COVID-19 AND REGULATORY INNOVATIONS IN SOUTH ASIA
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# TABLE OF CONTENTS

1 INTRODUCTION .......................................................... 6

2 THE PANDEMIC ERA: SAARC COUNTRIES EXPORT/IMPORT OF GOODS AND SERVICES .......................................................... 8

3 REGULATIONS, LOGISTICS, AND DIGITAL ECONOMY .......... 12

4 MULTI-STREAM FRAMEWORK ............................................ 14
   4.1 Problem, Politics & Policy Nexus .................................... 14
      4.1.1 The Problem Stream .............................................. 14
         A. Information and Communication Technology (ICT) Diffusion 14
         B. Trade Barriers ...................................................... 17
         C. E-Transport, Logistics and Supply Chain Management ........ 18
      4.1.2 The Policy Stream .............................................. 19
         A. India ............................................................. 19
         B. Pakistan ......................................................... 20
         C. Bangladesh .................................................... 20
         D. Sri Lanka ....................................................... 21
         E. Bhutan .......................................................... 21
         F. Nepal ........................................................... 22
         G. Maldives ......................................................... 22
         H. Afghanistan .................................................... 22
      4.1.3 Policy Challenges Hindering Cross Border Ecommerce .... 23
      4.1.4 Integrated E-payment System ............................... 23
      4.1.5 The Politics Stream ............................................ 24
   4.2 Window of Opportunity .............................................. 24

5 QUANTITATIVE APPROACH: EMPIRICAL ANALYSIS ........ 26
   Table 5: Firms’ E-Commerce and other Pertinent Characteristics 27
   Table 6: Regression Models Variables’ Description ................. 28
   5.1 E-commerce Potentials and Firms’ Sales Growth in SAARC Region 28
   Table 7: Pooled OLS Regression with Robust Standard Error Estimation: Ecommerce and Firms Performances 29
   5.2 E-commerce and Employment Growth Opportunities in SAARC Region 30
   Table 8: Pooled OLS Regression with Robust Standard Error Estimation: Ecommerce and Employment Growth 30

6 A WAY FORWARD ........................................................... 31

7 REFERENCES ............................................................. 33
1. INTRODUCTION

COVID-19 pandemic has undermined economic activities both at macro and micro level during its surge on global level. The slowdown of economic activities amid the pandemic come into practice as the authorities across the cities, countries, regions, and continents imposed pandemic SOPs such as lockdowns, social distancing, closing cross border transaction etc. The trade-off between countering the spread and the deadly impact of the pandemic was to restrict both human and business transaction at the cost of economic growth.

Whereas the pandemic adversely affected economic and business transaction, thereby it has paved and accelerated novel approach e-commerce to sustain business transactions across the globe. During the pandemic countries that ranked higher in the use Information and Communication Technology (ICT); better Logistic Performance; inclusive internet index; ICT infrastructure; and e-business enabling factors such as using email to communicate with clients and suppliers; owning website and e-payment have performed better and sustained their business transactions as compared with the countries that lacked better e-transaction infrastructure.

The roots of Ecommerce go back to the era of internet emergence, and since then, it has become part and parcel of the contemporary lifestyle. Intricately woven into the everyday fabric of our life, it is unimaginable that once it was considered a distant dream. It truly serves as a panacea for the time and physical constraints associated with the conventional mode of retail and trade Lund et al. (2016). Economies have enabled e-commerce ecosystem through Consumer protection; Data protection and privacy; E-transactions; Cybersecurity; Market access and Investment-related policy measures. Thus, during COVID 19’s impediments, firms in digitally developed countries maintained business operations via e-commerce.

On the other hand, emerging economies in general and South Asian countries specifically performed below its potential during the pandemic versus its peer regions. The business activities and supply chains witnessed poor management due to the untapped e-commerce potentials, business regulatory regimes’ obstructions, lack of intra-regional connectivity which keep South Asian countries at bay from the international digital market. Amid Covid 19 pandemic, developed economies are reaching heights on the basis of ecommerce potentials. In 2017 about 2.3 trillion U.S. dollars were spent on retail shopping by global customers, reaching 4 trillion dollars in 2020. However, SAARC countries are lagging, and a huge disparity exists in e-commerce related sales and purchases. The percentage of online sales compared to total retail sales is only 1.6 percent in India and 0.7 percent in Bangladesh (Kathuria et. al, 2020)

Despite SAARC, established in 1985, aimed intra-regional connectivity via trade and investment; Preferential Trade Agreement (SAPTA), signed in 1995, aimed for greater economic integration; and South Asian Free Trade Agreement (SAFTA) which aimed to promote free trade among South Asian countries, the region performed below its potentials in terms of intra-regional trade and investment mainly due to lack of cooperation, political will, logistic barriers, poor infrastructure, high tariff, para tariff, non-tariff barriers, and lack of flow of trade and information (Mufti and Ali, 2020; Mufti and Ali, 2021).

Therefore, this study aimed to investigate SAARC intra-regional trade and investment potential via e-commerce that would shed light on inter and intra-regional connectivity even amid externalities such as Covid 19 pandemic. The objective of the study is twofold:
The study is an attempt to provide evidence-based policy guidance that tap potential intra-regional connectivity, trade, and economic integration via e-commerce. The study may provide silver lining to the lackluster firms to adopt e-business as a new normal in the competing digital market. The emergence of e-commerce has transformed the accounting system of businesses and opportunity costs related to international trade. It has been noted by Lund et al. (2016), who showed that using online platforms such as eBay for cross-border business can reduce the transaction cost by 64 percent. E-commerce reducing the cost of the transaction by seamlessly connecting buyers and sellers, its benefits are proven around the world. For examples China, where Alibaba created 30 million employment opportunities, engaging marginalized groups as well as young people (Wei, 2017).

To meet the objective of the study, we employed qualitative (descriptive analysis) assessment approach. Secondly, to meet the empirical assessment objective of the study, we employed the quantitative approach. The data is garnered from different sources. For the descriptive assessment data comes from UNCTAD Digital Economy; Volume Merchandise Growth rate of import and export, UNCTAD B2C Index; World Bank, Logistic Performance Index. For empirical estimations, the data form World Bank Enterprise Survey (WBES) is used. The WBES is firms micro level data that cover topics such firms’ performances; firms’ age; major obstacles; finance; workforce; innovation; size of firms etc. We have taken SAARC countries data from the WBES dataset. The sample size of the data is 13,933 firms from manufacturing sector, the firms comprise of small, medium, and large firms form the individual SAARC countries.

The study highlights some major challenges impeding e-commerce economic development. On the policy side, Government will (as identified by other studies), Weak legal system, Customs duties, and Poor logistic performances are the main challenges induced by respective regulatory bodies in the region. The supply side, firms with respect to e-commerce faces some major obstacles such as cross border logistic cost as a first major challenge identified by Nextrad Group. On the demand side, ICT diffusion and internet connectivity indicator show that both before and during pandemic era, the actual usage remain same and notably 61 % gap exist between having internet coverage but no usage. In addition, the study notes that in SAARC region with respect to its peer regions and countries, the overall ranking of inclusive internet index is below the potential in term of availability, affordability, relevance, and readiness.

Statistically, the study finds that one percent increase in firms’ e-commerce participation influences firms’ sales growth by 0.517 percentage point. These finding is consistent with other studies. For instance, Tidiane Kinda (2019) study reports that total factor productivity of firms engaged in e-business increased by 30 percent as compared to the firms not engaged in ecommerce transactions. Similarly, the study finds that one percent increase in ecommerce participation associated with 0.738 percentage point increase in firms’ employment growth in SAARC countries. These findings are aligned and consistent with Gherghina Botezatu & Simionescu (2021) which investigates the impact of e-business on employment growth rate in 27 European countries, the reported results suggest that ecommerce has is positive and significant impact of employment growth rate.
2. THE PANDEMIC ERA: SAARC COUNTRIES EXPORT/IMPORT OF GOODS AND SERVICES

Hunan Seafood wholesale market, Wuhan City China, was the foremost close-down of market by the Chinese authority in the wake of novel coronavirus outbreak in December 2019. In a short span of time, the Covid 19 spread out across cities, countries, regions, and continents that shocked and affected individuals along with their business of any sort.

