results and discussions emerged from data analysis (quantitative and qualitative) around the study objectives along with the comprehensive insights on the seven pillars of UNCTAD framework of e-commerce including updates form policy and private sector on the implementation of e-commerce related policies and initiatives in Pakistan. Chapter 5 that is last chapter concludes the research, recommendations and way forward is also given in this chapter.

Chapter 2. Review of Literature

This chapter starts with the basic concepts of e-commerce and the e-commerce platforms that are generic in nature along with the literature review majorly on e-commerce and economic growth and the issues related to the e-commerce that exist in Pakistan.

2.1. E-Commerce Pattern/Structure (Basic Concept)

There are multiple options for SMEs to sell their products online including selling through social media (Facebook and Instagram) directly through their website, selling through (hosted) e-commerce platform (Shopify, BigCommerce), marketplace sites (eBay, Amazon), and ecommerce Add-Ons (Campbell, 2019).

eCommerce platform can be described as “ecosystem of tools that seamlessly integrate, giving you complete control over every aspect of your business and the ability to scale as you grow.” (Shaheen, 2021). In other words, eCommerce platform provides broader market outreach to sale as well as shop, also it allows the entrepreneurs to do online marketing and manage inventory.

To start the discussion on the eCommerce platforms and their types in Pakistan, it is important to outline the international practices in this regard. Generally, ecommerce is classified in to four categories:

1. Business-to-Consumer (B2C)
2. Business-to-business (B2B)
3. Consumer-to-Business (C2B)
4. Consumer-to-Consumer (C2C)

B2C can be defined as the online sales from the sellers to the buyers (consumers), e.g., Daraz.pk, 2nd category is about sales among the businesses, wholesale buying can be quoted as an example here. Third category i.e., C2B is a non-conventional type and emerging as well as consumers can sell their influence in the form of marketing through social media posts, product reviews, etc. Last one i.e. C2C is the selling among consumers and Facebook marketplace offers this facility. In this category, a third person, who don't have own business, but he sells the products of someone else's business.

Globally, Amazon and eBay are the pioneers in eCommerce and WooCommerce is the top international e-commerce platform according to the market share in 2021 (Jabbar, 2022 & Shahid, 2021) and following are the top 10 marketplaces:

- WooCommerce
- BigCommerce
- Magento
- Shopify
- 3dCart
- SquareSpace
- Zyro
- Square Online
- OpenCart
- Yo! Kart
- Volusion
- Ecwid
- Salesforce Commerce Cloud

2.2. E-commerce platforms in Pakistan

There are many e-commerce platforms operating in Pakistan including Daraza, Goto, Ali Express, Telemart, Shopon, Home Shopping, iShopping, Symbios, Vmart, iBucket, among others. Foodpanda and Airlift are the emerging market players (Shah, 2021). Among these platforms, Daraz is the largest one and also targets to host around 3 million SMEs within 2 years as mentioned by Daraz CEO in an interview to Reuters (Shahzad, 2021). Among products high in online demand are garments, groceries, shoes, fashion (beauty products, jewelry, and accessories) related products.

Business-to-consumer is the most operating type of e-commerce and in terms of SMEs, 1st two models (B2C & B2B) are most common in Pakistan.

As mentioned earlier, e-commerce platforms facilitate the sellers to easily reach buyers at larger scale as platforms enable them to manage orders, product marketing, provide payment gateways,

and other services for selling their products online. So, e-commerce platforms which are easy to access and register by SMEs, greater outreach and marketing strategy provide greater success to any platform. For instance, Daraz has no fee for sellers to get register and provides solutions for timely payments that attract SMEs. Similarly, Daraz delivers all over the Pakistan through its logistics partners which sometimes becomes difficult for SMEs to manage on their own. Therefore, Daraz is among the most popular e-commerce platforms in Pakistan (International Trade Administration, 2022).

2.3. Literature Review on e-Commerce and economic growth

Describing on how digital commerce is contributing to the economy of a nation, Weiyue (2017) presented the case of China where e-commerce had impact on social behavior of public as well as impact on the development ways of the Chinese economy through the boom in information industry.

Furthermore, describing the changing economic paradigm, UNCTAD (2001) clearly mentioned that the e-commerce has positively impacted the business sector and also has the potential to contribute towards the macro-economic indicators. For instance, US case of rapid growth in quick adoption of information technology and the e-commerce can be attributed to economic productivity. UNCTAD (2001) also elaborated that the developing countries failed to benefit from this potential impact on productivity as they are unable to keep the pace of technology. This report reflected that the developed countries have the ability to raise the welfare gains up to USD 117 billion that left the developing countries in welfare loss of USD 726 billion if these countries remain behind.

Similarly, based on econometric analysis of GDP, Gross Capital Formation (GCF), and the e-commerce, Parishev, et al. (2020) shared the positive impact of e-commerce and investment on economic growth with 0.02 percent increase in GDP growth through 1 percent increase in e-commerce.

Georgiou (2009) also presented the positive relationship between e-commerce and economic growth in countries of Western Europe.

2.4. Literature on Dynamics and Issues related to e-commerce in Pakistan

Digital Trade has significant impact on trade competitiveness and business upscaling for SMEs in developing countries (González & Ferencz, 2018). Elaborating the benefits of e-commerce, Boateng et al. (2008) explained that it tends to expand market reach of the firms, product differentiation, improved access to the market information, reduced transaction costs, and helps to raise the firms' revenue. Baytar (2015) and Boateng et al. (2008) highlighted the factors including strengthening entrepreneurship, employment opportunities, increased income level, and facilitating exports through which e-commerce influences the economic growth in a country.

Pakistan is least regionally integrated country (ESCAP, 2020) and struggling with lack of trade diversification and instable export earnings (Pakistan Economic Survey, 2020). Digital trade can play crucial role to promote diversification of exports products through opening new trade options with comparative advantage for Pakistan. Various factors including regulations and availability of infrastructure that facilitate supply of internet and/or digital services, and access or demand of internet services need to be focused to promote digital trade (APEC, 2017).

Compared to the developed countries, developing countries are lagging behind in adopting the ongoing global transformation towards 4th Industrial Revolution. Kapurubandara (2009) elaborated the factors affecting the e-transformation of SMEs including the lack of knowledge of the technologies as well as the benefits of these technological advancements, and financial constraints. Based on the e-SME roadmap by Ginige et al., 2001, the author presented the analysis of survey results in Sri Lanka. Quoting the findings, the author revealed the fact that majority of the sampled firms were facing the internal constraints such as lack of required hardware, software, and technology infrastructure. On external front, SMEs required policy and regulatory support to adopt e-commerce.

Ahmed (2019) highlighted the relatively smaller size of the ecommerce market of Pakistan compared to the peer economies. Other aspects explained by the author including e-payments; logistics issues including coverage, and product damage; capacity issues; and lack of institutional infrastructure to promote e-commerce in Pakistan were also revealed in e-entrepreneurs survey.

Enlightening the tax related limitations, Javed (2020) identified the tax burden on ICT products and internet use that discourages consumers. Data protection that is one of the important elements to sustain and flourish e-commerce also among the areas of concern. The absence of data protection

law has adverse implications in terms of cybercrimes and inability to categorize which data is confidential (Ahmed et al. 2021). Sometimes, this tends to make government departments such as Federal Investigation Authority (FIA), Board of Investment and Federal Board of Revenue to consider entire data as confidential that is restricted for e-trade. Other elements such as consumers' confidence also require legislative support to prevent the delivery frauds (Javed, 2020).

Kahn et al (2014) explored lower level of e-commerce adoption among SMEs in Pakistan based on the result of a survey of 210 SMEs in Karachi, Gujranwala, and Faisalabad. Major reasons include lower intentions of SMEs to adopt e-commerce and lack of understanding of potential benefits.

Regarding the affecting factors behind SMEs' intentions to adopt e-commerce Abbas et al (2018) revealed the fact that managers' inclination towards e-commerce is one of the major elements, with responses from 160 SMEs applying technological, organizational, and environmental (TOE) model. Similar results are drawn by Nazir & Zhu (2018)— a qualitative study and TOE model — as internet speed, financial aspects, lack of ICT infrastructure, lack of regulatory and policy support, and lack of awareness among consumers are major limitations.

Another explorative study by Seyal et al. (2004), with the survey of 54 firms, explored the resource scarcity as one of hurdles for SMEs to move towards e-commerce and incentives form the government proved as motivating factor to adopt e-commerce.

Conclusion

Though there are certain studies as mentioned earlier about the adoption factors of e-commerce in Pakistan, but this research adds the latest responses from the firms in Covid context that is missing in literature. Mainly, because Covid has significantly impacted the use of internet and online shopping due to the limited mobility that also helped to change the shopping behavior and giving more options to the buyers/consumers in the form of online marketplaces. Also, this research gives the estimated cost that SMEs faced in adopting e-commerce. Explaining the barriers to digital transformation (sector wise) combined with the latest happenings in policy and private sector is another key element of this research that adds the overview of the implementation perspective as well. This research also tried to capture the updates on the policy sphere particularly providing enabling environment to adopt and sustain the e-commerce by SMEs that includes the ICT infrastructure, payment solutions and access to finance, legal and regulatory frameworks for digital protection of the consumers and sellers, developing capacity, and cross-border facilitation.

Chapter 3. Conceptual Framework and Methodology

This chapter presents the conceptual framework and the description of the methodology that is utilized for this thesis.

3.1. Conceptual Framework

Given the potential benefits of e-commerce for the economic growth with the particular focus on the inclusive trade, United Nations Conference on Trade and Development (UNCTAD) initiated a program titled “eTrade for All” with the aim of strengthening e-commerce in developing countries. For this purpose, measuring the level of e-commerce readiness, UNCTAD developed a framework namely eTrade Readiness Assessment Framework. This framework provides the outlook and in-depth understanding of the e-commerce ecosystem of a country against seven policy pillars namely:

- **E-commerce strategy**
- **Reliable and Affordable ICT infrastructure**
- **Trade facilitation** related to the logistics and cross-border facilitation to promote e-commerce,
- **Reliable Payment Solutions** for e-commerce
- **Legal and regulatory frameworks** required to ensure security for both the buyers and sellers with the regulations related to the data protection, consumers’ protection, and cyber-security
- **E-commerce skills development**
- **Access to Finance for e-commerce**

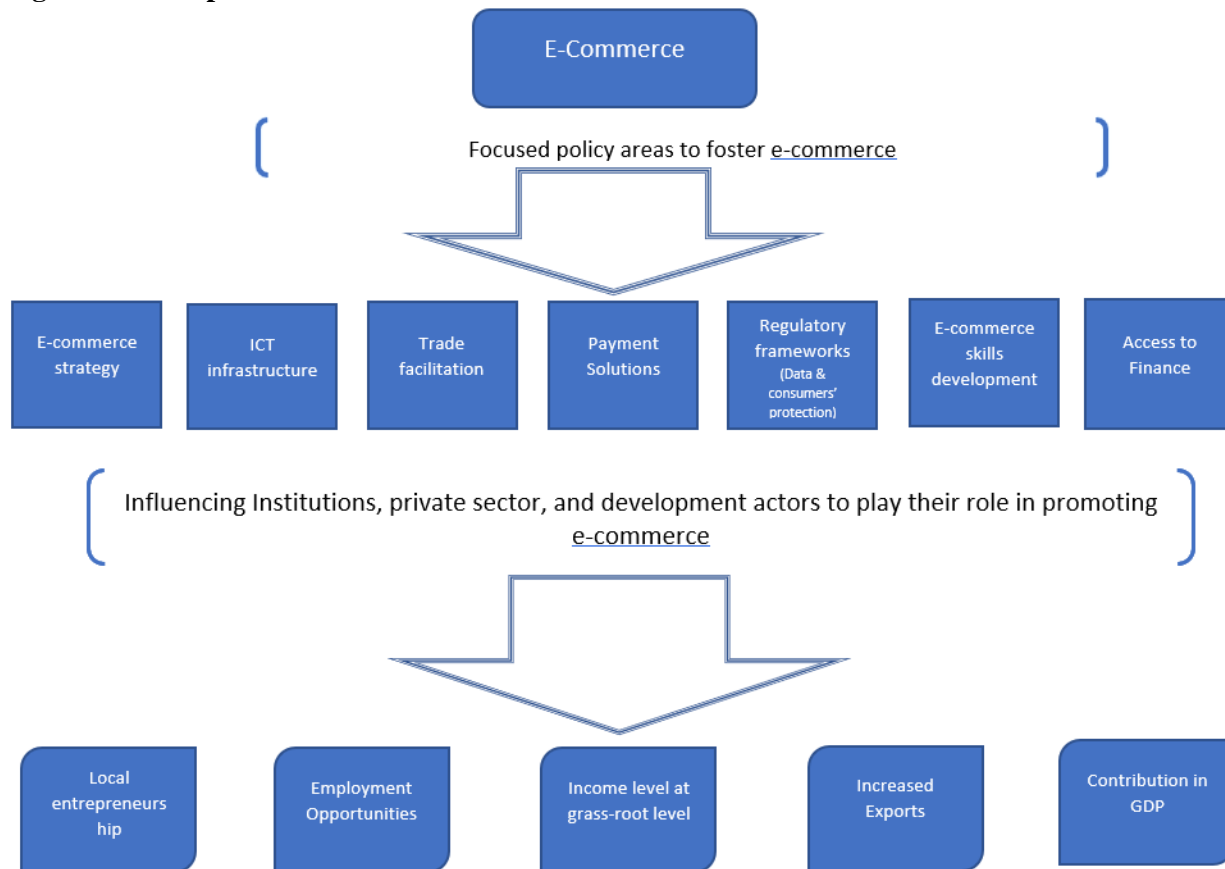
This framework provides the detailed gap analysis against each of the abovementioned policy area and the identify the required policy actions to promote e-commerce. Furthermore, this framework also helps in identifying the opportunities that exists in a country to flourish the digital mode of business.

