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BENCHMARKING ADOPTION OF E-COMMERCE ACROSS THE G20 MEMBERS

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EXECUTIVE SUMMARY

1. Introduction

The COVID-19 situation accelerated the adoption of e-commerce across the world. In 2021, around 2.14 billion people shopped online. In the same year, electronic commerce (e-commerce) accounted for nearly 20% of the total retail sales worldwide, up from 7.5% in 2015 and 13.8% in 2019. While, globally, there has been an increase in the share of e-commerce in total retail sales, there are variations in e-commerce adoption across countries and the difference is obtrusive when one compares developed countries and emerging market economies. This paper undertakes a comparative assessment of e-commerce adoption by the G20 countries and, in doing so, it benchmarks the G20 members across different indicators that determine e-commerce adoption. More specifically, this paper focuses on national readiness to adopt e-commerce, thereby assessing the indicators affecting e-commerce adoption for both buyers (households) and sellers (enterprises). Based on secondary data, the paper presents some stylized facts, discusses the regulatory scenario with respect to e-commerce in G20 countries and

Key Highlights

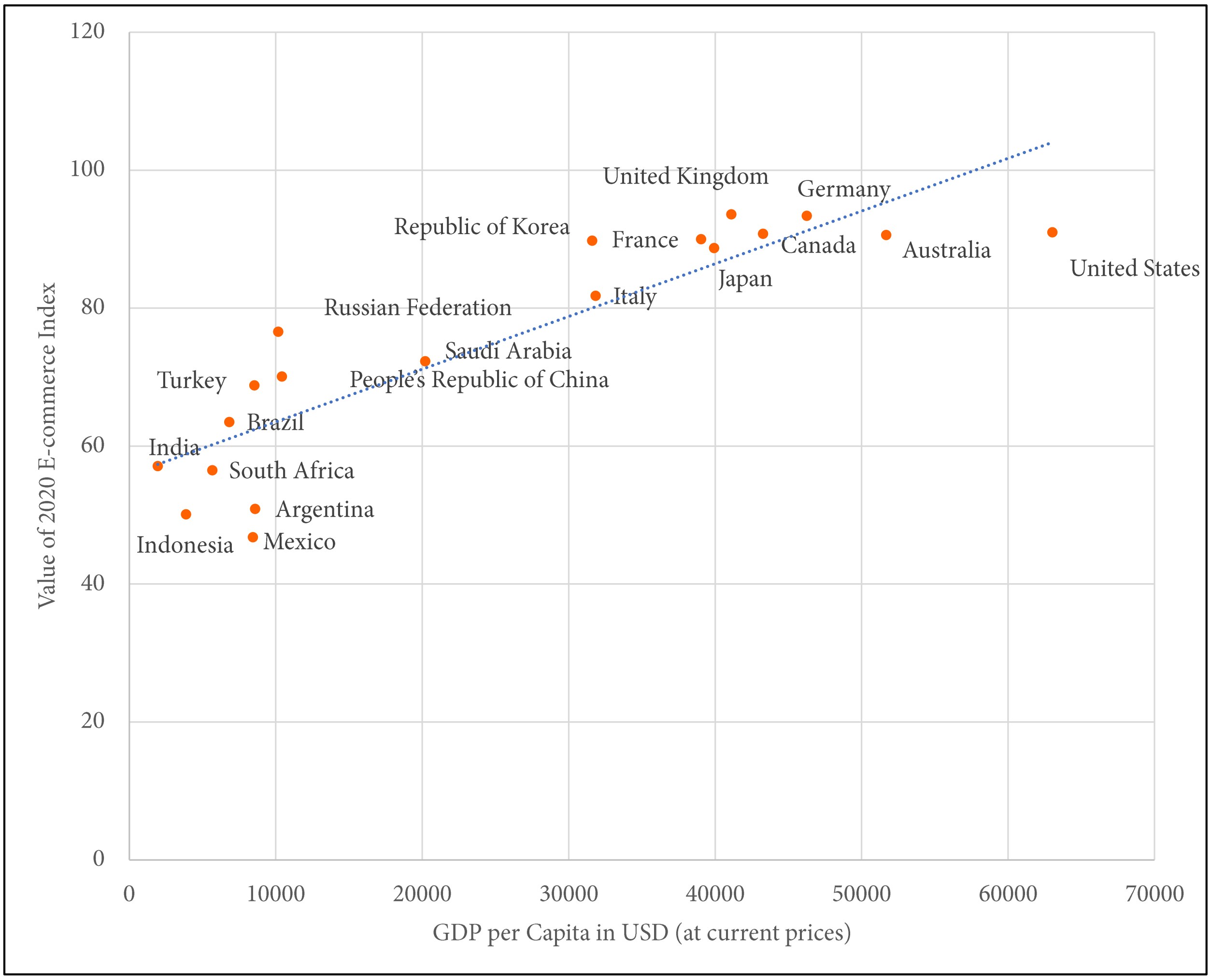
- Among the G20 members, countries with lower GDP per Capita exhibit a relatively low level of preparedness to support online shopping compared to the countries with higher GDP per Capita.
- Most emerging market economies of the G20 performed poorly on key indicators influencing e-commerce adoption, namely, Internet access and use, financial inclusion, postal reliability, and Internet security.
- E-commerce regulations have divergent policy objective across G20 members and are still evolving in many emerging market economies of the G20.
- Given the importance of e-commerce, particularly in the post-pandemic world, the G20 members must be encouraged to roll-out national e-commerce policies to support the growth of the sector.
- G20 members must cooperate to harmonise standards for digital infrastructure as they are instrumental in improving the quality of infrastructure, establish a common framework, and improve inter-portability.