To intercept and control the deadly Covid 19, Governments and authorities-imposed restrictions on mobility within and across countries. The lockdowns have affected supply chain and traditional mode of business transaction. To measure Covid 19 related restrictions strictness and stringency, the Oxford Coronavirus Government Tracker (OxCGRT) has developed stringency index comprised of nine factors. The scale of the index range 1-100 the latter implies strict regulations. The stringency is calculated on daily basis, but to align
with the quarterly available data of merchandise growth rate on export and import, we use stringency index average quarterly. As shown in the given Fig. 1, the red line presents the Covid 19 Stringency Index and its corresponding impact on merchandise export and import growth rate. As per UNCTAD quarterly data and statistics the lockdowns undermined merchandise export and import growth rate globally.

### Top 10 Countries, Ranked by Retail Ecommerce Sales Growth, 2022

<table>
<thead>
<tr>
<th>Country</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>25.9%</td>
</tr>
<tr>
<td>India</td>
<td>25.5%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>23.0%</td>
</tr>
<tr>
<td>Brazil</td>
<td>22.2%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>19.0%</td>
</tr>
<tr>
<td>Argentina</td>
<td>18.6%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>18.3%</td>
</tr>
<tr>
<td>Thailand</td>
<td>18.0%</td>
</tr>
<tr>
<td>Mexico</td>
<td>18.0%</td>
</tr>
<tr>
<td>US</td>
<td>15.9%</td>
</tr>
</tbody>
</table>

Note: Includes products or services ordered using the internet via any device, regardless of the method of payment of fulfillment; excludes travel and event tickets, payments such as bill pay, taxes or money transfers, food services and drinking place sales, gambling and other vice good sales

Source: eMarteter, Jan 2022

Specifically, the South Asian countries experienced negative merchandise trade growth rate in the wake of Covid 19 and due to restriction of cross border business transactions. As the stringency of lockdown increased,

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1 Data source: UNCTAD dataset, International Merchandise Trade, Volume Growth Rate of Merchandise export and import, quarterly.
the volume growth rate of merchandise export and import decreased in the different quarter in the years 2020/21. The pandemic has undermined economic development in general, and specifically in South Asia.

At the cost of slowing down economic activities via lockdowns and social distancing, COVID-19 has paved and accelerated novel approach e-commerce to sustain business transactions amid its spillover across the globe. The deadly Covid-19 affected and drastically changed the retail landscape of the world. Changing the behavior of each individual and the way of life has tremendous implications for global e-commerce. The survey pointed towards the behavioral transition of people that even after receiving their coronavirus vaccine, 52 percent were reluctant to revert to traditional modes. Coronavirus affected the products belonging to different categories unequally, and the sales of certain products increased while others fell (Andrienko, 2020). Relatedly, it has been estimated that sales are expected to be $6.5 trillion in 2023 (Jones, 2020). For Asian and Pacific countries, the growth is estimated at $2 trillion by 2025, as projected by Euromonitor International.

Asia is rapidly changing and adopting opportunities presented by digital transformation. It has not only opened countless avenues for the citizens, but it is also leaving its mark by leading globally in some digitalization sectors. The data from eMarketer shows that during the pandemic, the most significant e-commerce sales growth is recorded in the Philippines and Malaysia, which is 25 to 23 percent, respectively, with only one SAARC country India following them at 21 percent. Post pandemic, India took the lead and secured the 2nd spot, as shown in figure 2, indicating the increasing uptake of technology and innovations in the sector.

Besides E-commerce retail sales growth, Covid 19 halted cross-border trade of goods and services because of regulation stringency on international trade and services. The services sector was affected negatively in large proportion as compared with trade in goods. During the pandemic international travel dropped by 63 percent, and transport services decreased by 20 percent globally. Ecommerce in the goods sector was prone to many challenges during the pandemic and performed with less resilience than e-trade in the services sector globally and the least developed regions. Specifically, where cross-border trade and services in developing countries decreased by 1 percent each, the digitally enabled trade services proved resilient and increased by 5 percent (UNCTAD, 2022).

**Figure 3: Exports in Digitally Deliverable Services: Percentage of Total Trade in Services**

![Figure 3: Exports in Digitally Deliverable Services: Percentage of Total Trade in Services](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAAEAAAABCAYAAAAfFcSJAAAADUlEQVR42mP8/wAG/wDE/sAAAABJRU5ErkJggg==)

Data Source: UNCTAD Digital Economy’s Data, Author’s illustration
Besides e-commerce retail sales growth, Covid-19 halted cross-border trade of goods and services because of regulation stringency on international trade and services. The services sector was affected negatively in large proportion as compared with trade in goods. During the pandemic international travel dropped by 63 percent, and transport services decreased by 20 percent globally. E-commerce in the goods sector was prone to many challenges during the pandemic and performed with less resilience than e-trade in the services sector globally and the least developed regions. Specifically, where cross-border trade and services in developing countries decreased by 1 percent each, the digitally enabled trade services proved resilient and increased by 5 percent (UNCTAD, 2022).

Globally, international e-trade in the services sector enabled by ICT services improved manifold during the surge of the Covid-19 pandemic. E-services as a percentage of total export increased drastically during the pandemic. Fig. 3 presents 14 percentage points enhancement of e-services export in the Asian region.

In most developing regions and countries, the overall export, specifically digitally deliverable goods and services, declined by many percentage points during the Covid 19 pandemic due to a lack of technological capabilities linked with low investment in human capital that enables digital economy (UNCTAD, 2020). However, the SAARC region and economies, offset, not entirely, export losses with digitally enabled export in the services sector. Variations within SAARC countries differ as the e-services export declined during the pandemic in Bangladesh. In contrast, South Asian countries e-trade export has increased by significant percentage points during pandemic. The overall export of e-services during the pandemic in the SAARC region increased compared to many other developed and developing areas.

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2 Data Source: UNCTAD, Digital Economy, International trade in digitally deliverable services, SAARC
3. REGULATIONS, LOGISTICS, AND DIGITAL ECONOMY

Ecommerce potential is tightly linked with the laws governing online transactions and a robust legal system that ensures compliance and adjudicates disputes. SAARC economies are characterized by a weak legal system and inadequate efforts to formulate digital-friendly policies. Until 2000, no SAARC country had recognized the digital footprint and realized the need to enact the emerging space laws. In 2000, India formally introduced its Information Technology Act (ICT), and Pakistan passed Electronic Transactions Ordinance in 2002. Intercountry e-commerce trade remains limited due to several trade restrictions and risks entailed in data protection and privacy issues (Gessner & Snodgrass 2015). The other prominent barriers to international e-commerce include customs delays, borderline transparency, delayed deliveries, complicated return procedures, and no provisions for a location or time changes (UNCTAD, 2015). Owing to these hurdles, a considerable gap exists between high-income and middle-income countries adopting e-commerce activities (WTO, 2018).

The underlying cause of all these anomalies lies in the frail formal institutions (Jean et al., 2020). These institutes are at the behest of appropriate policy developed by the officials, which supports ecommerce businesses and assists in lowering the aforementioned risks through greater transparency (OECD 2019c). Countries around the world have different e-commerce policies and legislative laws. The UNCTAD global cyber law is the first ever tracker of international cyber laws that explore e-commerce-related legislation in data privacy and consumer protection. With respect to SAARC countries, the following tables highlight essential areas where legal efforts are proven to be successful and also show the direction for improvement.

Table 1: E-Commerce Related Laws

<table>
<thead>
<tr>
<th>SAARC Countries</th>
<th>E-Transactions Laws</th>
<th>Consumer Protection Laws</th>
<th>Privacy Laws</th>
<th>Cybercrime Laws</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>✓</td>
<td>☐</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pakistan</td>
<td>✓</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>Nepal</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Bhutan</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>☐</td>
<td>×</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>✓</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>✓</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Maldives</td>
<td>☐</td>
<td>×</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Data Source: UNCTAD (2021)

✓ = Legislation exists, ☐ = Draft Legislation, × = No legislation, ☐ = no data available
The presence or absence of regulations on the stated areas can drastically affect how e-commerce firms conduct their businesses and to what extent they can reduce their transaction costs. Correspondingly, a lack of understanding critically limits the e-commerce potential. For instance, consumer protection, considering the imbalance of information between buyers and sellers, affect the search cost on digital mediums. This asymmetry of information favors the sellers more than buyers and renders them with more responsibilities in the form of warranties and refund arrangements. As consumers cannot physically inspect the products at the time of purchase, a return policy is a crucial element in consumer protection. Likewise, excessive regulatory requirements can restrict the growth of small enterprises; for example, enacting the “country-of-destination”3 principle makes the efforts for protection counterproductive as laws differ widely across countries.