Following the UNCTAD’s e-Trade Readiness framework (figure#1 for reference) that reflects the status of the e-trade performance in a country, this study explored the aforementioned policy areas through systemic review of available literature and existing policies.

Presenting the wholistic picture, this framework of UNCTAD covers almost all the dimensions to promote and strengthen e-commerce. These key areas explain the majority of the issues being faced by enterprises to adopt e-commerce and also the required policy support to provide enabling environment in a country.

The flourished e-commerce has the potential positive impact on economic indicators including promoting local entrepreneurs, employment opportunities, income level, exports, and hence GDP of an economy (Boateng, et al., 2008 & Baytar, 2015). In addition to the key policy areas covered in this research, the benefits/impact of e-commerce on sales, new business opportunities, cost, and international trade is also captured majorly because of the reason that literature revealed the positive impact of e-commerce on these variables. Hoq, et al. (2005) reflected upon the changing cost structure of firms as it introduces new ways to doing business and reduces the selling cost. However, it also implies the increased internal cost such as internet cost. Similarly, Liu, et al. (2013) showed the positive impact of e-commerce on firms' productivity based on the analysis of manufacturing firms in Taiwan.

Figure 1: Conceptual Framework



Source: UNCTAD, Boateng et al. 2008

3.2. Methodology

As mixed method is used to capture both quantitative and qualitative aspects of the required data. Quantitative survey covers the breadth of a matter whereas qualitative survey adds depth to the quantitative results. In other words, this is sequential explanatory design in a way that the quantitative data was collected first and on later stage the qualitative responses were collected to further strengthen the quantitative results. Therefore, mixed method is used to provide a comprehensive analysis to the issues regarding e-commerce. There are two main components of this study:

1. Exploring the adoption pattern of e-commerce by SMEs based on a firm level survey (quantitative data).
2. Qualitative Approach is adopted to supplement the quantitative analysis. Key informant interviews, and stakeholder consultations/webinars are the key tools of this approach.

A Comprehensive desk review including review of available literature and policy documents was initiated and followed by the primary data analysis (explained next) exploring the answers to the following research questions:

- How digital technologies are reshaping SMEs, the way SMEs are adopting e-commerce
- What are the implications of adopting e-commerce for various indicators of SMEs including sales, employment, exports, cost, etc.
- What obstacles SMEs in Pakistan are facing around abovementioned thematic areas including regulations, digital infrastructure, capacity building, payment solutions, and cross-border facilitation to leverage the e-commerce
- What kind of policy support is required to address the limitations to adopt e-commerce?

Quantitative Data and Analysis:

A quantitative questionnaire was developed to capture the following key indicators:

- How digital technologies are reshaping the SMEs in terms of implication/benefits of adopting e-commerce on firm's cost, sales, international trade, and access to new business opportunities.
- What are the characteristics of firms adopted e-commerce by type of business, size of firm, and geographical region
- What are the key challenges and barriers that SMEs faced to enter and sustain the e-commerce era.

These key quantitative questions were integrated into a small and medium enterprises (SME) survey conducted by Sustainable Development Policy Institute (SDPI) mainly due to the financial constraint to collect primary quantitative data for this thesis (*e-commerce related portion of the questionnaire is given in Annex-1*). Another reason for integration is the addition of covid aspect as this survey was designed to capture the impact of covid on SME. The survey sample is 750 firms across Pakistan including all four provinces, Islamabad, Gilgit Baltistan (GB), and Azad Jammu & Kashmir (AJK). The sectors covered under this survey are manufacturing, retail, transport, construction, and agriculture.

In addition to the small and medium enterprises, this survey also includes the micro firms with the number of employees between 1-10, small are classified as the firms with 11-50 number of employees, and medium are the firms with 51-250 employees. Younger firms are defined as the firms with less than 20 years of age.

Sampling Technique: The sampling in this survey was multi-staged. The geographical distribution is the first division, second layer is sector-based selection and then the rural-urban distribution. The selection of firms at province level is based on the weighted average of contributions to each province along with the number of SMEs in each province.

Similarly, sectoral contribution to GDP and also the contribution of SMEs to GDP in rural and urban areas is considered for the sectoral and area wise sample allocation. Further to that, firms were selected based on purposive sampling⁴. The survey was done in major cities of all four provinces including AJK/GB/Islamabad. After firms' selection, main respondent of the survey was Head/Manager/CEO and in his/her absence, the any other person from senior management was selected.

Around 61 percent firms are from Punjab, 20% from Sindh, 13% from Khyber Pakhtunkhwa (KP), 3% from Balochistan and 2% from Islamabad/AJK/GB. City-wise firms distribution shows that 145 firms are from Lahore, followed by 115 firms from Faisalabad, 110 firms in Karachi and 100 firms from Peshawar.

Out of 750 firms, total 187 (25%) firms adopted e-commerce and those 187 firms are taken for analysis under this thesis.

Microsoft excel and SPSS are used for the quantitative analysis of the responses received from 187 firms to respond to the questions stated above. Descriptive statistics (percentages) and Relative Importance Index (as constructed by Tholibon et al. (2021) is applied for quantitative analysis.

As majority of the responses in this survey are on Likert scale, Relative Important Index (RII) reflected the relative importance of each Likert scale category particularly the responses of the key barriers and benefits of e-commerce. and the index calculated as given below:

⁴ Purposive sampling is a non-probability sampling, used to identify the respondents considering the objectives of the study and it relies on the discretion of researcher.

$$\text{Relative Importance Index} = \frac{\sum w}{AN} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{5N} \quad \text{Equation 1}$$

Likert scale is categorized on 5 scales: Highly Significant, Significant, No Impact, Insignificant, and Highly Insignificant; ranging from 1-5. RII ranks between 0-1. Equation-1 can be explained as:

n_5 = number of responses for Highly Significant

n_4 = number of responses for Significant

n_3 = number of responses for No Impact

n_2 = number of responses for Insignificant

n_1 = number of responses for Highly Insignificant

w =weightage for each factor

N = Total number of respondents

A =Highest scale/weightage (5)

Data Validity:

While data collection, various measures were adopted to ensure the quality of data:

- Quality checks both at product (data set) and process level (data collection and handling).
- It adopted several Prevention Measures including the back-check interviews by the 3rd person, and process monitoring reports.
- Starting from the survey design phase, questionnaire pre-testing was done and the mock sessions were conducted with the enumerators for fine tuning of the questionnaire and make sure their required level of understating for accurate data collection.

Qualitative Data and Analysis:

Following the conceptual framework of this study given in figure#1, this study captured the point of view of relevant stakeholders responsible for the promotion of e-commerce. Respondents for the qualitative survey were the Head/senior person from relevant organizations. These respondents

were identified from their websites and later were contacted for the interviews. Around **3 key informant interviews (KIIs)** are conducted with the relevant stakeholders to delve into the constraints identified through quantitative survey results. Following organizations were engaged for KIIs⁵:

1. The Federation of Pakistan Chambers of Commerce and Industry
2. PakistanCreates, the online e-commerce platform, developed specifically for the women entrepreneurs in the country
3. AffordablePrice, another e-commerce platform, providing e-commerce facilities to the registered SMEs.

Apart from interviews, a session was organized in SDPI's Annual Development conference (2021) to initiate a discussion around the topic and listen the experts view from Member PM's Task Force on IT and Telecom, Planning Commission, Government of Pakistan, United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), and Institute of Development Studies (IDS), UK. Another perspective of gender in e-commerce is mentioned as the presentation was done in a session during UNCTAD's e-Commerce Week (2022).

In addition to these, the dialogue sessions are also considered for expert views from government including Pakistan Telecommunication Authority (PTA), Pakistan Software Export Board, private sector (Jazz, Telenor, Nayatel), and World Bank. These dialogues were conducted by Pakistan Institute of Development Economics (PIDE) and SDPI.

A comprehensive review of policy documents particularly e-Commerce Policy 2019 and National SME Policy 2021 along with the announcements by various and relevant government departments including Ministry of Commerce, Small and Medium Enterprises Development Authority (SMEDA), Ministry of Information and Technology, Pakistan Telecommunication Authority (PTA), State Bank of Pakistan, Daraz, Amazon, various other e-commerce platforms, and private sector (internet providers) is done in order to give an idea of implementation around various aspects of e-commerce in Pakistan. Departmental websites and newspapers are the major sources of this insight.

⁵ Qualitative questionnaire is given in Annex-I-B

Chapter 4. Results and Discussion

This chapter presents the results of the data collected from quantitative and qualitative tools. The results starting with the key characteristics of the surveyed firms, further expanded to adoption patterns by province, rural-urban, firms' age and size; benefits of adopting e-commerce; and key challenges that firms are facing in practicing e-commerce. Possible explanation to the results is also discussed in this section

4.1. Sample Characteristics

As mentioned earlier, the total sample size is 750 firms with the gender distribution of 89% male and 11% female-led SMEs. More than half (53%) of the surveyed firms were formal⁶ compared to 48% of the firms operating in the informal mode. The informal firms are facing the problems majorly about the regulatory and legislative barriers along with the associated high cost to register as formal firms.

Sector wise distribution of surveyed firms reflect that 30% firms are from retail sector, 27% from agriculture, 22% from manufacturing, 15% from transport, and rest of the 6% are from construction sector. Province-wise distribution shows that 61% firms are from Punjab, followed by Sindh (20%), KP (13%), Balochistan (3%), and AJK/GB/Islamabad (2%).

Firm age and size also covered in this survey. Majority of the firms covered in the sample are young firms (47%) with the establishment years of less than 10, 20% firms are of 11-20 years of age, 13% have establishment period of between 21-30 years, and 14% are of 30+ age.

More than 50% firms are micro-sized firms with employment size of 1-10 workers, 36% are small-sized firms (11-50 workers), and 7% are medium-sized firms (51-250 firms).

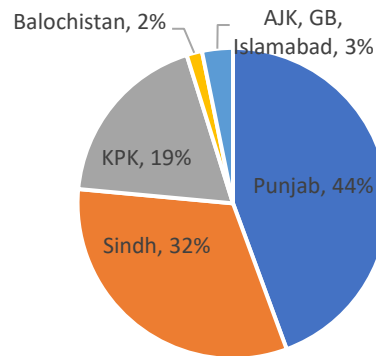
⁶ This survey defined formal sector firms those have NTN and/or formal office space to run the business and/or are registered with any government institution and the vice versa.

4.2. Pattern of e-commerce Adoption, Benefits and Key Challenges: Evidence from Field

4.2.1. Key Characteristics of SMEs adopted e-commerce

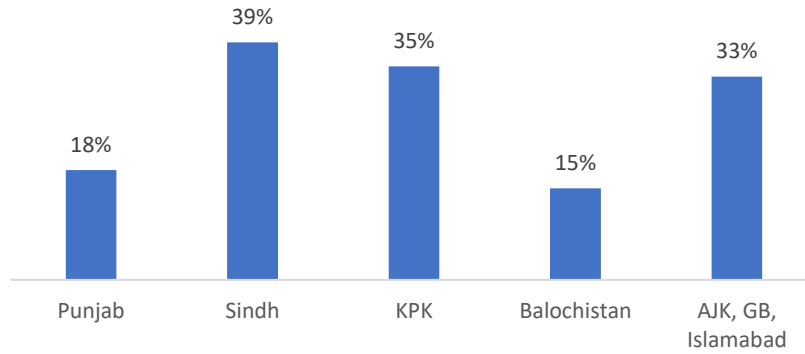
Based on the survey of 750 firms across Pakistan (all four provinces, Islamabad, AJK and GB). Around 25% (187) of the surveyed firms reported that they are using online channels for their businesses. Geographical distribution of the firms adopted e-commerce shows greater concentration of these firms in Punjab with 44 percent firms followed by Sindh with 32 percent firms and 19 percent in KP (for reference, see figure 2 below). Karachi (29 percent), Peshawar (19%) and Lahore (17%) are the major cities where SMEs adopted e-commerce.