identifies key constraints to e-commerce adoption in the comparatively poor performers..

2. Benchmarking E-commerce Adoption

The adoption and development of e-commerce in a country depends on a country's capacity or readiness to engage in the digital economy (United Nations 2021). The United Nations Conference on Trade and Development's (UNCTAD's) B2C e-commerce index measures a country's preparedness to support online shopping (Figure 1).

Figure 1: Mapping Score of G20 Countries on UNCTAD's B2C E-commerce Index against their GDP per Capita in USD (2020)



Note: The higher the value of index, the better prepared is a country to support e-commerce.

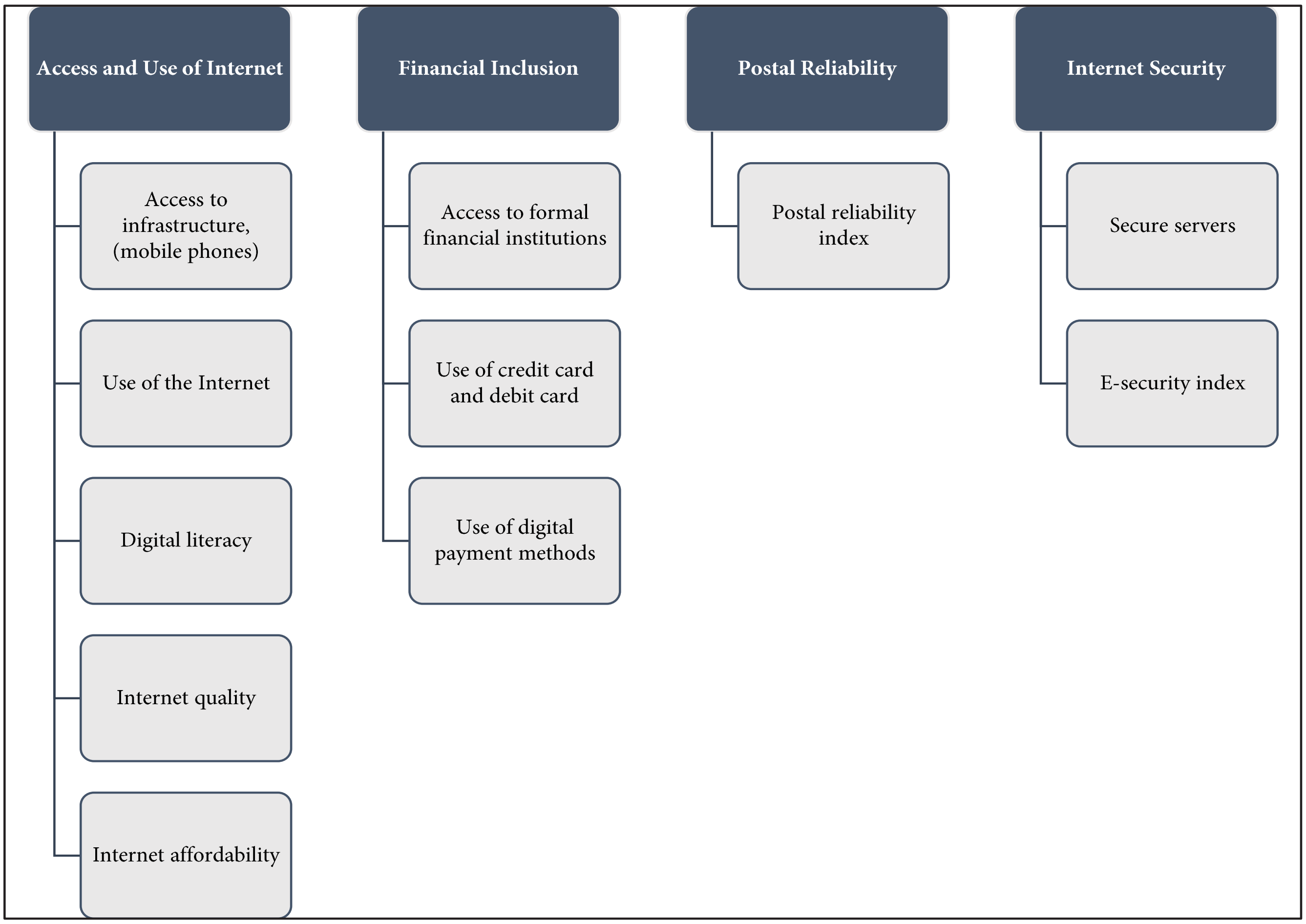
Source: GDP per Capita data are extracted from the World Development Indicators (2020) of the World Bank and the value of e-commerce index is compiled from UNCTAD (2021)