Added to this, data privacy and applicability for e-commerce are immense, as most of the transactions on digital platforms are paperless and require a process to identify parties and ensure authenticity. In sync with this, the legal issue surrounding signatures digitally and electronically has become necessary to ensure the validity of the transactions. This, in turn, demands a large amount of data which then compromises consumer privacy. Involving a critical tradeoff between consumer acquisition and the reliability of transactions may cast doubt on the consumer front, who are already reluctant to shop online. In comparison, the more excellent protection of data will not be helpful in a sense that it will create barriers for sellers trying to identify the need of customers thus restricting the ecommerce space. As the preferred mode of making online payments involves anonymity and paperless engagement, it necessitates solid legal bases from where credibility and legitimacy can be guaranteed (Pappas, 2002). Such provisions can be made available through Digital Transaction Laws which can account for advance payment mechanisms and technologies. In addition to solidifying the payment relationship between buyers and sellers, there is also a pertinent need to consolidate the link between financial institutions and payment agents such that a uniform competitive environment prevails for e payment suppliers (Olsen et al., 2015)

Another growing issue revolves around cybercrime, which extensively affects the purchases through hacking, data, and intellectual property appropriations (USITC, 2017). Around $3.5 billion dollars were stolen in 2012 by an online fraud (Demery, 2018). Hence, government strive to develop secure Information Technology systems such that the transactions of citizens are secured. This is done through encryption, online certificates and content moderation coupled with intellectual property rights. Lastly, compliance burdens, taxes on digital investments, high tariffs and trade duties can severely constrict the growth of digital services (USITC, 2017). Augmented by logistical restrictions, cost of delivery the obstructions further deteriorate the business environment and signals the harsh market conditions to the entrants. For that reason, adequate ecommerce regulations and their effective implementation has become imperative in order to curtail costs of business.

3 It stipulates that consumers internationally rely on the domestic consumer protection laws.
4. MULTI-STREAM FRAMEWORK

4.1 PROBLEM, POLITICS & POLICY NEXUS:

Kingdon proposed a model of policymaking in 1984 and explained it using three interdependent variables known as problem, policy, and political system. These variables are referred to as streams and are combined through the window of opportunity. Problem stream relates to problem perception that makes the introduction of policy essential. Policy stream includes the current debates and analysis surrounding the upcoming solutions. Political stream on the other hand, consists of interests of vested groups and narrative of government. Additionally, window of opportunity is where these three streams interact and represents the time when there is high likelihood for policy to be successful.

![Figure 4: Kingdon Multi Stream Framework](image)

4.1.1 THE PROBLEM STREAM

A. Information and Communication Technology (ICT) Diffusion

Considered as the backbone of Ecommerce, ICT has become the indispensable part of the global economic infrastructure (Pradhan et al., 2017). The Asian region consists of approximately 60 percent of the world population and the proportion of SAARC countries in global population is 3.8 percent.

Figure 5 displays the ICT diffusion in SAARC countries from 2000 up to 2017. It can be seen the ICT index has been following the upward trend until 2006. The primary causes for this increasing trajectory are access to mobile data, enhanced capacity of mobile technology and burgeoning demand for internet speed. However, despite the increasing popularity of the ICT modes SAARC countries are still suffering from the inadequate infrastructure, unconstrained poverty coupled with low level of consumption which makes the diffusion of ICT in the remote and rural regions difficult (Verma & Giri, 2020).
Furthermore, Mobile Internet Connectivity indicators provide a useful benchmark to access the infrastructure behind the Ecommerce. The State of Mobile Internet Connectivity Index (2021) highlighted important indicators related to mobile internet use and provided key highlights related to the state of internet connectivity in the region. For the SAARC countries, it noted that it is increasing significantly, along with declining private consumption levels which are usually the primary hurdles to ICT diffusion in backward and remote regions. Contributing to this is the inappropriate provision of telecom services including fixed telephones, mobile phone technology, and fixed broadband service. According to International Telecommunications Union, access to mobile data is increasing tremendously. Due to increasing capacity of mobile phone technology, demand for high-speed data is on a rapid rise day by day.

Table 1 depicts the ICT scenario of India. With 1.1724 billion users, India has the second largest telecommunication network comprising of both fixed and mobile connections and has the second largest Internet subscriber base all over the world comprising of 661.94 million broadband subscribers as on December 31, 2019 (Telecom regulatory authority of India, 2020). Presently India is at 138th position among 175 nations in ICT Development Rankings released by International Telecommunications Union (ITU). Though the value of the index increased from 2.5 to 2.69, ranking slashed down from 125th rank in 2010 to 129th in 2013 to 135 in 2015, before finishing at 138th as the world has moved at a faster rate. Therefore, access to technology is still restricted because of various factors and India needs to quickly build its ICT infrastructure and improve citizen’s access to the Internet before programs like Digital India could have significant meaningful change to people’s lives.

On the other hand, financial system open doors for trading, diversifying, pooling risks, allocating resources, mobilizing savings, and exchanging goods and services, which induces growth mainly through accumulation of capital along with innovation in technology (Levine, 1997). Furthermore, financial institutions reinforce innovation and creativity, thus enhancing prospective growth through identifying and further funding investments which turns out to be productive for the society (Schumpeter, 1911).

The role of technology diffusion as a pivotal channel of economic growth and vice versa has been comprehensively examined by various researchers (Pradhan, Arvin, Norman, & Bele, 2014; Rosario, Costa, & da Silva, 2019; Yousefi, 2011). Also, several researches (Ahmed & Ansari, 1998; Paun, Musetescu, Topan, & Danuletiu, 2019; Petkovski & Kjosevski, 2014) investigated the nexus of financial sector development and economic growth, yet, only a handful of studies examined the nexus of ICT diffusion, financial sector development, and economic growth in the south Asian nations. Therefore, the foremost objective of this research is to fill this gap and look into the causal nexus of ICT diffusion, financial sector development, and economic growth for the SAARC countries from 2000 to 2017. To do this meticulously, the study uses panel granger causality and cointegration tests. The study makes valuable contribution to the existing literature of ICT-finance-growth nexus in four ways. First, this study integrates...
and 40 million people were using mobile services in 2019. However, despite the exponential growth the data reveals as shown in figure 6, 61 percent usage gap exists before and during the pandemic era, which means that large number of people do not use internet services while residing in the areas which are covered and have accessible internet. Similarly, there is a percent increase in the internet connectivity during the surge of pandemic. Thus, bridging the gaps identified in the following graph, need to be priorities in order to fully utilize the untapped potential of ecommerce via connectivity, active usage, and coverage gap. The 61 percent usage gap has huge potentials that can boost up intra-regional connectivity and the economic growth yielded by digital economy. In addition, there is a fortune attached with ecommerce, if 1.6 billion are included in the net of active usage.

Similarly, the Economist Intelligent Unit assesses the inclusiveness of economies in world digital arena. It develops an inclusive Internet Index based on indicators such as availability, affordability, relevance, and readiness of households to use internet. The survey included most relevant topic during the Covid 19 pandemic. The internet inclusive index covers pertinent indicators that has significant influence on boosting up digital economy and enable individuals to participate in ecommerce activities. For example, the availability indicator measures the required infrastructure for internet usages, the affordability indicator gauge individuals purchasing power relative to their income in internet marketplace, the relevance indicator measures e-commerce related content in local language, and the readiness variable examine the cultural acceptance and digital skills of individuals.