Figure 2: Province-wise distribution (percentage) of SMEs that Adopted e-Commerce



The reason for higher percentage of firms that adopted e-commerce in Punjab is that Punjab is the province with largest number of firms in the survey sample. To counter this factor, adoption is estimated as percentage of the total firms surveyed in each province. According to this estimation, Sindh is on top of the list with 39% e-commerce adoption, followed by KP (35%), Punjab (18%) and Baluchistan (15%). One possible reason of higher percentage of Sindh is the Karachi's highest contribution in e-commerce market (Daraz, 2020).

Figure 3: Province wise e-Commerce Adoption (percentage of total firms within each province)



Within firms that adopted the e-commerce, 35% firms were from retail sector, 28% from manufacturing and 16% from agriculture, 13% from transport and rest of the 8% from construction sector (as given in figure 4). Analyzing the e-commerce adoption as percentage of total firms surveyed in each sector reflects similar results but percentage becomes different as displayed in figure 5.

Figure 4: Sector wise e-commerce adoption pattern

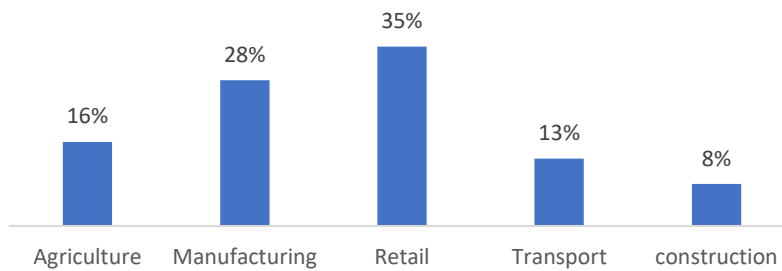
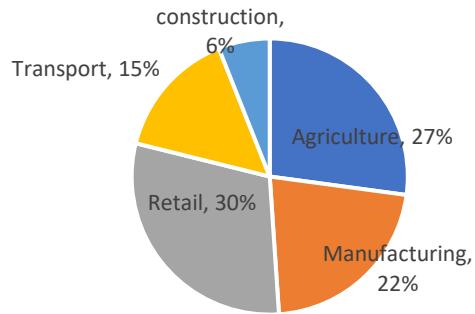


Figure 5: Sector wise e-commerce adoption (distribution within total firms surveyed)



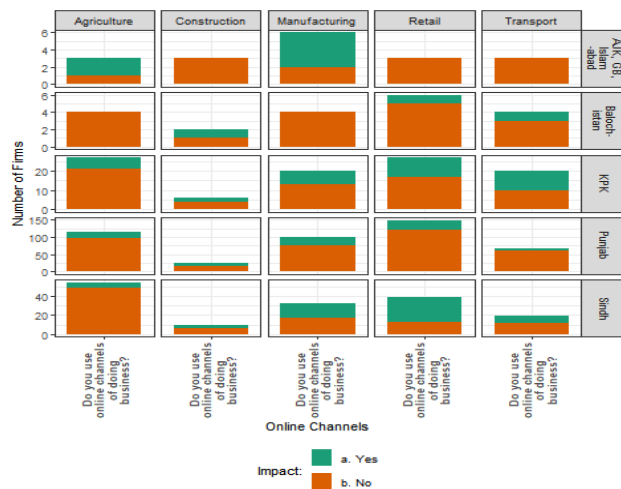
Explaining the e-commerce for agriculture sector, an expert was of the view:

“E-Commerce is limited to urban areas only. Agriculturists get exploited at the hands of middleman. If the farmers are provided with an app/online platform through which they can sell their crops directly to the cities, the middleman can be removed.”

According to the analysis within province, Sindh and KP has highest adoption in retail sector.

Figure 6 provides complete picture of sectors with e-commerce in each province.

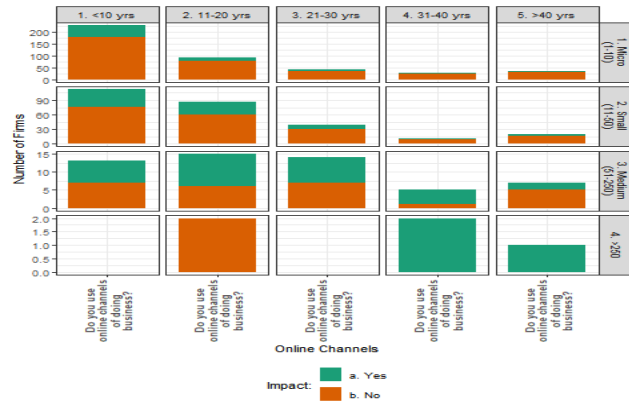
Figure 6: The Use of Online Channels for Doing Business by Province and Sector



The use of online channels for doing business distributed by firm age and size is presented in figure 7. The medium sized businesses are more frequently adopting online channels for doing business

than their smaller counterparts. Except for the more mature smaller firms, adoption of online channels seems to be a relatively common practice.

Figure 7: The Use of Online Channels for Doing Business by Firm Age and Size



4.2.2. Digital Technologies and SMEs Transformation

The responses on the adoption of different ways of doing online business during the pandemic is reflecting that the top ways are (i) using Email/social media pages/website to communicate with customers & vendors (ii) Conducting online marketing (catalogue, online advertisement) (iii) conducting online sales (receive enquiries, receive customer orders through website, social media pages) and (iv) using online banking channels to receive or send payments. All methods receive favorable responses than unfavorable responses except for conducting online purchases. The firm responses are presented in Figure 8.

Similar pattern is observed in all provinces as presented in Figure 9.

Figure 8: Online Ways of Doing Business

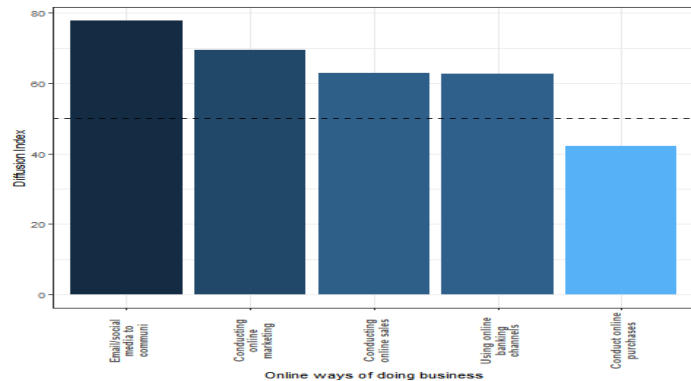
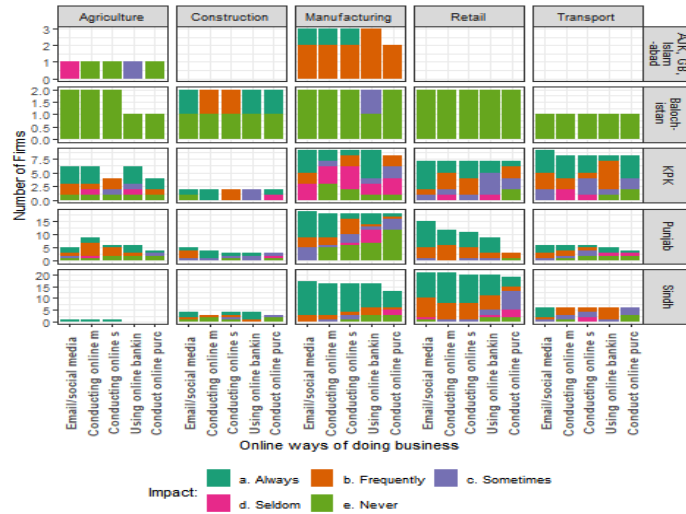


Figure 9: Province and Sector wise Adoption of Different Ways of Doing Online Business During the Pandemic



4.2.3. Benefits to adopt e-commerce reported by SMEs/Implications e-commerce on Firms’ key Indicators

The relative importance index score on the benefits of adopting online usage during the pandemic is presented in Table 1. The most important benefits according to the ranking are (i) increased sales (ii) new business opportunities (iii) reduced cost of communication and the least significant benefits are (iv) reduced cost of marketing and (v) international trade.

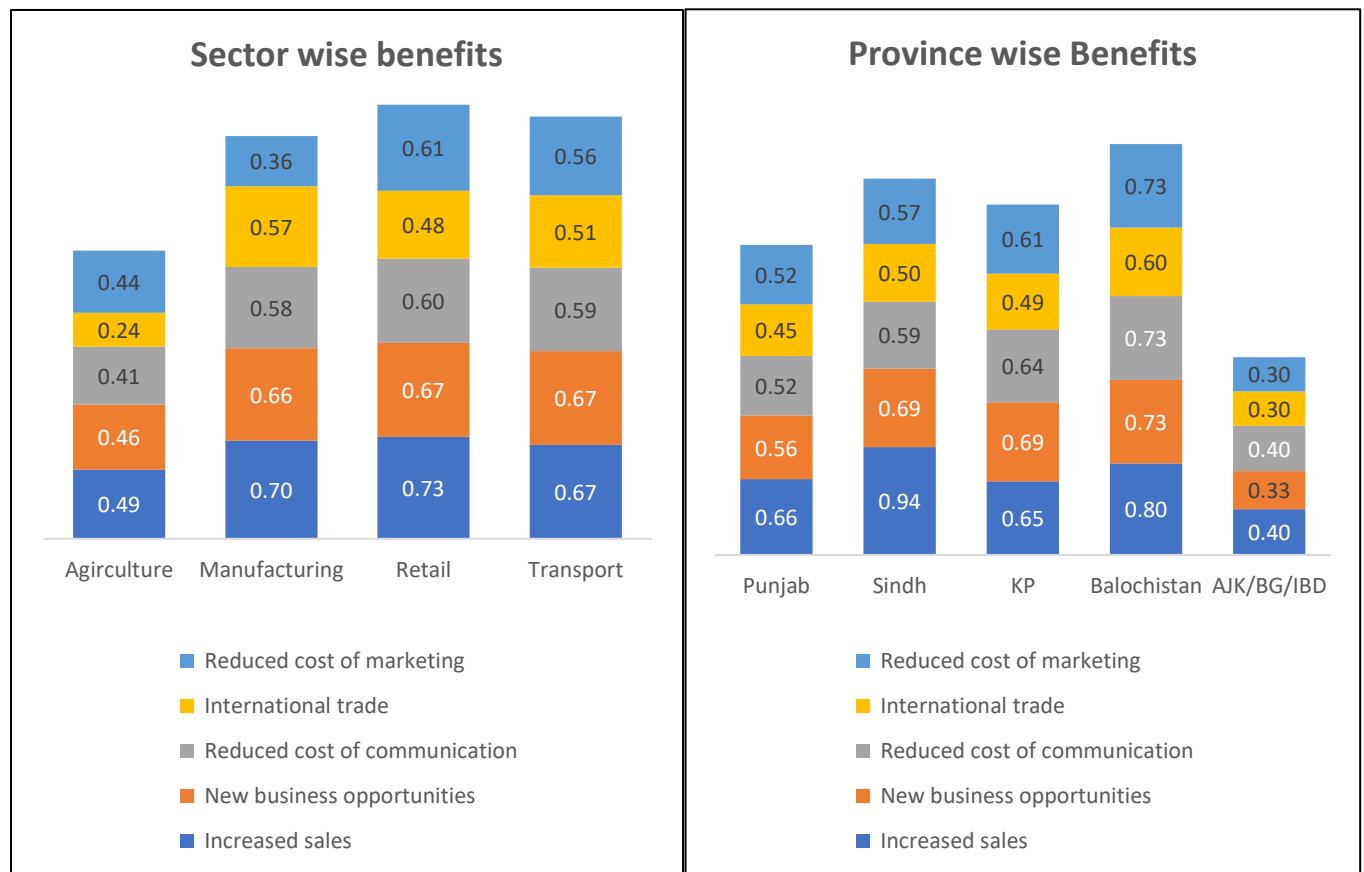
Table 1: Benefit of e-Commerce ranked by Relative Importance Index Score

Benefits	Highly Significant (n5)	Significant (n4)	No Impact (n3)	Insignificant (n2)	Highly Insignificant (n1)	$\sum w$	$RII = \frac{\sum w}{AN}$	Rank
Increased sales	81	44	14	1	2	627	0.67	1
New business opportunities	55	53	30	0	3	580	0.62	2
Reduced cost of communication	40	45	46	2	3	525	0.56	3
Reduced cost of marketing	36	41	52	3	8	514	0.55	4

International trade	26	33	55	7	3	444	0.47	5
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Similar pattern is observed in province and sector wise analysis of benefits of doing business online. As given in Figure 10, all the provinces and sectors reported increased sales and new opportunities as top two benefits.