The figure shows that countries with lower GDP per Capita exhibit a relatively low level of preparedness to support online shopping while countries with higher GDP per Capita, such as the US, the UK, Australia, Germany, and Canada, are better prepared. Thus, the size of the market, as measured by the GDP per Capita, is an important determinant of e-commerce preparedness among the G20 members.

E-commerce opportunities depend on several factors. The UNCTAD B2C e-commerce index measures preparedness to support online shopping by taking a weighted average of four sub-indices related to four distinct parameters, including access to and use of the Internet, financial inclusion, postal reliability, and security of the network. For benchmarking e-commerce adoption in G20 countries, this paper uses the broad indicators identified by UNCTAD

(2021) for calculating e-commerce preparedness and builds on some of the indicators discussed in the existing literature. Below, Figure 2 gives a list of the indicators considered for benchmarking e-commerce adoption.

Figure 2: Framework of Indicators Explaining E-commerce Adoption



Source: Compiled by authors from UNCTAD (2021) and existing literature.

3. Stylized Facts

Existing data was collected and analysed for G20 countries across four broad parameters – access and use of the Internet, financial inclusion, postal reliability and Internet security.

Access and Use of the Internet: Among the G20 countries, India and Indonesia had the lowest proportion of individuals using the Internet in 2020. Compared to this, over 90% of the individuals in Saudi Arabia, Canada, the Republic of Korea, the United Kingdom (UK), and the United States (US) and Japan were using the Internet in the same year.

When it comes to enterprises, compared to developed economies, a smaller percentage of businesses in the emerging market economies have a website or homepage, and the percentage is even lower for smaller businesses. Moreover, overall, far fewer businesses receive orders online and the share of small businesses is even smaller. For India, ICRIER (2021) found that COVID led to a massive surge in the share of online sales of MSMEs that are integrated with e-commerce platforms.

As regards quality and affordability of digital services, all G20 countries scored poorly on the affordability parameter, with Mexico, Indonesia, Brazil and Saudi Arabia being the worst performers. Moreover, most emerging market economies including Mexico, Indonesia, Türkiye, India, and Argentina, are the worst in terms of quality. Among the G20 countries, the US, Japan, and Germany are among the best performers in terms of digital literacy, while India, the People's Republic of China (PRC) and Brazil are among the worst.

Financial Inclusion: Access to and use of formal and informal financial services and digital payments also affect the adoption of e-commerce, given that the sale and purchase takes place on computer networks. In 2021, on average, 76% of the global population had an account with a financial institution or mobile money. In most G20 countries, except Argentina, Indonesia, Saudi Arabia and Türkiye, the percentage is above the global average. Moreover, data show that the percentage of individuals with an account has increased in 2021 in most G20 countries, when compared to 2017.

There has also been an increase in the ownership of debit and credit cards among individuals above 15 years of age. Globally, the ownership of debit cards increased from 48% in 2017 to 53% in 2021. The ownership of credit cards increased from 18% to 24% during the same period. While most G20 countries are placed above the global average, Indonesia and India are among the worst performers and lie below the global average. Among the emerging market economies of the G20, the PRC has the highest use of digital payment methods, nearly on a par with developed countries.