**Table 2: Inclusive Internet index ranking: selected SAARC countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Years</th>
<th>Overall ranking</th>
<th>Availability</th>
<th>Affordability</th>
<th>Relevance</th>
<th>Readiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>2019</td>
<td>46</td>
<td>68</td>
<td>8</td>
<td>47</td>
<td>31</td>
</tr>
<tr>
<td>India</td>
<td>2020</td>
<td>49</td>
<td>65</td>
<td>21</td>
<td>47</td>
<td>21</td>
</tr>
<tr>
<td>India</td>
<td>2021</td>
<td>48</td>
<td>65</td>
<td>17</td>
<td>35</td>
<td>38</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2019</td>
<td>50</td>
<td>62</td>
<td>44</td>
<td>44</td>
<td>66</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2020</td>
<td>58</td>
<td>60</td>
<td>49</td>
<td>46</td>
<td>75</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2021</td>
<td>62</td>
<td>59</td>
<td>46</td>
<td>63</td>
<td>97</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>2019</td>
<td>65</td>
<td>70</td>
<td>59</td>
<td>71</td>
<td>72</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>2020</td>
<td>65</td>
<td>67</td>
<td>52</td>
<td>71</td>
<td>54</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>2021</td>
<td>69</td>
<td>73</td>
<td>66</td>
<td>64</td>
<td>72</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2019</td>
<td>72</td>
<td>81</td>
<td>78</td>
<td>57</td>
<td>63</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2020</td>
<td>78</td>
<td>83</td>
<td>79</td>
<td>69</td>
<td>72</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2021</td>
<td>79</td>
<td>82</td>
<td>78</td>
<td>80</td>
<td>73</td>
</tr>
</tbody>
</table>

**Data Source: Economist Impact. Data computed for selected SAARC countries**

1 The overall Index ranking of 120 countries based on the scores of the Availability, Affordability, Relevance and Readiness categories.
2 The Availability category examines the quality and breadth of available infrastructure required for access and levels of Internet usage.
3 The Affordability category examines the cost of access relative to income and the level of competition in the Internet marketplace.
4 The Relevance category examines the existence and extent of local language content and relevant content.
5 The Readiness category examines the capacity to access the Internet, including skills, cultural acceptance, and supporting policy.
Table 2 present the inclusive internet index ranking of SAARC countries along with indicators ranking that are used for countries overall ranking showing inclusiveness. Among the South Asian countries, India ranked top followed by Sri Lanka, Bangladesh, and Pakistan. The index shows SAARC countries lower performance in terms of availability. However, the affordability, relevance, and readiness ranking reported better as compared with availability. The component of inclusive internet such availability, affordability, relevance, and readiness are the main driver of digitalization of an economy and specifically for the ecommerce. SAARC countries need to prioritize inclusive internet across gender and income disparity.

B. Trade Barriers

Expanding on to the regional economic integration, the important concept of Regionalism comes at play, which states the common interests of governments in order to attain cooperation through the institutional process (Sridharan, 2007). Several institutional frameworks have been developed by SAARC countries to boost intraregional trade and for achieving greater regional integration, however the efforts are not sufficient provided that only 5 percent of total trade takes place between the geographical borders of Asian countries (UNESCAP, 2017).

Also, the countries in the region are the signatory 1996 WTO Information Technology Agreement (ITA), which directed for elimination of tariffs and other duties on the products related to I.T. For instance, India still imposes effective tariff rate and anti-dumping duty on several I.T. products. Similarly, Pakistan also has high tariff rates (7.6%) and has not been part of the WTO Information Technology Agreement. Over and above that, the other potential areas identified by the survey of 2200 firms in South Asia are shown in table 3. Businesses in Afghanistan, India, Pakistan, and Nepal listed the high logistics costs as one of the main obstacles, and taxes, customs rules have been cited as other challenges in the intra-regional trade.

Table 3: Small online sellers’ priority challenges in cross-border ecommerce

<table>
<thead>
<tr>
<th>Overall cost of cross-border logistics</th>
<th>South Asia</th>
<th>Afghanistan</th>
<th>Bangladesh</th>
<th>India</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Clearance of low-value shipments</td>
<td>2</td>
<td>8</td>
<td>18</td>
<td>1</td>
<td>2</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Custom rules on low-value shipments</td>
<td>3</td>
<td>9</td>
<td>12</td>
<td>4</td>
<td>1</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Taxes or trade barriers in export markets</td>
<td>4</td>
<td>10</td>
<td>9</td>
<td>2</td>
<td>17</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Custom procedures for e-commerce imports</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>9</td>
<td>12</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Tariffs in export markets</td>
<td>6</td>
<td>20</td>
<td>7</td>
<td>5</td>
<td>10</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>Total cost of delivery from my country to foreign customer</td>
<td>7</td>
<td>2</td>
<td>10</td>
<td>11</td>
<td>3</td>
<td>23</td>
<td>6</td>
</tr>
<tr>
<td>Infrastructure for cross border e-commerce</td>
<td>8</td>
<td>7</td>
<td>11</td>
<td>7</td>
<td>13</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Local content requirements</td>
<td>9</td>
<td>15</td>
<td>8</td>
<td>15</td>
<td>9</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Custom procedures for my e-commerce exports in main exports markets</td>
<td>10</td>
<td>13</td>
<td>1</td>
<td>12</td>
<td>6</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Postal services for cross border e-commerce import -- import or export</td>
<td>11</td>
<td>3</td>
<td>5</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>Forex restrictions -- cross border payments</td>
<td>12</td>
<td>22</td>
<td>14</td>
<td>18</td>
<td>4</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Cost of cross border online payments</td>
<td>13</td>
<td>21</td>
<td>13</td>
<td>17</td>
<td>5</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>IP protection in other markets</td>
<td>14</td>
<td>16</td>
<td>15</td>
<td>16</td>
<td>19</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Compliance with healthy, safety, environmental, and products standards</td>
<td>15</td>
<td>17</td>
<td>3</td>
<td>20</td>
<td>20</td>
<td>17</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: Computer-Assisted Telephonic Interviews, Nextrade Group
C. E-Transport, Logistics and Supply Chain Management

The dissemination and delivery of goods and services is dependent on crucial transportation services. With the orders of around millions, ecommerce uses the logistics and delivery services much more than any other sector. The responsibility of acquiring and delivering purchases to consumer’s destination has been taken by service providers. In South Asia, there exists numerous constraints and challenges for transport services. For instance, in the case of air cargo, small regional airports lack the adequate infrastructure and capacity to handle individual shipments. This is particularly the case in India where 90 percent of air cargo is handled by large six airports of the country i.e., Delhi, Mumbai, Bengaluru, Chennai, Hyderabad, and Kolkata, thus posing the challenges for the parts of the countries which are at a distance from the metropolitan centers.

Similarly, in Nepal and Bangladesh locations at a distance from the Dhaka and Chittagong are severely underdeveloped and ill-equipped when it comes to handling air cargo. Nepal’s geography makes the logistical transportation quite challenging. Kathmandu Airport is the main airport which has the capacity to process the cargo.

On the basis of these issues and for the evaluation of logistics performance of economies, a logistic performance index is developed by World Bank since 2007. The parameters that are used in the index cover broader scope related to international trade The index is comprised of six indicators that show how an economy perform in term of custom, infrastructure, international shipment, logistic quality, and competence, tracking and tracing, and timeliness. Country’s logistic performance is pivotal for cross region and cross border trade in general and specifically for digital economy.

The custom component of the index measure the efficiency of customs and border management clearing; indicator infrastructure gauge the quality to trade and transport infrastructure; the logistic component of the index measure Competence and quality of logistics services; the international shipment of the index shows the performance of Ease of arranging competitively priced shipments; the tracking and tracing variable factor of the index calculate the ability to track and trace consignment; and the indicator timeliness measure shipments delivering to within expected delivery time (World Bank, 2018).

Figure 7 demonstrates SAARC countries logistic performance index scores graphically. The data indicates South Asian economies in comparison of the top scored and ranked country Germany. Among the SAARC

![Graph of Logistic Performance Index 2018 SAARC Countries](image)
countries, India ensures highest scores in terms of better custom management, infrastructure, cross border shipment, logistic quality, and competence, tracking and tracing, and timeliness as compared to other South Asian economies. Bhutan and Afghanistan are the least performer in terms of logistic performance. During the Covid 19 pandemic, these countries performed better in logistics, and transportation enabled ecommerce activities.