Figure 10: Province and Sector wise Relative Importance Index Score on Benefit of e-Commerce



Note: Detailed tables of these figures are annexed.

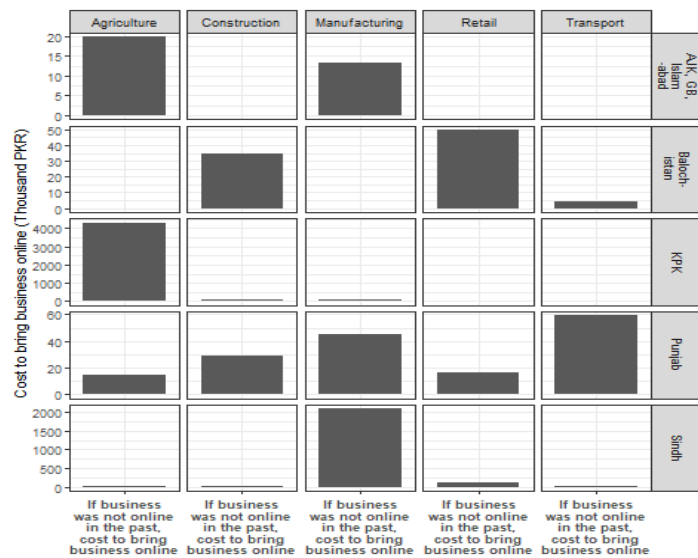
4.2.4. Key Challenges to adopt e-commerce

4.2.4.1. High Cost

The average cost of adopting online channels for doing business during the pandemic was PKR 287,000. This cost may contain internet cost, website cost, and logistics cost to deliver the orders.

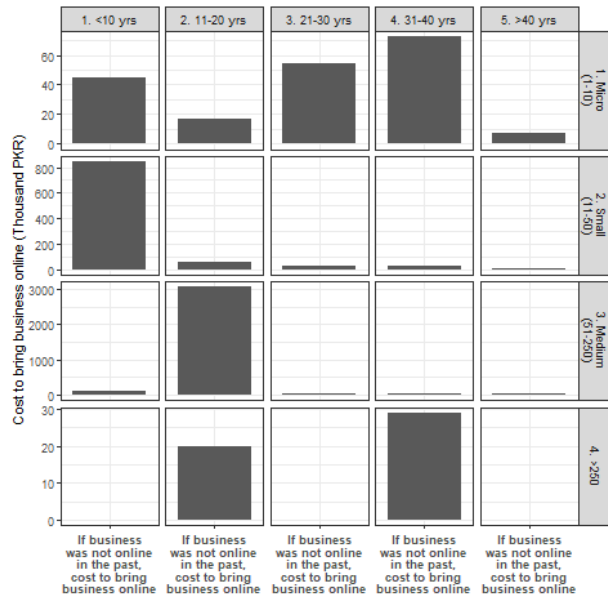
The highest cost across provinces was reported for firms in KP at PKR 848,000, followed by firms in Sindh at PKR 646,000. The cost reported for firms in Punjab was PKR 28,000. Firms in agriculture reported the highest cost across sectors at PKR 607,000, followed by firms in manufacturing at PKR 514,000. The cost distributed by province and sector is presented in Figure 11. Firms in the agriculture sector in KP reported the highest cost for setting up an online channel, and in Sindh manufacturing reported higher cost. There was strong discrepancy across sectors in both KP and Sindh. However, this cost variation among the sectors within province Punjab is relatively less.

Figure 11: Additional Cost to Bring Business Online by Province and Sector



The cost distributed by firm age and sector is presented in 12. The younger small-sized and medium-sized firms report the highest costs across their respective firm-age categories, while the cost difference among the micro-sized firms of different age is not significant.

Figure 12: Additional Cost to Bring Business Online by Firm Age and Size



4.2.4.2. Customers Trust, Lack of Capacity and other barriers

The more significant barriers to adopt e-commerce by SMEs are (i) lack of technical knowledge ii) security related issues, and iii) customers are not adoptive. Customer behavior/less responsiveness have two possible implications: it reflects the lack of customers' trust in online buying that point out towards the weak consumer protection in country that led to this situation and the other implication is the less ability of firms in digital marketing to attract more buyers and customers. As it is also highlighted by an expert that consumer in Pakistan still believes in physical transaction mostly because of lack of awareness, low literacy, and language barriers and she also quoted:

“One of the constraints for transitioning towards digital trade is the lack of comfort. Consumers are not comfortable with sharing their details.”

Regarding other barriers including lack of good internet services and lack of financing opportunities, most of the respondents were indifferent. The firm responses are given in Table 2.

Table 2: Ranking of the Barriers to Adoption of E-Commerce based on Relative Importance Index Score

Barriers to adopt e-commerce	Highly Significant (n5)	Significant (n4)	No Impact (n3)	Insignificant (n2)	Highly Insignificant (n1)	$\sum w$	$\frac{\sum w}{A/N}$	Rank
Lack of technical knowledge	39	42	10	5	5	408	0.436	1
Security issues related to scam	42	30	19	6	1	400	0.428	2
Customers are not adoptive	35	38	19	1	5	391	0.418	3
High cost	26	34	25	8	25	382	0.409	4
Lack of good internet services	38	24	24	9	3	379	0.405	5
Strict documentation requirements	30	29	25	4	4	353	0.378	6
Lack of financing opportunities	22	31	31	9	3	348	0.372	7

It is important to mention here that the lack of technical knowledge among SMEs is also re-iterated by the e-commerce platforms which provide opportunity to the registered firms to easily do their business online. One of the respondents highlighted that lack of understanding about product development and marketing as well as technical knowledge is among the major challenges that firms usually face. SME owners are rarely technology savvy and don't understand the risks, marketing requirements and knowledge of running an e-commerce business.

Another respondent from Federation of Pakistan Chambers of Commerce and Industry (FPCCI) elaborated the aspect of training requirement for SMEs particularly in remote areas and small cities. He mentioned about the FPCCI's training initiative in collaboration with technical

vocational education and training (TVET) to capacitate the SMEs on e-commerce, but that initiative requires financial support to implement.

As given in Figure 13 & 14, province and sector wise analysis of barriers reflect that SMEs in all provinces face almost similar issues as described above. Balochistan and Sindh are the provinces where firms reported lack of internet availability as a significant barrier.

Also, elaborated by Pakistan Social and Living Standards Measurements (PSLM), 2019-20, Balochistan and Sindh are the provinces with lowest internet access among provinces (Pakistan Bureau of Statistics, 2020).

Figure 13: Province Wise Barriers to Adoption of E-Commerce (RII Score)

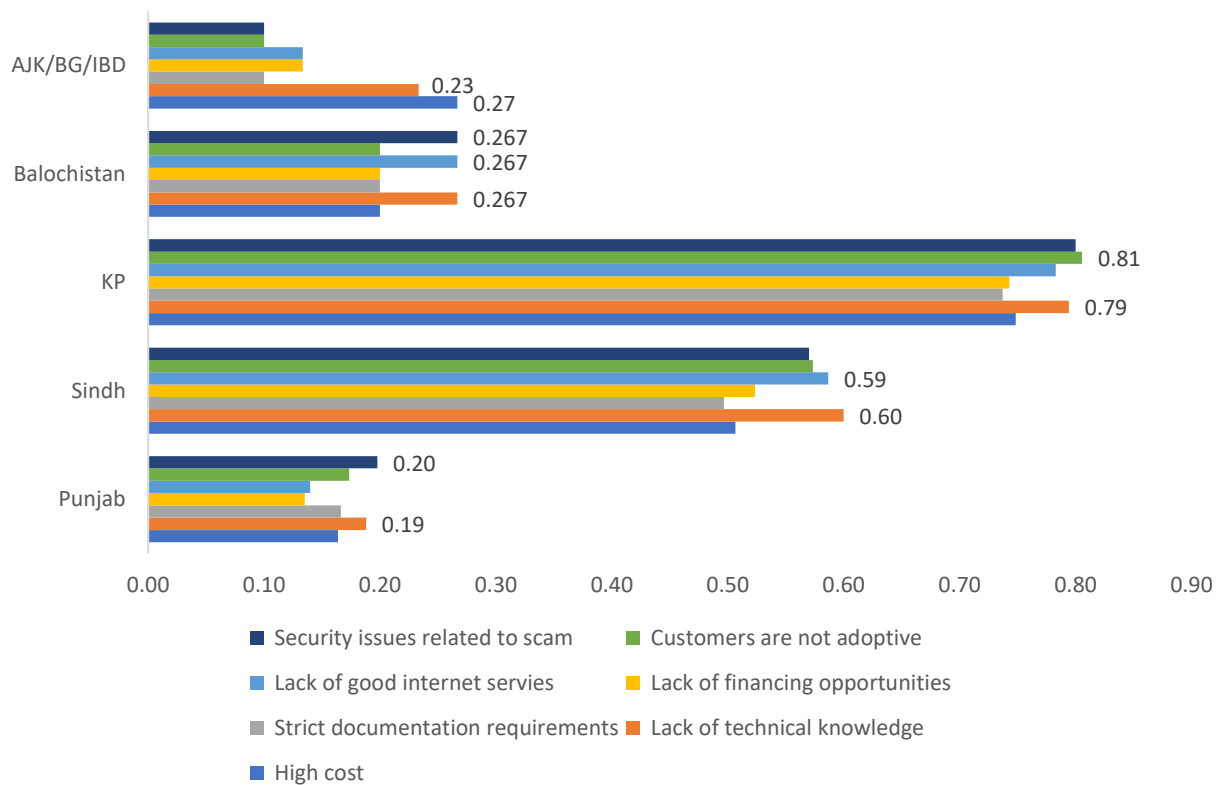
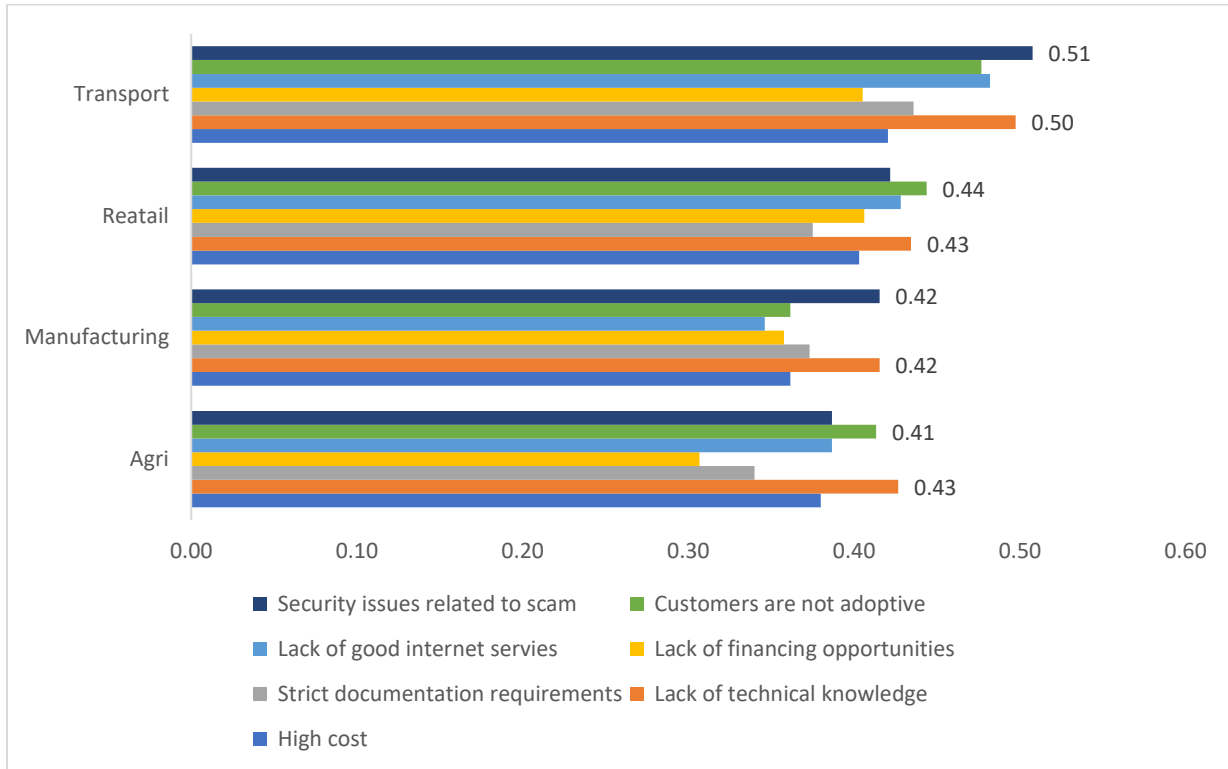


Figure 14: Sector Wise Barriers to Adoption of E-Commerce (RII Score)



Note: Top two barriers reported by the firms in each province and sector are labelled with RII score in this figure. Tables are annexed.