Postal Reliability: Postal service quality in many emerging market economies is falling behind that of the developed members of the G20. In fact, in the last year, due to the COVID-19 situation, the overall postal development scores for most countries, including developed markets, have fallen, indicating a slackening of postal reliability.

Internet Security: Over the last decade, there has been a dramatic increase in the number of secure servers per million people in the world as well as in the G20 countries. Here again, developed countries have outperformed the emerging market economies. Moreover, most developed countries are doing better in terms of electronic security, when compared to emerging market economies in the G20. However, among the emerging market economies, India has scored relatively well on e-security index, indicating a comparatively better state of cybersecurity and data protection.

4. E-Commerce Regulations: Current Status and Divergences across Select G20 Countries

Globally, there is a divergence on larger policy objectives of e-commerce regulations. Existing literature suggests that there are three large digital domains—the US, the European Union (EU), and the PRC. Each of these digital spheres have different priorities, and on the basis of those priorities, e-commerce regulations are drafted in these countries/ regions. For instance, the European system is more human rights- and consumer-centric and thus, issues such as data protection and privacy are reflected in the policy priorities. The US system is committed to a market-driven architecture and has a business-centric approach, while protecting consumer rights. Compared to these two, the Chinese regulatory system is significantly drawn on protecting the sovereignty of the nation.

There is a myriad of regulations, often with conflicting objectives and without a common goal. Examining the legislations across the world, UNCTAD data reflects that 81% of the countries worldwide have adopted e-transaction legislations. Nearly 70% of the countries worldwide have adopted data privacy and protection legislation, while 80% have legislation to address cybercrime. Of these, a majority are developed countries.

In fact, in some countries, there is no single overarching jurisdiction or an e-commerce law that regulates business operations, but a series of regulations to meet specific objectives. While there is no dearth of regulations on e-commerce business, nevertheless a uniform approach for regulating e-commerce operations is missing in the case of some countries. The absence of a single law or policy on e-commerce operations has several adverse implications on the ease of doing business, particularly from the perspective of smaller enterprises. The impact of this regulatory patchwork often translates into a higher cost of compliance.

5. Constraints to E-commerce Adoption

E-commerce preparedness is low amongst emerging market economies, as compared to developed countries. Several factors affect the preparedness of emerging market economies for adopting e-commerce. These include low usage of the Internet, digital illiteracy, lower levels of financial inclusion as compared to developed countries, and poor postal reliability, among others.

The stylised facts presented in the paper found that most emerging market economies perform poorly in terms of Internet use. There is inadequate digital infrastructure in most of these countries, including insufficient digital assets and sparse digital technology adoption, especially at the household level.

Moreover, emerging market economies are inhibited by poor Internet quality. To conduct basic online shopping for 40 minutes a day, it takes a standard of 1.5 gigabyte Internet per month at a speed of 3 megabytes per second. Most emerging market economies do not have that, which acts as a constraint to e-commerce adoption in these countries.

This is compounded by low digital literacy. Emerging market economies have scored relatively low on digital literacy and overcoming this is important for enhancing e-commerce adoption, particularly in these countries.

Low use of digital payment methods is another factor inhibiting higher e-commerce adoption in emerging market economies. Importantly, it is observed that sellers or businesses in emerging market economies are still not accustomed to receiving payments using digital payment methods as the percentage of individuals receiving digital payments is very low. Thus, low firm-level readiness is a constraint to e-commerce adoption in emerging markets.

Electronic security is a major concern for businesses, and in most emerging markets data protection laws are still in progress, which adds to regulatory uncertainty.

6. Role of the G20

The paper makes the following recommendations for the G20.

- Encourage national e-commerce policies to support the growth and development of the e-commerce sector;
- Establish common data collection and reporting mechanisms on parameters related to e-commerce adoption;
- Bridge the adoption gap, especially for enterprises and segments that are vulnerable to digital transformation, such as MSMEs;
- Enhance digital financial inclusion by promoting digital financial literacy;
- Promote harmonized standards for digital infrastructure.

7. Conclusion

Poor access and use of the Internet, limited financial inclusion, and regulatory bottlenecks are some factors constraining the adoption of e-commerce in emerging market economies. As a forum that brings together diverse communities, including leaders, policymakers, the private sector, and civil societies, among others, from developed countries and emerging market economies, the G20 is uniquely placed to bridge the gap in adoption.