As the retail market via the online channel is growing by leaps and bounds, the e-retailers are formulating the strategies to beat the cutthroat competition. All this is highly dependent on supply chain since it provides the right product at the right time. In the contemporary world, the retailers are strategizing to minimize the operational cost without impacting the quality of the product, timings, and demand forecasting (Fernie & Sparks, 2018). On the other hand, the retailers face pressure from the customers for on time delivery irrespective of the geographical location. Whereas it is quite difficult to maintain the balance between lower cost and on time delivery. Online retailers have found that logistics play a very pivotal role for firm’s success and satisfaction of the customers. Therefore, retailers have identified the opportunity to make their own private logistics firms such as Ekart by Flipkart.com and Amazon Transportation Services Private Limited by Amazon.in. In addition to that they still have ties with third-party logistics (3PL) companies to deliver the last mile consignments (Rao et al., 2011). Today, for better supply chain management real time tracking, usage of drones and robots, integrated GPS system, and collaborative networks amongst the suppliers and customers are the key aspects. The strategy of reverse logistics is also a key determinant for the success of online retailers, specifically in India since, returned goods volume in India was recorded to be 30%, thus this situation requires planned strategy for reverse logistics.

4.1.2 THE POLICY STREAM

Ecommerce became a phenomenon back in 1998 and since then World Trade Organization has been working on the wide range of issues faced by the ecommerce. Starting a work programme to cover areas like customs, market access, cross border flow, it has been working closely with other trade bodies such as Council for Trade in Goods, Council for Trade and Development and Council for Trade in Services. Tuthill (2016) mentioned important issues under discussion by these councils. For instance, council for trade in services deals with protection of privacy, fraud protection, anti-competitive practices, custom duties etc. Based on these issues countries have steered their directions towards formulating the ecommerce policy.

A. India

The draft policy for ecommerce was formulated in 2019, by the Department of Promotion of Industry and Internal Trade. It has been hailed as a breakthrough given the Indian ecommerce market worth of $38.5 billion. The policy aimed to develop a framework for ecommerce growth in conjunction with the Make in India, Skill India, and Digital India Policies. Aiming to create an all-encompassing governance framework, it includes the potential pain-points which effect the sector worldwide. It engages stakeholders and formulated strategies on consumer protection, intellectual property, and competition such that it can unlock the potential for higher productivity, employment opportunities, increasing privacy measures and creates a platform for manufacturers, retailers, traders, and domestic producers (Mahawar, 2022; 2022).

The key issues dealt by the National Ecommerce Policy are a) data, b) ecommerce marketplaces c) domestic digital economy d) export promotion e) regulatory impediments f) infrastructure. Some of the major breakthroughs in the draft are:
Recognize the performance of data and states that “just like oil and other natural source, it is important to protect data, prevent its misuse, regulate the use and processing of data and address the concerns related to privacy”.

It establishes the need for development of reliable digital infrastructure, provision of government services digitally, and expansion of digital literacy.

It suggested anti-counterfeiting techniques to prevent reviews which are fraudulent and also ensured a platform for solving customer problems.

Taking into account the logistics issue, it recommended that there must be separate measures to accommodate ecommerce in the Logistics Policy.

B. Pakistan

The fast-growing ecommerce markets in Pakistan cannot elude the institutional voids that are hampering the growth. Insufficient payment options, low levels of financial inclusion, high costs of logistics lead to creation of ecommerce policy in 2019. It aims to strike 1) regulatory issues 2) digital infrastructure along with financial inclusion 3) youth empowerment through ecommerce 5) taxation issues 6) consumer protection 7) logistics 8) Cross-border connectivity and global linkages.

The stakeholders selected for the policy framework included ecommerce businesses, freelance providers, digital industries, and cross government departments including the revenue and regulatory authorities, financial institutions, logistical partners, and small medium enterprises associations. The collaboration between these players proposed to create a one window operation for all ecommerce stakeholders such that major positive results can be deduced and effectively implemented. In relation to the preceding discussion, the goals of the ecommerce policy are:

- To make ecommerce industry one of the driving force of the Pakistan’s economy.
- Establish a single window for ecommerce businesses and National e-commerce council so that effective implementation can be carried out.
- Streamlining laws and regulations for ecommerce transactions domestically and internationally.
- To facilitate small businesses and help them in their creative destruction by empowering them as well as youth in far flung areas.
- Improve the payment infrastructure hence allowing the quick payments both inland and across the border (E-Commerce Policy of Pakistan, 2019).

C. Bangladesh

The government realized the need for enacting ecommerce policy and outlined several priority areas which will help in the economic growth of the country. The salient features of the policy are:

- The benefits are illustrated for B2C ecommerce such as reduced operating costs, global outreach, and customer satisfaction strategies.
- In B2B ecommerce, policy proposed to arrange training workshops to build business’s digital capacities. This will help them in achieving greater transparency in their internal tax monitoring systems and reduces the problems associated with brick-and-mortar systems.
- Policy aimed to achieve high standards of governance by creating e-government platforms. Examples of such platforms are e-tendering and information services.
- For Legal and regulatory framework, it proposed code of conduct, consumer protection laws through holding fund in the merchants account, privacy matters such as personal information to be stored by merchant.
The Framework also laid the foundation for community conscious guidelines, as countries differ in their social and economic conditions. Identification and verification procedures were suggested for taxes and monitoring purposes. Along with bilateral trade agreements, relaxation in customs, Value added tax, convenience in payment, and improvement in delivery services has also been proposed (E Commerce Policy Framework for Bangladesh, 2018).

D. Sri Lanka

Sri Lanka like other neighboring countries have online businesses in several sectors such as banking, travel, hotels etc. These businesses offer millions of products to people in Sri Lanka and government strives to provide greater access through measures such as government portals for filing tax returns, licenses renewal as well as payment of taxes.

The ecommerce space is governed by Electronic Transactions Act. 19 (2006), which eliminated the legal barriers and provide legal support to both domestic and international partners. The other laws such as Evidence Act no. 14 of 1995 and Settlement Act no. 28 of 2005 also work in synergy with ETA (2006). Concerning the ecommerce intellectual property rights, the individual or any party responsible for the fraudulent activities will be held accountable under the intellectual property law. Further, related to ecommerce there are no discussion going on at present (Sri Lanka - eCommerce, 2021).

E. Bhutan

The ecommerce policy of Bhutan stands on five pillars:

- **Access and Education**: Availability of affordable internet to all the nationals as a top priority and ensure that internet should no longer be a luxury but considered as a necessity. Plan for partnerships to increase digital literacy has also been suggested.

- **Trust in E-commerce**: It includes that government should play an important role in bridging the legal and regulatory barriers. By setting the ground for consumer protection through transparency mechanisms, dispute resolution and covering wide range of issues such as cybersecurity, copyright, trademarks, anti-spam rules it provides essential safeguards to both consumers and sellers.

- **Barriers to Adoption**: The policy recognizes important policies related to custom duties, logistics, payment systems so to ensure seamless ecommerce transactions.

- **Ecommerce Governance and Policy**: The policy realizes the need for effective leadership in enacting the policy and asserts that government has an important role to play in the availability of digital content. It makes the licensing process simpler, so businesses can create innovative website and tools.

- **Ecommerce Business Development**: In this domain policy framework deals with skills development program by incorporating courses on digital education. It also promotes digital free trade zones along with promoting Brand Bhutan image worldwide (Draft E-Commerce Policy, 2020).
F. Nepal

Nepal’s e-commerce industry is still in its infancy. However, it lacks defined legal rules and conventions, making it hard for new entrants to set up and run firms. Users, on the other hand, seem to be unable to put their faith in e-commerce businesses since there are no such regulations or governmental entities dedicated only to governing e-commerce. The government passed an ecommerce bill, which addresses the following rules:

- Cancellation right
- Order must be treated as a contract
- No cancellation fees
- Various payment options
- Set delivery time and location
- Alteration prohibition
- Options for replacement and refund
- Complaints procedures

For the time being, companies are constituted under the Firm Act 2063 following registration at the Office of the Company Register due to the lack of clear laws to control and incorporate the e-commerce company. Furthermore, after formation under the Firm Act, the firm must obtain approval from the Department of Commerce or the Department of Industry, depending on the nature of the business. For example, if the nature of the firm is related to commodity trading, the Department of Commerce must approve it; nevertheless, if the business is created with the intention of manufacturing goods and materials, the Department of Industry must approve it. Again, no clear procedure or set of criteria exists for applying for and getting licenses. (Gateway, 2021).