While analyzing the data with respect to the firm size and age, it is evident that the younger micro and small firms expressed higher significance towards the capacity constraints issue compared to the older firms (with the existence time period of above 20 years). Whereas small and medium-sized firms of all age groups stated that they are significantly facing the barriers particularly the capacity constraints, customers' behavior, and internet availability, and security related issues, in addition to the other issues elaborated in figure 15 & 16. However, the younger firms are relatively more in financial stress to adopt e-commerce, as given in figure 16 below.

Figure 15: Barriers to adopt e-commerce by Firm Size (based on RII Score)

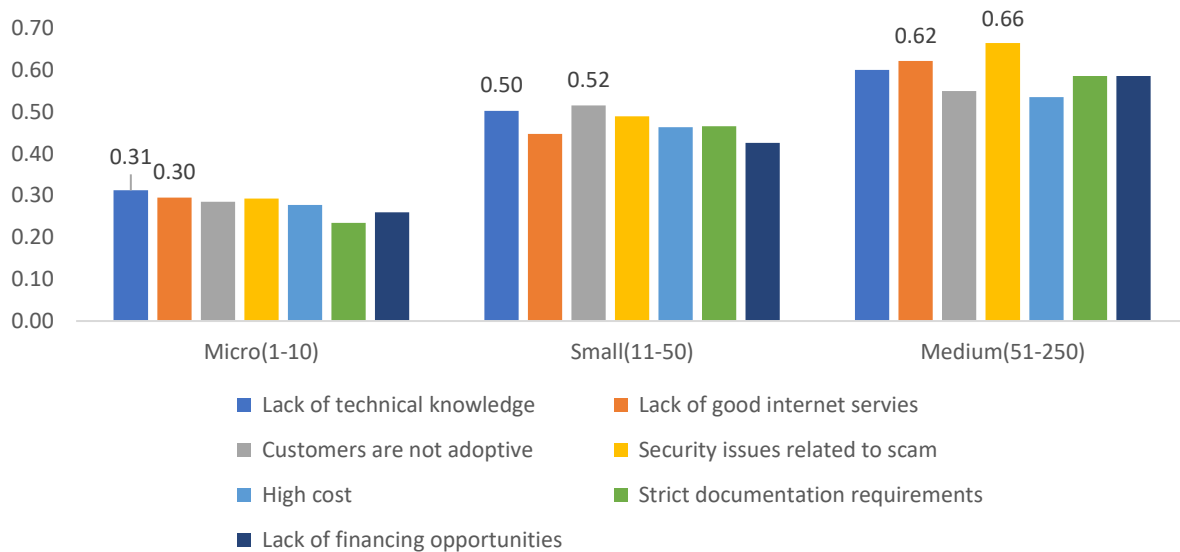
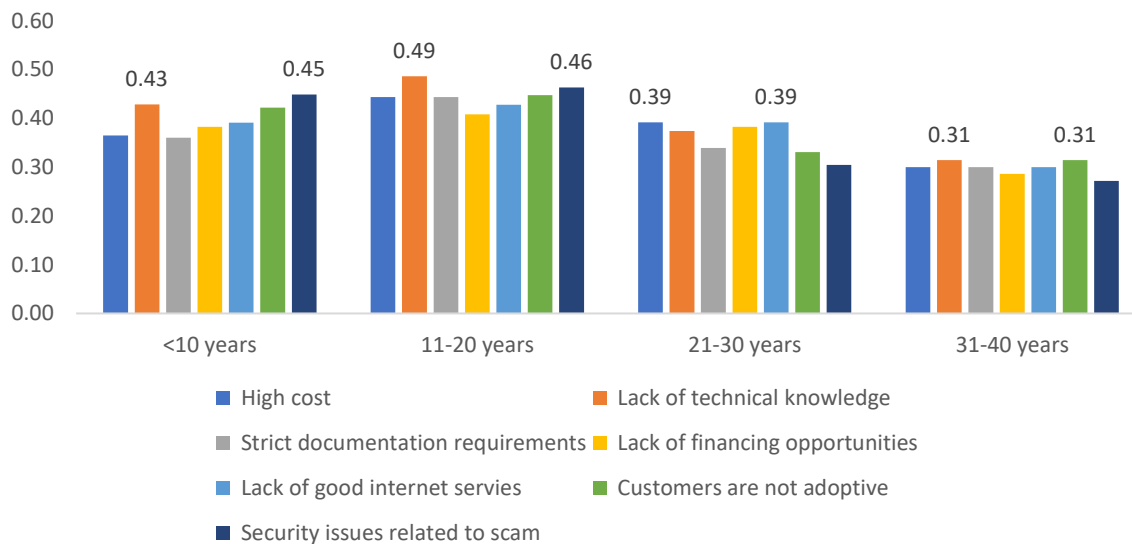


Figure 16: Barriers to adopt e-commerce by Firm age (based on RII Score)



Digital Payments (Reliable Payment Solutions for e-commerce)

Based on the interviews from e-commerce platforms there are other prominent issues related to the digital payments that limits the smooth functioning of online business. As Pakistan is cash-

based country where digital payments are still less popular among masses and also highlighted by member PM Task Force on IT:

“Cashless transactions in the country, which would make the whole thing viable and more attractive for somebody coming from outside, are not rampant. It is still a cash-based economy. Government is not doing enough to push aggressively towards the cashless economy.”

Lack of international payment instruments for SMEs in Pakistan restrict them to do cross-border payments. While expressing his views, one of the interview respondents from e-commerce platform said:

“Lack of payment instruments like Escrow accounts, logistics companies and networks that allow SMEs to sell internationally are the important hurdles to grow exports through e-commerce”.

Reliable and Affordable ICT infrastructure Affordability of internet is the basic element of shifting to the online business. Expressing the digital divide in terms of access to infrastructure and connectivity in Pakistan, an expert from World Bank said that it is the trade barrier of 21st century.

Another expert from academia explained it in this way:

“Many men and women (in rural areas) make handicrafts, but they are not able to sell their products at fair prices. If those people are provided with an online app through which they can connect with the urban retailers directly, they can get fair prices.”

According to recent Pakistan Social and Living Standards Measurement (PSLM) survey (2020), 33% of the households have internet services but only 19% are using the internet. Internet availability in rural areas is another concern as 23% households in rural areas compared to the 48% in urban areas have internet access. Highlighting this concern, academic expert stressed as:

“If we want to extend internet services to rural areas via mobile phone operators, we will need spectrums. The spectrums are released by Pakistan

Telecommunication Authority (PTA). PTA has 19,000 MHz spectrum at the moment; however, it has released only 256 MHz of the spectrum until now. When it was released for the first time, each operator paid almost 236 million dollars. PTA is planning to release another 1-billion-dollar worth of spectrum again. If mobile phone operators pay such high prices, they will ultimately recover this price from the consumers, hence consumers won't be able to afford the internet."

Another expert expressed this point as higher tax rate on mobile services including internet considering it as luxury item rather than the necessity item and he quoted:

"Pakistan has a 30% higher tax on broadband compared to luxury products."

Trade facilitation related to the logistics and cross-border facilitation

As delivery and logistics is the core element of e-commerce, and in Pakistan there exists gap in delivery and logistics chain among e-commerce market players. That leads towards dissatisfaction among the customers who ordered online. Basically, the delivery mechanism characterized by the following main issues as reported by Karandaaz (2017):

- The logistics partners receive incomplete address that result in incorrect deliveries
- Lack of customers' support
- Both leads to higher operational cost

Conclusion

This chapter can be concluded as SMEs are in process of adopting e-commerce though not at the faster rate. There are certain barriers that limits the ability of SMEs to adopt this new mode of business that has the potential of increased benefits in terms of sales and increased access to the broader market, among others. Major issues of capacity constraint, consumer behavior, and associated cost along with the issues related to the logistics, e-payments, internet availability and trade facilitation require policy attention.

Chapter 5. Updates from Public and Private Sector on e-Commerce implementation Based on UNCTAD Framework

The seven policy areas of UNCTAD eT framework including strategy formulation, ICT, logistics, regulatory framework, payments, capacity, and financial aspects along with the sub thematic elements under each area provides a complete picture of the e-commerce performance in a country. The list of sub thematic areas is given in Annex-II. This section provides the insight and updates from public as well as private sector against each area of this framework.

Policy Area-I-e-commerce Strategy Formulation

S1a- Strategy development

As described earlier, e-Commerce Policy was launched in 2019 by Ministry of Commerce (MoC). Through this policy, MoC aims to provide enabling environment to promote e-commerce in Pakistan adopting the holistic approach through prioritizing key elements of strengthening SMEs and empowering youth, protecting the consumer rights to build trust in e-commerce, providing regulatory facilitation, promote financial inclusion, create and strengthen the digital payments infrastructure, addressing the logistics related issues for e-commerce, protecting and securing data, enhancing international connections and negotiations to make improvements in cross-border e-commerce along with the focus on ICT and telecom services.

This policy aims for the target of 50% increase in e-commerce exports through building capacity and facilitating the SMEs. Specifically, Pakistan e-SME initiative will focus on SMEs in remote areas to train them and connect them with e-commerce marketplaces. Timely and effective implementation of this policy will be a milestone to flourish e-commerce both for domestic businesses as well as the new entrants in the market. For instance, Amazon's entrance in Pakistan with the ability of firms in Pakistan to sell their products through Amazon, the policy enactment will facilitate such platforms to get benefits from these international giants.

E-Commerce policy also targeted to develop Act for establishing National E-Commerce Authority (NECA) that will be a single window.

Another important policy “National SME Policy 2021” is also launched. This policy mentioned the implementation of e-Commerce Policy to broaden the opportunities for SMEs. **Though it seems that the alignment of this policy with e-Commerce policy is ambiguous as digitalization aspect overall is not strong enough.**

S2a- Policy coordination and dialogue (committees/working groups)

National e-Commerce Council has been established by Ministry of Commerce with the representation from public and private sectors. NeCC is mandated with the regular interaction of committee member (at least twice a year meeting) and also to form further groups or sub-committees to track and oversight the implementation of the policy targets. Eight meetings of NeCC have been conducted, so far. During these meetings, NeCC members have discussions around the cross-border e-commerce matters including international payments, registration and digital on-boarding of enterprises, establishing a portal to facilitate the enterprises, consumer protection, Consultative Committee of Women Economic Empowerment (WEE), and other related issues (Dawn, 2021)

E-Tijarat Portal is also developed to provide the one-window information related to the e-commerce in Pakistan. This portal will bridge the knowledge gap particularly for the entrepreneurs to adopt e-commerce.

S2b- Policy coordination and dialogue (e-commerce associations)

A few private players (Enablers, Daraz, FoodPanda, Homeshopping) are trying to establish e-Commerce Association/Chamber of e-Commerce to address the related issues collectively (IDG Pakistan, 2018, Business Recorder, 2021).

Another update is the Amazon facilitation centers that have been opened in major cities by Pakistan Post to collect and scan the products of sellers for the delivery to Amazon warehouses across the globe.

** S3- Availability of new e-government services

- SBP in collaboration with MoC has created clearance facility in web based one custom (WeBoC), this facility will benefit the SMEs in promoting their exports through facilitating the exports of low value.
- SMEDA One Window (SOW) is another initiative to facilitate the SMEs in terms of providing single platform through providing them range of services including validation of business ideas, registration, and others.

S4- E-commerce statistics availability

Newly established eTijarat portal is reporting latest statistics (basics) on e-commerce and one can hope that this portal will provide all the data available from various sources at one place. Other relevant sources and the data gaps are:

- Pakistan Bureau of Statistics for household level data on internet access and utilization
- State Bank of Pakistan provides data on registered merchants, online transactions, etc. But that is not part of regular exercise of SBP, that left the users with lack of updated data.
- Data on consumers' behavior is missing
- There are certain players in development sector who provide data on various indicators such as International Telecommunication Unit (ITU), World Bank, etc.
- According to eTijarat portal, MoC started collecting data on e-commerce from various data sources, its status is not clear.