G. Maldives

The Maldives government has set five strategic objectives for the country’s digital growth. (Maldives Development Update, 2021)

- The ecommerce policy of Bhutan stands on five pillars: 1. Revitalize the governing processes of the ICT industry in order to prepare the Maldives for a digital economy.
- Build interactive infrastructure, platforms, and ecosystems capable of delivering more efficient, secure, and consistent information and communication technology solutions.
- Digitize government services so that data-driven decisions and efficient information and service delivery are possible.
- Facilitate digital innovation and create an environment that allows businesses to thrive in a digital economy. Increase human capacity in the ICT business by creating a digitally equipped workforce.

H. Afghanistan

Several ecommerce laws and regulations exist in Afghanistan, which govern the challenges faced by budding entrepreneurs and established businesses (Nanjira, 2021). These consists of:

- Electronic transactions and Electronic Signatures Act, which guarantees the legal recognition of electronic transactions and electronic signatures.
- Draft of Electronic Transactions and Digital Signature Law which offer a stable, safe, and efficient environment for digital means, to increase awareness, acceptance, and the quantity of electronic commerce in Afghanistan, and ensure that all electronic transactions in Afghanistan adhere to the most stringent international standards.
On enterprises side, despite of Free Trade Agreement, firms and SMEs in south Asian countries face significant constraints that hinder cross border ecommerce activities. Studies have identified major and significant challenges faced by firms of all size. The obstacles vary across countries according to their regional trade policies. Constraint related to cross border ecommerce activities impede south Asian region trade and investment potentials. In the context of regional trade, south Asian countries lag peer regions. For instance, regional trade among SAARC countries accounted for 5%, while in case of East Asian and the Pacific regional trade as a percentage of total trade is noted as 50% (Mufti and Ali, 2021). Some of the challenges identified by studies such as (Kathuria et al. 2020) related to the cross-border ecommerce are logistic cost to the end buyer, complexities of customs, online payment, digital literacy, online fraud, custom and taxation, cost of delivery to cross country customer.

On the policy side, the challenges that keep regional ecommerce low in south Asia as compared to other regions and countries are alarming and need urgent consensus. SAARC countries have better term of trade with far region than immediate neighbor economies. For instance, Trade restrictiveness index, based on both explicit and implicit import barriers, suggest that restrictiveness on import within south Asian countries are stringent as compared to import form other regions. Sunjay Kathuria (2018) highlights some key policy challenges that undermine trade and ecommerce and the role of South Asian Free Trade Agreement (SAFTA). Along with Import restrictiveness, cost of trade, tariff and para-tariff, sensitive list, access to each other markets, and intraregional trade in services. These policy challenges have significant impact on both trade and ecommerce in SAARC region. By addressing these policy issues along with e-payment integrated system can ensure regional integration via digital economy which has certain positive implication for boosting up cross border trade and firms’ competitiveness in the region.

4.1.4 INTEGRATED E-PAYMENT SYSTEM

Payment is noted as series issue in case of ecommerce especially across the country transaction. Hurdles with respect to e-payment impact cross border ecommerce transaction and transaction cost. An e-payment regulatory framework is required that minimize risks associated with cross border transaction. To boost up cross border ecommerce business, south Asian countries need to create and develop an integrated cross border payment system that connect and facilitate intraregional digital economic ecosystem.

Worldwide, there are reliable integrated system that interlink cross border e-payment. For instance, Buna Payment System (Buna) is a regional payment infrastructure with participants from the 22 Arab Monetary Fund (AMF) states. The platform became fully operational in December 2020. The project’s motivation is rooted in the challenges faced by banks to complete cross-border payments in the Arab region. Buna is a multi-currency settlement system in four Arab currencies as well as USD and EUR. Buna allows participants to
Covid-19 and Regulatory Innovations in South Asia

connect directly or through central banks. In line with international e-payment system, South Asian countries need to interlink business and customers through an integrated payment system to facilitate and enhance cross border economic activities.

4.1.5 THE POLITICS STREAM

During the Covid-19 epidemic, India’s political leadership utilized the crisis as an opportunity to push for much-needed economic changes. Production-linked incentives had the expected effect of spurring new investments in priority areas, with corporations like as Apple and Samsung declaring plans to relocate production to the nation (Moneycontrol News, 2021). Changes to labor regulations were also driven by the federal and state governments, allowing the private sector more leeway in hiring and firing people (Pal, 2020). As part of these reform initiatives, government adopted a new strategy for economic development and recovery. The original stimulus announcement in May 2020 brought attention to this new initiative, named the Self-Reliant India Scheme (Atmanirbhar Bharat Abhiyan), which established a target of assisting millions of small companies across the country flourish and contained a $9.3 billion funding package (Ayres, 2020).

Similarly, in Bangladesh, the government unveiled a stimulus plan at $8.6 billion, or around 2.5 percent of the country’s GDP (English. News. Cn, 2020). The package contains low-interest loans for small enterprises as well as major industrial entities, and service providers; increase of food security and social protection initiatives; and credit distribution to the agricultural industry. During the early months, the government received assistance from multilateral donors as well: The World Bank has authorized a $1 billion loan to assist the government’s response to the economic problems (Desk, 2020). In Pakistan, The Central Bank also played a key role in supporting the economy, extending credit to small- and medium-sized businesses, and protecting millions of jobs in the formal economy. The cumulative support provided by the central bank reached Rs. 1.3 trillion by October 2020 (The Express Tribune, 2020).

4.2 WINDOW OF OPPORTUNITY

It is important to explore features and factors that promote and enable ecommerce business amid Covid. For example, account ownership, internet usage, postal reliability and secure internet server are among the enabling factors that promote digital business activities and shows the preparedness of firms to tackle the adverse effects of pandemic. In this regard, UNCTAD developed Business to Consumer (B2C) index based on the enabling factors. The B2C E-commerce index gauge how much an economy is prepared and ready for digital shopping. The index comprised of the core and significant indicator that influence and enable ecommerce. On the base of B2C index values, countries are ranked.

Figure 8 shows the B2C index values for the South Asian region. Data published by UNCTAD indicates highest B2C index values for the top economies such as Germany, Denmark securing 95.9 and 94.5 in the year 2020. The values graphically shown in the figure 8 depict less preparedness of SAARC countries for digital business activities. Whereas other countries have improved the enabling factors that have induced digital economy during Covid 19 pandemic, while the South Asian economies have made minimal progress in the digital market.

Table 4 shows the ranking of the economies based on B2C index for both top ranked economies and South Asian countries. Comparatively, both figure 8 and table 4 indicate the lag of SAARC countries in term of preparedness for digital economic transformation. According to UNCTAD B2C index, India is among the top ten
developing and transitioning economies, while other South Asian countries lost certain point of values of the ecommerce preparedness index. The Covid 19 pandemic triggered and transformed the conventional mode of business transaction into digital platform of the countries, largely prepared and capable of using digital platform during the time of Covid 19 lockdown and restrictions on in-person commerce.

Figure 8: SAARC Countries’ B2C E-Commerce Index Values (0-100)

![SAARC Countries’ B2C E-Commerce Index Values (0-100)](image)

Data source: UNCTAD B2C Index Data, World Bank

Table 4: UNCTAD B2C E-Commerce Index Ranking (Ranks 1-152)

<table>
<thead>
<tr>
<th>SAARC Ranking</th>
<th>Years</th>
<th>Bangladesh</th>
<th>Bhutan</th>
<th>India</th>
<th>Sri Lanka</th>
<th>Nepal</th>
<th>Pakistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>B2C E-commerce Index</td>
<td>2016</td>
<td>121</td>
<td>104</td>
<td>90</td>
<td>92</td>
<td>118</td>
<td>105</td>
</tr>
<tr>
<td>B2C E-commerce Index</td>
<td>2017</td>
<td>103</td>
<td>100</td>
<td>83</td>
<td>73</td>
<td>108</td>
<td>120</td>
</tr>
<tr>
<td>B2C E-commerce Index</td>
<td>2018</td>
<td>88</td>
<td>112</td>
<td>80</td>
<td>93</td>
<td>115</td>
<td>117</td>
</tr>
<tr>
<td>B2C E-commerce Index</td>
<td>2019</td>
<td>103</td>
<td>116</td>
<td>73</td>
<td>86</td>
<td>112</td>
<td>114</td>
</tr>
<tr>
<td>B2C E-commerce Index</td>
<td>2020</td>
<td>115</td>
<td>114</td>
<td>71</td>
<td>91</td>
<td>113</td>
<td>116</td>
</tr>
</tbody>
</table>

Top Economic Rankings

<table>
<thead>
<tr>
<th>B2C E-commerce Index</th>
<th>Years</th>
<th>Germany</th>
<th>Switzerland</th>
<th>Denmark</th>
<th>UK</th>
<th>Netherlands</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2016</td>
<td>17</td>
<td>9</td>
<td>16</td>
<td>8</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>9</td>
<td>2</td>
<td>13</td>
<td>6</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>16</td>
<td>3</td>
<td>10</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2019</td>
<td>9</td>
<td>2</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2020</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Data Source: UNCTAD Index Data, World Bank
The study employs empirical analysis techniques to quantify the impact of ecommerce on business enterprises in SAARC countries. Specifically, the study develops regression models that reflect correlation between firms’ ecommerce participation and its observed effect on firms’ sales growth. In addition, the study quantifies the correlation between enterprises’ ecommerce participation and its impact on employment growth. Also, the study further highlights ecommerce enabling factors that hinder and impede firms’ performance in SAARC region. The study develops the following empirical model which assesses the impact of firms’ ecommerce participation on its sales values.

Model 1.

\[
\text{Sale Growth}_{i,t} = \alpha_1 + \alpha_2 \text{ (ecommerce)}_{i,t} + \alpha_3 \text{ (control var)}_{i,t} + \varepsilon \tag{1}
\]

Where Sale Growth is an outcomes variable, stands for firm’s annual sale growth. The subscription i indicates the ith firms at time T. E-commerce is an explanatory variable of interest and indicates firms’ ecommerce participation. To capture the impact of e-commerce, we employ a proxy variable “firms using email to communicate buyers and suppliers”. This variable has been used by other study as indicator for ecommerce. Control variables comprised of other covariates that affect firms’ sales values. controlled variables capture firm’s characteristics, macro variable, institutional factor, and ecommerce enabling factors such firms website, transportation, and electricity. Description of variables are given in Table 6. Error term \( \varepsilon \) captures the unobserved factors affecting firms’ sales growth.

The study uses World Bank Enterprises Survey (WBES) data for cross sectional analysis. Due to cross-country data unavailability on ecommerce the study relies on WBES datasets. The WBES data is conducted through interviews with firm managers and business owners regarding firm characteristics and business environment. The survey covers topics such as firms’ performance; firms’ characteristics; finance; tax and regulations; major obstacles; infrastructure; technology and innovation; workforce, etc. covering small, medium, and large firms across sectors. The data used in this study is taken for the South Asian countries covering firms’ micro data for 13,933 firms and 6,585 observations.
Table 5: Firms E-Commerce and other Pertinent Characteristics

<table>
<thead>
<tr>
<th>Firms Characteristics</th>
<th>Bangladesh</th>
<th>Bhutan</th>
<th>India</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Survey: No of Firms</td>
<td>1442</td>
<td>503</td>
<td>9281</td>
<td>850</td>
<td>1247</td>
<td>610</td>
<td>13933</td>
</tr>
<tr>
<td>Large firms: 100 and over employees</td>
<td>429</td>
<td>58</td>
<td>2303</td>
<td>84</td>
<td>267</td>
<td>115</td>
<td>3526</td>
</tr>
<tr>
<td>Medium firm: 20-99 employees</td>
<td>515</td>
<td>178</td>
<td>4133</td>
<td>290</td>
<td>471</td>
<td>178</td>
<td>5765</td>
</tr>
<tr>
<td>Small firm: less than 20 employees</td>
<td>498</td>
<td>267</td>
<td>2845</td>
<td>476</td>
<td>509</td>
<td>317</td>
<td>4912</td>
</tr>
<tr>
<td>Number of exporter firms</td>
<td>270</td>
<td>64</td>
<td>1112</td>
<td>66</td>
<td>159</td>
<td>45</td>
<td>1716</td>
</tr>
<tr>
<td>Number of nonexporter firms</td>
<td>1172</td>
<td>434</td>
<td>8169</td>
<td>784</td>
<td>1088</td>
<td>564</td>
<td>12211</td>
</tr>
<tr>
<td>% Of firms using E-mail to communicate with clients/suppliers</td>
<td>631</td>
<td>341</td>
<td>7926</td>
<td>495</td>
<td>606</td>
<td>268</td>
<td>10267</td>
</tr>
<tr>
<td>% Of firms not using E-mail to communicate with clients/suppliers</td>
<td>810</td>
<td>162</td>
<td>1347</td>
<td>355</td>
<td>633</td>
<td>342</td>
<td>3649</td>
</tr>
<tr>
<td>Percent of firms having its own website</td>
<td>461</td>
<td>151</td>
<td>4925</td>
<td>270</td>
<td>506</td>
<td>189</td>
<td>6502</td>
</tr>
<tr>
<td>Percent of firms do not have its own website</td>
<td>980</td>
<td>351</td>
<td>4344</td>
<td>580</td>
<td>729</td>
<td>421</td>
<td>7405</td>
</tr>
</tbody>
</table>

Data Source: World Enterprises Survey Data. Author’s Calculations Via STATA

Table 5 presents business enterprises ecommerce and other characteristics of the firms covered in the sample survey from South Asian countries. The table differentiates size of firms based on the criteria of numbers of employees such as firms employing 100 plus employees, 20-99 employees, and up-to 19 employees are categorized as large firm, medium firms, and small firms respectively. The survey sample identifies the trading nature of firms whether exporting or non-exporting. Characteristics related to ecommerce participation are that whether firms using email to communicate with suppliers and clients, whether firms owing their own website. For instance, the table shows that majority of the firms using email for business interaction an indicator for
e-commerce participation. However, majority of firms do not have their own website as shown in the Table 5. The description of variables used in the empirical assessment are given in Table 6.

**Table 6: Regression Models Variables’ Description**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SaleGrowth</td>
<td>Firm’s annual sales growth</td>
</tr>
<tr>
<td>E-Commerce</td>
<td>% of firms using email to communicate with clients and suppliers</td>
</tr>
<tr>
<td>EmployGrowth</td>
<td>Firm’s annual employment growth</td>
</tr>
<tr>
<td>TradeGdp (%)</td>
<td>Percentage of tradee in GDP: Macro variable</td>
</tr>
<tr>
<td>PoliticalInstablity</td>
<td>Political instabality: Institutional variable</td>
</tr>
<tr>
<td>Access2Finance</td>
<td>Firm’s identifying access to finance as major constraint</td>
</tr>
<tr>
<td>Int’lQualityCertif.</td>
<td>Firm’s having international quality certificate</td>
</tr>
<tr>
<td>Firm’sOwnership</td>
<td>Ownership of firm: domestic vs foreign</td>
</tr>
<tr>
<td>SkilledWorker</td>
<td>Number of skilled permanent workforce</td>
</tr>
<tr>
<td>FirmOwnWebS</td>
<td>Number of firms having their own website</td>
</tr>
<tr>
<td>TransportIssue</td>
<td>Number of firms identifying transport as a major constraint</td>
</tr>
<tr>
<td>ElectricityIssue</td>
<td>Number of firms identifying electricity as a major constraint</td>
</tr>
<tr>
<td>Firm’sAge</td>
<td>Age of firm (years)</td>
</tr>
<tr>
<td>Labors’Training</td>
<td>Percent of firms offering labor training</td>
</tr>
<tr>
<td>ManagerExperience</td>
<td>Years of top manager experience</td>
</tr>
<tr>
<td>LargeFirm</td>
<td>Firms having 100 and over employees</td>
</tr>
<tr>
<td>UnskilledWorkerIssue</td>
<td>No of unskilled production workers</td>
</tr>
</tbody>
</table>

Source: Data descriptions, World Enterprise Survey data

**5.1 E-commerce Potentials and Firms’ Sales Growth in SAARC Region**

The study relies on OLS regression model technique with robust standard error estimation to report the correlation between ecommerce potentials and its observed impact on firms’ annual sale growth. Firms’ annual sales growth is dependent variable indicating firms’ performance. Ecommerce participation is the variable of interest, we employ a dummy variable that depicts firms’ online trade.