Policy Areas-II- ICT Infrastructure and services

I1-ICT infrastructure development

After 7 years of 3G/4G launch by PTA, 5G spectrum roll out will be initiated by 2023 in Pakistan. (Express Tribune, 2022). The implementation of this initiative will increase the internet speed and improved connectivity (Qayyum and Anwar, 2021).

Given the increased demand of spectrum availability due to the heavy usage of wireless mobile broadband after covid, MoITT issued policy directive for auctioning the additional spectrum in 2021.

Universal Services Fund (USF), established by the Government of Pakistan is also putting efforts for the provision of telecommunication services in remote areas (USF, 2021). Under USF, MoITT launched the “Smart Village” initiative with the concept of establishing a center with modern facilities in remote villages across Pakistan. Moreover, MoITT set the target to conduct the public private dialogues on how to incentivize the local manufacturers to make available the IT products in country (eTijarat Portal).

In order to improve the tech infrastructure, SBP allowed the IT companies to make remittances within the limit of PKR 100,000 without SBP approval.

I2- Mobile Internet connectivity

Pakistan is the country with 51% mobile internet (3G/4G) penetration and 52.6% broadband subscribers, according to latest figures of PTA (2022). According to another source (Datareportal, 2022), internet penetration is 36.5% in Pakistan that reflects 63% population is offline. Around 22 million increases in internet users are reported by Datareportal in 2022 compared to 2021.

PTA revealed more than 100% increase in broadband subscribers from 32.22 million in 2015 to 78 million broadband subscribers.

As mentioned earlier, there is significant number of offline population and also downside ranking of Pakistan by “Inclusive Internet Index (2021)” from 77th position to 90th in the list of 100 countries implies the need to explore this aspect further (Dawn, 2021).

In 2021, MoITT has implemented several projects over Rs. 30 billion with the focus of internet services and phone connections in remote areas in country.

Additionally, MoITT is focusing the optic fiber technology to improve the internet speed, also MoITT is providing incentives to the cloud providers to ensure data storage in Pakistan (eTijarat Portal). MoITT along with provincial IT Boards has prepared the district wise plans of internet

availability. Another update shared on eTijarat portal is that MoITT collaborated with Higher Education Commission (HEC) to initiate the IT related projects with university students.

To achieve the target of MoC to strengthen digital access to women entrepreneur through “One Women One Bank Account” under Ehsaas/BISP, MoC collaborated with Ministry of Poverty Alleviation and Social Safety to prepare mechanism to target and select beneficiaries and training need assessment.

I3- Internet affordability

Economist Intelligence Unit (EIU) ranked Pakistan at 67th position in the “Affordability of internet” that is based on the cost to access internet.

According to PhoneYear, Pakistan is among countries with most expensive mobile internet rates, also reflected by one of the experts:

“Many countries made the mistake of pricing the spectrum too highly right at the beginning. Now the countries are becoming more astute, and they are realizing that the real benefit of the internet comes when people start using it. The economy will get a bigger boost and they’ll get much more in terms of tax receipts and productivity.”

Aligned with the Digital Pakistan Policy, Tech Park with the name of Fazal Software Technology Park was established in Islamabad in 2021 (Dawn, 2021) It will attract foreign direct investment in IT sector.

I4- Access to electricity

Access to electricity is one of the determining factors of internet usage. According to Pakistan Standards of Living Measurement Survey (PSLM) 2019-2020 around 91% of surveyed households reported electricity as the main source of lighting. There exist geographical disparities as some

districts particularly Rajanpur, Tharparkar, Khyber, and Sherani with 60%, 35%, 15%, and 0% access to electricity, respectively.

Policy Area-III-Trade Facilitation and Logistics

T1- Street addressing

Logistics model in Pakistan is complex and characterized by various issues such as incomplete street address that makes the logistics partners unable to deliver on correct address and weaker customer support by the merchants that leads towards the issue of high rates of returned parcels and also at the cost of customers' trust. (Karandaaz, 2017). There is need to promote collaboration among merchants, logistics partners and e-commerce platforms to address these issues. Tracking facility to make the transparent services, sharing of Geo location with the customers by the logistics company along with other measures can help to reduce this problem.

T2- E-commerce logistics

According to the country profile of Pakistan by UNCTAD, 95% of the population in Pakistan receives parcel/mail at home. However, the Postal Reliability Index scores Pakistan at 50 (neither best nor worst). Regarding cross border logistics, Pakistan takes 11.4 days for custom clearance of exports that is more than the average days (7.6) at global levels.

National Freight and Logistics Policy launched by Ministry of Communications covers elements of e-commerce logistics as it mentioned about the transit trade facilitation for e-commerce related deliveries. Furthermore, this policy placed focus on 3rd party logistics (3PL) to improve the logistics.

As mentioned in Chapter 4, cash on delivery makes trouble for both the businesses as well as logistics companies because it makes the higher delivery time compared to the prepayments option, riskier handling of cash by the drivers, sometimes the merchants receive late payments from the delivery companies, and cost of delivery rejection (Dawood, 2020)

Considering these issues, Pakistan Post (PP) is also putting efforts in the form of Pakistan Post Shop and Amazon Facilitation Centers. Under these initiatives, small businesses will get benefit through mobile app and EMS Plus service that is export parcel service. It will help particularly the SMEs to send their deliveries abroad (in 173 countries) within 72 hours with the tracking facility (Pakistan Post).

Further to automate the logistics in Pakistan, following initiatives **are in pending stage**:

- For improved transparency of deliveries, strengthening API connectivity among 3PL companies and vendors. Logistics companies along with the PP, and e-commerce platforms are responsible for this initiative.
- Mechanism to improve the service quality of 3PL companies by Ministry of Communications
- Digital signatures by e-commerce platforms

There are two steps taken by Pakistan Post to upgrade for international trade, and **these efforts are still in progress**:

- Integration of PP with National Single Window (NSW) that is a step forward to move away from paper-based trade
- Proposal to Export Development Fund (EDF) by Pakistan Post for automation

T3- Implementation of the Trade Facilitation Agreement

MoC is providing the support to the Moratorium on import duty of electronic transactions. Operationalization of National Single Window along with the implementation of Trade Facilitation Agreement will strengthen e-Commerce by I&E forms simplification, de-minimis and accelerated shipment provisions.

In addition to these steps, MoC and MoITT are in process of consultation with the industry stakeholders to discuss the possibility of joining e-Commerce Joint Initiative of WTO. This WTO initiative is established to foster the e-commerce related negotiations and by joining this group,

Pakistan will be able to stay updated and contribute in discussions on required negotiations for the country. Moreover, consultations are in progress among stakeholders including industry representatives, MoC, TDAP, Pakistan Trade Missions abroad, and others on the negotiations with WTO and other bilateral and multilateral agreements.

In order to promote the local entrepreneurs and to highlight the success of SMEs, the global print and electronic media will be approached to encourage them.

There are some more continuous efforts from various stakeholders:

- Creating online directory of manufacturers along with digital marketing for business-to-business trade gatherings by MoC and TDAP in collaboration with private sector
- Ensuring the whitelisted sign ups by the merchants on global e-commerce platforms including business-to-business, business-to-consumers, and consumers-to-consumers such as Amazon, etc
- Registration of the sellers and engagements with Chambers also mentioned by eTijarat portal as a target of MoC that is in progress National Single Window (NSW) has been launched and

Policy Area IV-Legal and Regulatory Framework

L1- Regulatory review and gap analysis

As regulatory environment plays important role in building trust among the customers as well as the sellers. In Pakistan there are laws, bills and the relevant departments/councils targeting various aspects form cyber security to consumer protection, as given below:

- Electronic Data Protection and Safety Act 2005
- Prevention of Electronic Crimes Act (PECA)-2016
- Payment Systems and Electronic Fund Transfers Act, 2007
- Islamabad Consumer Protection Act, 1995
- Khyber Pakhtunkhwa Consumer Protection Act, 1997

- Balochistan Consumer Protection Act, 2003
- The Punjab Consumer Protection Act, 2005
- Sindh Consumer Protection Act 2015
- Directorate Consumer Protection Council, Punjab, Sindh and KP Consumer Protection Councils

But the lack of customers’ trust reflects the gaps in these regulations or weak implementation as also highlighted by member PM IT Task Force:

“Cybersecurity framework which is also lacking in the country. One of the consequences is that there is no data classification. It is not possible to say what data has to be treated with what level of confidentiality. Therefore, the tendency of the government departments is to treat entire data as confidential, which is indeed restrictive for digital trade and business. In order to overcome such constraints, private businesses keep their data outside Pakistan. First and foremost, legislative requirement is the data protection law. It is still on the website of MoITT. It has changed a lot in between, but it has yet to become a law.

Another expert said:

“Consumer protection is a provincial matter. For example, if I order something from Islamabad and it comes from Karachi, then I have to file a suit in Karachi because it is a provincial matter. There is no law to regulate e-Commerce in Pakistan. You can’t only protect the consumers; you have to protect the e-business owners as well.” Further elaborating the Prevention of Electronic Crimes Act (PECA), Ahmed et al. (2021) expressed that this act did not seem effective in preventing cybercrimes that raises the question on its comprehensiveness or lack of implementation. Similar is true for consumer protection acts mentioned above. Malkani (2020) also mentioned that the e-Commerce policy remains ambiguous about the kind of amendments that will be made in Customs Act (1969), Income Tax Ordinance (2001), and Sales Tax (1990) in order to address the issue of re-shipment/re-export and the timeline of its implementation is also not clear.

L2- New laws and regulation initiatives

MoITT has prepared the Data Protection Bill in 2020 and after Cabinet approval the bill has been approved (Data Guidance, 2022). This Bill outlines the data protection standards, and the **implementation of this bill will be the mandate of National Commission for Data Protection that is not established yet.**

PTA has issued regulatory framework for Internet of Things (IoT) in February 2022. This framework aims to smooth the IoT services in Pakistan and also to accomplish the Digital Pakistan targets (PTA, 2022).

In 2021, SBP launched “Raast”, an initiative to promote digital payments that is in implementation stages (PAYPERS, 2022). Commercial Banks also putting efforts on their own. For instance, Faysal Bank received the best e-commerce website for its Faysal Digi Mall initiative.

Following steps are taken/being taken by the various stakeholders mainly MoC to implement the targets related to the regulatory measures:

- To facilitate the cross-border trade, SBP and Federal Board of Revenue (FBR) have made amendments in Foreign Exchange (FX) Manual of SBP
- Ministry of Finance and SBP made changes in FX Manual for new entrants to open warehouse.
- SBP and FBR are in process to simplify the forms namely e-form and I-form to facilitate e-commerce
- FBR targeting to reduce the cost for small orders through National Single Window
- Aligned with the regional standards, FBR has finalized the De-minimis rule that is below \$100
- Amendments in existing Acts and Ordinances to ensure the re-export of faulty products
- Securities & Exchange Commission of Pakistan (SECP) has created a separate category for e-commerce registration to simplify the process of registration
- It is mentioned that e-commerce platforms have to develop dispute resolution mechanism, but the status is not clear

- MoC also in process of defining the type of e-commerce business to categorize and target policy measures accordingly
- E-procurement by the government is still pending as it was targeted to provide relaxation to tech start-ups in procurement requirements, allocating quota in procurement contracts for tech start-ups, and drafting legislation for e-procurement model. Public Procurement Regulatory Authority (PPRA) and National Information Technology Board (NITB) are the main responsible organizations.
- **A few more pending measures on consumer protection include:**
 - To develop alternate dispute resolution mechanism for returns of faulty products under Consumer Protection Acts, initiating the nodes of Intellectual Property Organization (IPO) and Trade Dispute Resolution Organization (TRDO) in Chambers of Commerce
 - Finalization of Trade Dispute Resolution Act (TRDA)
 - Upgrade process of consumer courts to e-courts
 - Building capacity of judicial staff on e-commerce and consumer protection. Provincial Judicial Academies are responsible for this activity.
 - Gap analysis in existing legal and regulatory framework, and amendments in existing consumer protection laws

L3- Awareness and sensitization

In order to create awareness among the public and the SMEs, e-Commerce policy set the target to initiate training programs. Regarding awareness of the relevant avenues and the legal rights of the consumers, there exist lack of awareness. Here, consumer protection councils or e-commerce platforms need to play their role to enhance the public awareness and to revive the customers' trust. Similarly, the Chambers of Commerce and Industry also spread awareness among businesses.

As per e-Commerce Policy, the Consumer Protection Councils have to conduct public awareness campaigns.

Policy Area V-Payment Solutions

P1- Financial inclusion

As e-payment is the key element for successful implementation of e-commerce in a country. Before moving towards the e-payments, it is important to mention here that Pakistan is the country where financial inclusion is still 21% and most the population is still out of the formal financial system (Sohail, 2021). Gender gap is prominent in financial inclusion as only 7% of the adult females are financially included compared to the 36% of their male counterparts.

In order to promote digital accounts through mobile money accounts, SBP was successfully able to make 15 million females to operate digital accounts through their mobiles by December 2020 ((Sohail, 2021). But still a long way ahead to improve the situation given the severity and magnitude of the issues as 93% adult female need to be approached.

Among possible digital payment methods that are common in use are: Bank accounts (digital), FinTech companies such as easypaisa (mobile money account), JazzCash (wallet-based), UPaisa (launched by Ufone), Payoneer (operates in 200 countries, in more than 100 currencies and enables Pakistani businesses and freelancers to send money abroad), and PayPak (introduced a few years back in 2016 by 1Link and ensures access to money across Pakistan and its Debit Card is accepted by e-commerce websites. Safety of the customers' personal data is a prominent feature of this method) (PDF.CO, 1Link).

Mentioning some of the major initiatives by the commercial banks (Zaheer, 2022), following are the prominent one:

- Internet Payment Gateway by Habib Bank Limited (HBL)
- e-Commerce Payment Gateway by United Bank Limited
- eGate by Muslim Commercial Bank
- Faysal Bank DigiMall

These Banks provide the facilities of digital banking and eCommerce store. PayFast is another initiative that made the online payments easier. It is licensed by SBP and provide various options to the users both customers and firms to do transactions through various methods of payments.

P2- Interoperability of e-payments

Interoperability that makes the cross-border payments easy, SBP has recently issued in March 2022 the guidelines/standards for interoperability. Raast that is online payment system of SBP addresses the challenges of weaker interoperability in financial sector of Pakistan. Now, Raast made it possible for the banks to connect with each other through a link that will result in accessibility of digital payments of any financial channel to the customers. (SBP)

P3- Trust in online transactions

As mentioned in Chapter 4, lack of trust in online transactions hampers the e-commerce growth in Pakistan. National Cyber Security Policy (2021) by MoITT clearly mentions the policy priority of building trust in online transactions through digital certifications and digital signatures for online transactions, strengthening Public Key Infrastructure (PKI) as a business requirement for e-passport, e-governance, etc., and multiple certification service providers. As a next step, its timely implementation would determine the revival of users' trust in online transactions in Pakistan.

P4- New e-payment options and innovations

eTijarat Portal has provided several updates on policy front regarding the implementation of policy target of financial inclusion and digital payment infrastructure. This pillar contains 12 target areas and updates are given below:

- SBP has partially completed the payment service operators (PSO)/payment service providers (PSPs) that will help in enabling the card-not-present (CNP) transactions.
- SBP in collaboration with MoITT and NITB is working on the international payment gateway of Pakistan

- FBR is in progress of providing incentives to the customers and businesses on using digital payments through various measures including rebates, tax refunds, etc.
- SBP along with FBR is facilitating white-listed foreign companies such as Amazon, etc., provide ease in remittances and payments
- SBP is in process of work on export re-finance schemes to facilitate the exporters in e-commerce
- Efforts to collect and provide data on e-commerce exports are in progress by SBP, PSEB, and FBR
- SBP has taken action to reduce the merchant discount rate by the international payment schemes such as VISA Card
- As mentioned in Chapter 4, the requirement of Escrow account by one of the respondents from e-commerce platform, banks and e-commerce companies are moving towards the Escrow account as this service builds the trust factor
- SBP and SECP has introduced the licensing for fin tech companies that will enable them to access the Application Programming Interface (API) and to enter the digital financial services
- SBP has accomplished the target of preparing guidelines for the digital on-boarding of merchants
- To ease the loan collateral condition, SBP is working on subsidizing the digital payments whereas easing the bank collateral is pending.

Pillar-VI-Skills Development

S1- Skills gap review and S2- Education and training

As Chapter-4 explained in detail the skills gaps as one the top reported issue by the SMEs and highlighted by the experts. This aspect requires special attention of policy makers as well as efforts form private sector.

ICT skills gap exists at 38% globally and in Pakistan this issue becomes more prominent as Pakistan is the country with overall low literacy rate (62%) (Abbasi, 2021 & Abbas, 2022). More than half of the population (64%) that is below the age of 30 can be a potential to boost

the e-commerce industry given the condition that they are trained enough with digital skills to adopt the changing dynamics of the work force. According to the UNDP report on youth (2020), around 30% of youth in Pakistan is illiterate, and more than 70% are unable to complete their education because of financial constraints.

Unfortunately, statistics shows the mismatch in skill supply and skill demand in the market. Majority of the employers are not satisfied with the new graduates of the education system in Pakistan (Shehbaz, et al. 2018). Schools and educational institutes also need to adopt this digital shift, but currently Pakistani education system lags behind as only 44% of the public secondary schools and 38% of private secondary have computer labs (Farhan, 2021)

S3- Digital innovation

The skills gap is acknowledged by policy makers as MoC and MoITT both mentioned special measures for building capacities of youth and businesses particularly SMEs. Private sector is also putting equal efforts in this front. Major private sector players are Daraz, Enablers, Parwaaz etc. Daraz has launched its university to promote the required skills for e-commerce and trained more than hundred thousand businesses/sellers on e-commerce (Saleem, 2021). Daraz also partnered with the Extreme Commerce (another private partner) to offer customized training courses to promote the e-commerce skills.

Parwaaz that is another initiative of Pakistan Skills Development Fund (PSDF) in collaboration with World Economic Forum (WFP) in 2020 (PSDF, 2020).

HelpHour e- Commerce summit (2020) offered various training sessions and engagement opportunities to different stakeholders of e-commerce industry.

Moving towards implementation status of proposed initiatives of MoC to strengthen SMEs and youth in policy:

- eSME initiative as mentioned in eCommerce policy, SMEDA is in process of identification of required skills and develop training manuals accordingly. SMEDA is collaborating with TDAP, TEVTA, private sector, and incubation centers to fulfil this task. As eSME initiative

targets to identify, train, and connect 50,000 e-SMEs to the online marketplaces, so these efforts require additional efforts to deliver this training program in addition to the developing manuals and trainers' database.

- SMEDA is also developing and maintaining pool of trainers.
- Training monitoring plan development is partially completed by SMEDA in collaboration with other stakeholders from industry.
- eTijarat Portal has been developed by MoC. It is a platform that provides relevant information on how to register, logistics, taxation for online businesses, e-payments, digital marketing and many more.

S4- Gender-related capacity building

Females that comprise the 50% of population in Pakistan are facing gender disparities at multiple fronts. Around 50% female population of 10 years and older are illiterate (PBS, 2021). Global Gender Gap Report (2021) ranked Pakistan at 153rd position out of 156 countries, the gender gap will require 257 years to close with this current rate (Marvi,2020). Pakistan is among the countries with lowest female labor force participation in the world as World Bank data (2020) reported 20% at the declining rate after reaching its peak (24%) in 2015.

Most of the women are engaged in informal sector and employed in primary and mid-level occupations with basic and intermediate level skills opposed to their male counterparts (Ministry of Human Resource, 2020). Some of the major reasons include cultural norms, low education and skills, lack of knowledge about opportunities, and digital gender gap. According to GSMA report (2021), Women in Pakistan are 49% less likely to use mobile internet than men and 94% less likely to own mobile money account.

However, the awareness of internet among women is increasing over the time but certain barriers still exist that restrict women to use internet and these barriers are: family approval, as some families don't allow or don't like the women to have mobile phone or use internet as culturally it seems inappropriate to them; lack of digital literacy that makes it difficult for women to use internet for their benefit. Another women-specific concern is the digital privacy and safety.

In the wake of these gender-specific issues, National e-Commerce Council established the consultative group namely Women Economic Empowerment (WEE). Furthermore, MoC is in process of coordination with the women department at province level, GSMA, and other relevant institutions to collect data with gender lens. **In this regard, baseline survey to have data on gender specific digital access, access to e-commerce platforms, and financial inclusion is pending.**

TDAP organized the WEXNET exhibition in 2022 with the focus on showcasing the products of women entrepreneurs.

S5- Public sector capacity development

To create and provide conducive environment for e-commerce, building capacity of government employees on digital skills is a crucial element. NITB is extending support to train the government employees on IT skills. **As mentioned earlier, judicial staff was also supposed to be trained on e-commerce but that is not implemented, yet.**

Policy Area-VII-Access to Finance

F1- New financing opportunities and F2- Finance for digital entrepreneurship

SMEs require financial support to adopt e-commerce as it requires considerable amount of money as also discussed in Chapter 4. Considering the importance of this aspect, MoC emphasized on the collaboration for capital venture and seed funding, and microfinance program to make it easier for SMEs to access the required financial support. Also, the on-going process by SBP to subsidize the digital payments will reduce the cost of borrowing.

Chapter 6. Conclusion and Way Forward

Conclusion

E-Commerce is gradually being adopted by the SMEs though at slower pace as in this survey only 25% firms adopted e-commerce. We can say that Covid proved as major reason to shift their businesses online. Province-wise data reflected that Sindh topped the list in adopting e-commerce with 39% firms. Also, the sectoral comparison shows that the adoption in retail sector is higher (64 firms) than other sectors and construction is the sector with least number of firms (15) that adopted e-commerce in this survey. Within province, retail sector is the most adopting sector in Sindh and KP and in Punjab all the sectors responded that they adopted e-commerce. Whereas Balochistan is the sector with retail, construction, and transport sector adoption.

E-commerce tends to have positive implications on key indicators of the firms and among most reported benefits of e-commerce are: increase in sales, new business opportunities, and reduced cost of communication. The least reported benefit is increase international trade that is because of the fact that the number of firms adopted e-commerce with international trade are less in the survey.

The reported cost to shift to the online mode of business is higher that reflects the associated cost or affordability aspect of the digital shift. As average cost reported by SMEs is PKR 287,000 and KP is the province with highest average cost compared to the other provinces. Similarly, agriculture sector reported highest average cost to adopt e-commerce among sectors. Firm's size and age is another element as younger firms and firms with smaller size reported relatively higher average cost of doing business online. It implies the need to make digital gadgets including mobiles, computers, tabs, and internet affordable by lowering their prices or thorough other measures.

The micro-sized younger firms with less than 20 years of age shows less interest in e-commerce compared to the other counterparts even though these younger firms are aware of its benefits. This is evident of the fact that these firms have affordability issue. Medium-sized firms are the most welcoming firms to the new mode of business.

As per survey findings, the e-commerce market is in early stages and mostly the informal ways to online business are adopted in the form of social media and emails, also through websites. It is more likely to practice e-commerce through various modes by the younger and firms with medium size. The culture of e-commerce platforms (Daraz, Amazon, and other local platforms, etc.) is not that much popular among SMEs. It can be interpreted as platform ecosystem, is not flourished, yet, though it is in rising stage as there are many domestic platforms (Daraz, SheOps, Pakistan Creates, and many others) are emerging. Now, due to the government efforts, Amazon also allowed Pakistani businesses to register.

The barriers to adopt e-commerce can be summarized as most of the reported issues include lack of capacity to shift online mode of business, less supportive behavior of the customers along with others including internet affordability and financial constraints. The lack of customers' trust in buying online products implies the less ability of firms to attract customers, payment issues, inability to return the defaulted parcels/ineffective return policies by the firms, the absence of consumers' rights, and also language barriers in some cases. Balochistan is the province, where internet access and affordability were reported much higher than other provinces.

Key updates on policy upfront based on the UNCTAD framework can be concluded as Pakistan has comprehensive e-commerce policy and also NeCC for the regular interaction of relevant stakeholders from public and private sectors to discuss the issues. So far, eight meetings have been held (in the month of March 2022) since its inception. Similarly, e-Tijarat portal will be another hallmark to provide related information at one place. Another relevant policy namely "National SME Policy 2021" also needs to be aligned with the e-Commerce policy as digitalization aspect overall is not strong enough to support online business.

Regarding ICT infrastructure, there are certain substantial updates including PTA's efforts to launch 5G by next year. As also discussed in previous chapter, internet affordability, public-private partnerships along with the government measures (reducing the taxes on internet), adoption of new technology (fiber optics that provides faster internet), spectrum availability for improved internet quality, among others can potentially play significant role in making quality internet available to the masses, given the condition of timely implementation of these initiatives. The implementation

of another initiative of USF's Smart Village to provide the digital access in remote areas across Pakistan needs to be explored.