The ecommerce variable is an independent variable taking value 1 if a firm sells product to customer or purchase product from a business enterprise via email. To control other covariates that affect firms’ sales growth, we employed trade as percentage of GDP taken from World Bank development indicator. Political instability variable captures the impact of institutional quality factor that affects firms’ performance. Other control variables are given in Table 6 description of variables.
Results reported in Table 7 present the impact of ecommerce participation on the annual sales growth of firms. Column 1 of Table 7 is the baseline estimation model showing significant positive impact of ecommerce on firms' performances, implying that firms engaged in electronic business experience significant sales growth as compared to firms that do not participate in ecommerce business. Statistically, the results suggest that one percent increase in firms' electronic commerce influence firms' sales growth by 0.517 percentage point. These finding is consistent with other studies. For instance, Tidiane Kinda (2019) study reports that total factor productivity of firms engaged in e-business increased by 30 percent as compared to the firms not engaged in ecommerce transactions.

The reported results in column 2, 3, and 4 of Table 7 highlight the ecommerce enabling factors affecting firms' sales growth. For instance, firms that having their own website report positive and significant correlation with firms increasing sale growth. Similarly, transportation and electricity constraints have negative and significant impact on firms' performance, though the impact is minimum as most of the firms have not engaged in cross border trade.
5.2 E-Commerce and Employment Growth Opportunities in SAARC Region

The study develops second model which capture the impact of ecommerce participation on firms employment growth. The following model assess the impact of e-commerce on job creation in SAARC region.

Employ \text{Growth}_{i,t} = \beta_1 + \beta_2 (\text{ecommerce})_{i,t} + \beta_3 (\text{control vars})_{i,t} + \varepsilon \quad (2)

Where employ Growth stands for firms’ annual employment growth. The subscription shows the employment growth of $i^{th}$ firm at time $T$. Ecommerce is main explanatory variable indicating firm ecommerce participation. The model further incorporates other relevant covariates which have impact of firms’ employment growth. Description of variables are given in table 6.

Table 8: Pooled OLS Regression with Robust Standard Error Estimation: Ecommerce and Employment Growth

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) EmployGrowth</th>
<th>(2) EmployGrowth</th>
<th>(3) EmployGrowth</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Commerce</td>
<td>0.738***</td>
<td>0.907***</td>
<td>0.688***</td>
</tr>
<tr>
<td></td>
<td>(0.266)</td>
<td>(0.269)</td>
<td>(0.267)</td>
</tr>
<tr>
<td>Intl'QualityCertificate</td>
<td>0.00223</td>
<td>0.00379**</td>
<td>0.00212</td>
</tr>
<tr>
<td></td>
<td>(0.00191)</td>
<td>(0.00192)</td>
<td>(0.00192)</td>
</tr>
<tr>
<td>Firm’s Age</td>
<td>-0.0489***</td>
<td>-0.0486***</td>
<td>-0.0488***</td>
</tr>
<tr>
<td></td>
<td>(0.00649)</td>
<td>(0.00647)</td>
<td>(0.00654)</td>
</tr>
<tr>
<td>Labors’Training</td>
<td>0.0114***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00197)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SkilledWorkers</td>
<td>0.00128**</td>
<td>0.00140**</td>
<td>0.00129**</td>
</tr>
<tr>
<td></td>
<td>(0.000545)</td>
<td>(0.000549)</td>
<td>(0.000546)</td>
</tr>
<tr>
<td>ManagerExperience</td>
<td>-0.0473***</td>
<td>-0.0427***</td>
<td>-0.0471***</td>
</tr>
<tr>
<td></td>
<td>(0.0109)</td>
<td>(0.0108)</td>
<td>(0.0109)</td>
</tr>
<tr>
<td>LargeFirm</td>
<td>0.586***</td>
<td>0.795***</td>
<td>0.625***</td>
</tr>
<tr>
<td></td>
<td>(0.226)</td>
<td>(0.230)</td>
<td>(0.227)</td>
</tr>
<tr>
<td>UnskilledWorkerIssue</td>
<td></td>
<td></td>
<td>-0.00867***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.00302)</td>
</tr>
<tr>
<td>Observations</td>
<td>9,136</td>
<td>9,090</td>
<td>9,060</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.021</td>
<td>0.024</td>
<td>0.022</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The results of the second model reported in Table 8 presents the nexus between the engagement of firms in e-business and generation of employees’ opportunities. The independent and outcomes variable of the model is firms’ annual employment growth given the Table 8 top row. Dependent variable and control variable are given the first column of the Table 8. OLS regression model with robust standard error estimation employed
for the empirical estimation. The results given in Table 8 suggests significant and robust correlation between ecommerce and employment growth in South Asia. The first column of table 8 depicts that one percent increase in ecommerce participation associated with 0.738 percentage point increase in firms’ employment growth in SAARC countries. The finding is consistent with other studies. For instance, Gherghina Botezatu & Simionescu (2021) investigate the impact of electronic business on employment growth rate in 27 European countries, the reported results suggest that ecommerce has positive and significant impact of employment growth rate. In addition, by employing formal labor training offered by firms in our model, the overall impact on employment growth increase

The second column reported in Table 8 presents that firms engaged in electronic trade and offer training to its labor forces enhance employment opportunities as compared to firms do not participate in ecommerce.

6. A WAY FORWARD

Given the challenges faced by the ecommerce businesses and opportunities presented by Covid-19 pandemic, as illustrated by figure 10, it is the need of the hour to bring up innovations and improvements in the existing policy space and government regulations. Thus, these difficulties highlight the importance of providing access to digital infrastructure and training to assist small business owners in becoming more capable of leveraging e-commerce. It is also critical to expand social protection to the informal sector so that it becomes less susceptible, can withstand inherent problems, and, eventually, becomes more dynamic.

Therefore, in order to boost ecommerce potential in South Asia, firstly there is a need for regional geographical integration. Most of the ecommerce in the regions across borders is done
informally and formalization of such viable economic activity will bring countless benefits for the countries. Each of the country must recognize the digital transactions mechanisms of other countries, under the guidelines of United Nations Convention on the Use of Electronic Commerce in International contracts.

Second, prioritizing the ecommerce enabling factors such availability, affordability, relevance, readiness, and usage gap need to be addressed. These measures ensure and paving way for boosting up ecommerce activities. Third, efficient ways to be introduced for payment mechanisms such as liaison between banks and merchants, which will increase the efficiency and speed up the process of payments along with the recovery in case of any discrepancy. For cross border trade, a uniform platform can be introduced which has applications in all countries of South Asia.

Fourth, success of ecommerce is dependent on the confidence of consumers on the sellers regarding delivery and quality of products, thus proper legal system should be in place so solve any conflicts arising in these areas. Fifthly, an integrated cross border e-payment system needs to be developed to facilitate cross border ecommerce and integrate south Asian countries via digital economy.

Lastly, policy challenges such as import restrictiveness, cost of trade, tariff and para-tariff, sensitive list, access to each other markets, and intraregional trade in services need to be addressed. The economies of South Asia are highly protectionist in terms of export and import which hinder the process of international trade and ecommerce, consequently while protecting their interests to an extent the countries can introduce minimum thresholds for tariffs, ensure transparency and simpler tariffs structures as listed in European Union’s Digital Marketing Strategy used as a reference point.
7. REFERENCES


40. Mufti, Ali and Ali, Imran, Sino-Saarc Trade Relations: Commentary and Analysis (December 08, 2020).