There are some welcoming initiatives in all of the three indicators of 3rd policy area. The National Freight and Logistics Policy and the latest efforts of Pakistan Post (PP) are the positive steps to address the logistics barriers. PP's Pakistan Post Shop, Amazon Facilitation Centers, and integration with NSW are targeting to address the logistics related issues and to improve the delivery of e-commerce goods within country as well as across the border. Furthermore, efforts from MoC about the negotiations in international agreements for e-commerce facilitation, elaborating the SMEs success at international level, and joining the WTO's e-Commerce Joint Initiative are of prime importance.

Weak regulatory environment, particularly for the consumers' protection and data localization is concluded in policy area-IV. Also, the presence of issues related to the consumers' rights and data protection despite that fact that we have aforementioned Acts/Bills on cyber security, data protection, ETO 2002, PSEFT 2007 and PECA 2016, etc., raises the question on the implementation issues. Consumer protection councils may play their role to raise awareness among the potential customers. There are some good examples from other countries such as Ministry of Commerce in Cambodia conducted awareness raising activities on the Consumer Protection Law and e-Commerce Law under a project to build the costumers trust in the country. Similar to these efforts, Uganda used social media, radio, webinars, TV shows, and workshops to enhance the digital buying during COVID.

Regarding absence of payment solutions for e-commerce both domestic as well as the international payments along with the low rates of financial inclusion in Pakistan, the recent initiatives by the commercial banks, and other domestic level initiatives e.g. PayPak, etc. have the potential to make the online payments easier. But still more concentrated efforts will be required for secure and fast digital payments both domestic and cross border. There are certain on-going efforts, for instance, process of promoting digital payments, international payment gateway, by SBP and provide secure payments' option like ESCROW. Also, Pakistan needs to introduce the measures to re-export/re-send the faulty goods to build the customer's trust.

Lack of skills development that is one of the major constraints reported by the SMEs and also the 6th policy area of UNCTAD framework, some noticeable initiatives have been done by the private sector and also by SMEDA. Most prominent efforts include free trainings by Daraz during Covid, trainings by FPCCI, SMEDA and other market players including Daraz University, Enablers (with considerable charges). Keeping in view the number of SMEs and with special focus on rural areas, Pakistan needs massive program to train the SMEs across Pakistan and to achieve the target of building capacity of enterprises through promoting public-private partnerships.

Access to finance that is the 7th pillar, is clearly recognized in e-Commerce Policy with the targets to strengthen collaborations to facilitate SMEs through access to finance and microfinance programs.

Considering the gender-related barriers to adopt e-commerce including digital gender gap, cultural constraints, digital privacy and safety, there is strong need to analyze all the policies relevant to the e-commerce (mentioned in chapter 5) with gender lens. These policies and initiatives need to be assessed in terms of gender responsiveness. The proposed measure of ensuring access to digital tools (smart phones) under One Woman One Bank Account initiative of BISP would be positive steps to provide financial support to some extent.

Recommendations:

Keeping in view the abovementioned gaps and issues, following recommendations are suggested to address the issues and promote e-commerce in Pakistan:

1. Capacity constraint being one of the major limitations, special attention is required to start massive capacity building programs e.g. eSME initiative with the major responsibility of SMEDA, TEVTA, and TDAP. As it requires financial allocations that is again not available at the larger scale. So, collaboration of public and private sector would provide possible solutions to this issue.
2. Customers' awareness campaigns are required to sensitize them on their rights along with the efforts to grievance redressal mechanism. It requires activating the district consumer courts and converting them to e-courts, developing dispute resolution mechanism by e-commerce platforms, Trade Dispute Resolution Act finalization, and enhanced

coordination among the Chambers of Commerce, IPO, and TRDO to build the trust in e-commerce.

3. There is strong need to develop the platform ecosystem and strengthen the e-commerce platforms as well as to bridge the gap between SMEs and these platforms through registering the firms with these new avenues. It will provide SMEs a variety of facilitation services including digital marketing, payment solutions, logistics, among other benefits.
4. For digital inclusion and to bridge the digital divide, special efforts are required for affordable, accessible and quality of internet services. Existing efforts including district wise plans by MoITT and adoption of new technology for faster internet needs to be prioritized.
5. Accelerated efforts by Pakistan Post, Ministry of Communication, and e-commerce platforms are required to expedite the pending tasks of API connectivity, service quality, and digital signatures for better logistics' transparency and quality.
6. The on-going process of promoting digital payments and international payment gateway by SBP needs to be expedited for smooth, easy and secure e-payments.
7. As affordability to adopt e-commerce emerged as one of the factors particularly from younger and micro firms, so there is need to strengthen the access to finance initiatives with the priority to the younger and smaller firms.

Limitations and Future Direction

As per WTO definition, e-commerce is the "production, distribution, marketing, and sale by electronic means". This research covers mainly online sales and marketing due to the time and financial constraints. Even though the e-commerce related latest and firsthand data was made available by the integrating e-commerce aspect into the SME survey. However, as the focus of quantitative survey was not e-commerce that is the main reason the information related to this aspect is not that much comprehensive (e.g. type of cost to shift online that may provide reasons behind cross provincial discrepancies) that a focused survey might capture.

For future research, a survey pertaining to the specific questions related to the e-commerce might have detailed exploration of the aspects of barriers and required support from the government and private sector with geographical implications along with considerations including type of business

and size, etc. Furthermore, due to the time and resources constraints, this piece of research contains limited amount of analysis regarding cross-provincial policy and initiatives' responsiveness towards the providing enabling environment for the e-commerce in their respective province. So, this aspect can be covered in future research. Another aspect for future research is the further exploration of the e-commerce platforms as how SMEs can be linked with these platforms both national and international, as this is also mentioned in e-Commerce Policy to connect the businesses with online marketplaces.

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Annexures

Annex-1

A. Quantitative Questionnaire

E-Commerce Adoption related questions in main questionnaire:

Q1. Do you use online channels of doing business?

Yes=1

No=0

Q2. If the business was not online in the past, what is the additional cost incurred to bring the business online?

Amount in PKR: _____

Q.3. Kindly inform about the adoption of following online ways of doing business amid COVID-19.

Description	Always 1	Frequently 2	Sometimes 3	Seldom 4	Never 5
Using Email/social media pages/website to communicate with customers & vendors.					
Conducting online marketing (catalogue, online advertisement)					
Conducting online sales (receive enquiries, receive customer orders through website, social media pages)					
Using online banking channels to receive or send payments					
You conduct online purchases					
Any other					

Q.4. Did you experience benefits of e-commerce?

Description	Highly Significant- 1	Significant- 2	No Impact-3	Insignificant- 4	Highly Insignificant- 5
Increased sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New business opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced cost of communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

International trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced cost of marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q.4 Which of the following are considered to key barriers to the adoption of e-commerce?

Description	Highly Significant-1	Significant-2	No Impact-3	Insignificant-4	Highly Insignificant-5
High cost					
Lack of technical knowledge to adopt e-commerce					
Strict documentation requirement from banks					
Lack of financing opportunities					
Lack of good internet services					
Customers/suppliers are not adoptive					
Customers/suppliers are not adoptive					
Any other					

B. Qualitative Questionnaire

Following are the generic qualitative questions and were tweaked according to the respondent:

Q 1. What kind of services your organization/platform offer to the sellers (e.g. digital marketing, trainings, etc.)

Q2. Based on your interaction with SMEs, what is your observation/experience regarding major difficulties reported by the SMEs to enter and sustain in e-commerce?

- Lack of capacity
- Lack of awareness among SMEs
- Digital infrastructure to provide good and affordable internet
- Connecting with the international e-commerce platforms

- Cross-border trade (payments, logistics, etc.)
- Financial Access

Q3. Latest initiatives of your organization/platform for e-commerce in Pakistan

Q4. What are the requirements/expectation from the government to facilitate in flourishing e-commerce in Pakistan?

Annex-II

Sub themes under each policy area/pillar of UNCTAD eT Ready framework

Thematic item	Policy area (No. of rated thematic items)
S1a- Strategy development (done or ongoing)	E-commerce readiness and strategy formulation (5)
S1b- Strategy development (looking for support/expressed interest)*	
S2a- Policy coordination and dialogue (committees/working groups)	
S2b- Policy coordination and dialogue (e-commerce associations)	
S2c- Policy coordination and dialogue (eT Ready dissemination)**	
S2d- Policy coordination and dialogue (eT Ready monitoring)**	
S3- Availability of new e-government services ¹⁷	
S4- E-commerce statistics availability	
I1- ICT infrastructure development	ICT infrastructure and services (4)
I2- Mobile Internet connectivity	
I3- Internet affordability	
I4- Access to electricity	
T1- Street addressing	Trade facilitation and logistics (3)
T2- E-commerce logistics	
T3- Implementation of the Trade Facilitation Agreement	
L1- Regulatory review and gap analysis	Legal and regulatory framework (3)
L2- New laws and regulation initiatives	
L3- Awareness and sensitization	
P1- Financial inclusion	Payment solutions (4)
P2- Interoperability of e-payments	
P3- Trust in online transactions	
P4- New e-payment options and innovations	
S1- Skills gap review	Skills development (5)
S2- Education and training	
S3- Digital innovation	
S4- Gender-related capacity building	
S5- Public sector capacity development	
F1- New financing opportunities	Access to financing (2)
F2- Finance for digital entrepreneurship	
Total 26	

Source: UNCTAD, 2020

Annex-III

Table 3: Sector wise Benefit of e-Commerce ranked by Relative Importance Index Score

Benefits	Agriculture	Manufacturing	Retail	Transport
Increased sales	0.49	0.70	0.73	0.67
New business opportunities	0.46	0.66	0.67	0.67
Reduced cost of communication	0.41	0.58	0.60	0.59
International trade	0.24	0.57	0.48	0.51
Reduced cost of marketing	0.44	0.36	0.61	0.56

Table 4: Province wise Benefit of e-Commerce ranked by Relative Importance Index Score

Benefits	Punjab	Sindh	KP	Balochistan	AJK/BG/IBD
Increased sales	0.66	0.94	0.65	0.80	0.40
New business opportunities	0.56	0.69	0.69	0.73	0.33
Reduced cost of communication	0.52	0.59	0.64	0.73	0.40
International trade	0.45	0.50	0.49	0.60	0.30
Reduced cost of marketing	0.52	0.57	0.61	0.73	0.30

Table 5: Province Wise Barriers to Adopt e-Commerce (RII Scores)

	High cost	Lack of technical knowledge	Strict documentation requirements	Lack of financing opportunities	Lack of good internet services	Customers are not adoptive	Security issues related to scam
Punjab	0.16	0.19	0.17	0.13	0.14	0.17	0.20
Sindh	0.51	0.60	0.50	0.52	0.59	0.57	0.57
KP	0.75	0.79	0.74	0.74	0.78	0.81	0.80
Balochistan	0.20	0.267	0.20	0.20	0.267	0.200	0.267
AJK/BG/IBD	0.27	0.23	0.10	0.13	0.13	0.10	0.10

Table 6: Sector Wise Barriers to Adopt e-Commerce (RII Scores)

Barriers	Agri	Manufacturing	Retail	Transport
High cost	0.38	0.36	0.40	0.42
Lack of technical knowledge	0.43	0.42	0.43	0.50
Strict documentation requirements	0.34	0.37	0.38	0.44
Lack of financing opportunities	0.31	0.36	0.41	0.41

Lack of good internet services	0.39	0.35	0.43	0.48
Customers are not adoptive	0.41	0.36	0.44	0.48
Security issues related to scam	0.39	0.42	0.42	0.51

Table 7: Barriers to Adopt e-Commerce by Firm Size (RII Scores)

Barriers	Micro (1-10)	Small (11-50)	Medium (51-250)
Lack of technical knowledge	0.31	0.50	0.60
Lack of good internet services	0.30	0.45	0.62
Customers are not adoptive	0.29	0.52	0.55
Security issues related to scam	0.29	0.49	0.66
High cost	0.28	0.46	0.54
Strict documentation requirements	0.24	0.47	0.59
Lack of financing opportunities	0.26	0.43	0.59

Table 8: Barriers to Adopt e-Commerce by Firm Age (RII Scores)

Barriers	<10 years	11-20 years	21-30 years	31-40 years	>40 years
High cost	0.36	0.44	0.39	0.30	0.43
Lack of technical knowledge	0.43	0.49	0.37	0.31	0.50
Strict documentation requirements	0.36	0.44	0.34	0.30	0.53

Lack of financing opportunities	0.38	0.41	0.38	0.29	0.38
Lack of good internet services	0.39	0.43	0.39	0.30	0.43
Customers are not adoptive	0.42	0.45	0.33	0.31	0.53
Security issues related to scam	0.45	0.46	0.30	0.27	0.50