A Cross-Regional Analysis of Cybersecurity Practices, Regulatory Policies, and Market Dynamics in Global E-Business

[1]Anandakumar Haldorai and [2]Evelyn Sharma
[1]Centre for Future Networks and Digital Twin, Sri Eshwar College of Engineering, Coimbatore, Tamil Nadu, India.
[2]University of North Dakota, Grand Forks, ND 58202, United States.
[1]anandakumar.h@sece.ac.in, [2]sharmaind5450@hotmail.com

Correspondence should be addressed to Anandakumar Haldorai: anandakumar.h@sece.ac.in

Abstract – In this study, we analyze the critical issues of multi-national e-business using a cross-regional approach. This method surveyed South Asian, African, Latin American, Asia-Pacific, European, and North American firms to retrieve quantitative and qualitative data. Our findings show that technological issues are the most prevalent, with approximately 68% of firms confirming their struggle with cyber threats, while 54% faced issues adopting novel technologies. In addition, 62% of interviewed individuals reported that compliance to regulations is a critical issue, while 68% reported issues accessing the required infrastructure. Lastly, there was unstable customer trust, and rising financial challenges, which limited efforts channels at mitigating cyber threats. Our study indicates a high degree of geographical distinction, and therefore context-specific solutions should be applied to effectively deal with e-business adoption globally.

Keywords – Global E-Business, Cybersecurity, Regulatory Compliance, Cross-Border E-Commerce, Infrastructural Challenges, Consumer Trust, Mixed-Methods Study.

I. INTRODUCTION

The increasing importance of e-commerce can be witnessed by the increase in electronic retail sales globally, which were recorded in 2016 as US $1,115.7 billion to approximately $3.5 trillion in 2019. This drastic development of e-commerce is stimulated by the wide-spread utilization of the information technology and the rising availability of mobile devices. These devices are amplified the number of internet users and introduced alternative channels of trading across different sectors such as apparel, literature, and groceries.
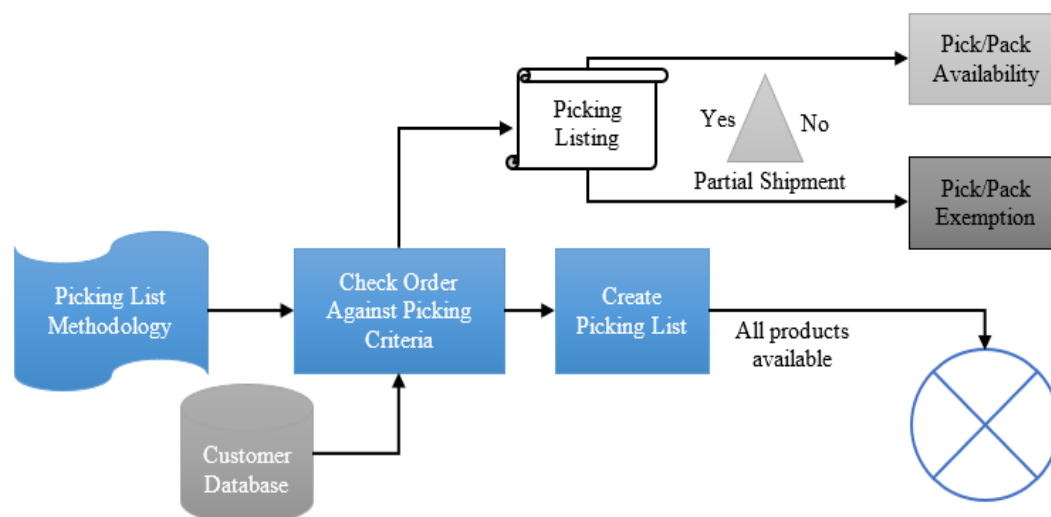

Fig 1. The Process of E-Commerce Business

Journal of Enterprise and Business Intelligence 6(1)(2026)

According to study in [1], apparel is one of the major electronic retail categories, which engage approximately 57% of web users globally. However, the overall number of small and medium enterprises (SMEs) that have embraced this technology is still significantly low compared to larger organizations. According to research by Phan [2], the merits of e-business are illustrated as the advantageous impacts of e-business innovations on various business processes in **Fig 1**.

Value chain models have been employed by many organizations to effectively identify the measure at which e-business can be based on. This model segments these processes into 5 major sections, which include sales/marketing, services, outbound logistics, operations, and inbound logistics; as well as 4 supporting fields, such as procurement, technological development, human resource management, and firm infrastructure. Thus, the integration of value chain activities is a major measure of the advantages brought by e-business. Major variables that represent e-business advantages are divided into 9 major variable quantities each of which signify the effect of e-business on particular value chain processes.

Nonetheless, there are some disadvantages that have been witnessed in e-business transactions. One of the major issues is cybersecurity, which significantly affects the adoption levels of electronic retailing. Many firms that are digitizing their operations are more susceptible to cyber-attacks such as ransomware, phishing, and data breaches. Stringent cybersecurity protocols are essential in safeguarding sensitive data and ensuring consumer confidence is restored and advanced. In addition, enterprises need to address the available digital gaps, since inequalities in technology proficiency and access might limit the adoption of e-commerce activities. It is fundamental to allocate enough resources towards change management and training programs. Without that, firms will witness opposition to change at both individual and organizational levels [3].

In this work, we review consumer, financial, infrastructural, regulatory, and technological challenges of e-business at different market environments and regions. Using a cross-regional mixed-methods technique, our review focusses on the degree of the prevalence of key obstacles and describe the manner in which these issues differ according to geographical regions and firm size. Resultantly, this provides insights that determine context-aware methodologies towards sustainable multi-national e-commerce adoption.

In Section II, we review various conceptual definitions of e-commerce, its adoption levels, barrier to adoptions, and various risks involved when using this technology. The methodology used in this study has critically been described in Section III. It defines the design of the review process, its sampling approach, data gathering process, analysis, and quality assurance ethics involved. In Section IV, we provide a detailed account of our findings, which shed light on technological challenges faced during the implementation of e-business, as well as both market and regional variations in these challenges. Lastly, our study is concluded in Section V by highlighting the implications of multi-national e-commerce, survey data, and interviews from distinct regions and marketplaces.

II.   LITERATURE REVIEW

Conceptual Definitions and E-Business/E-Commerce Scope

Many scholars have attempted to define the distinctions between e-commerce and e-business, which is typically ambiguous. Holsapple and Singh [4] used the term 'electronic business' interchangeably with 'internet commerce' and 'e-commerce' to describe business processes and activities, which are done via the web. On the other hand, Youssef [5] and Soliman [6] focuses their research on 'internet commerce' defining it as the dissemination of organizational data, enhancing business relations, and business transactions by using web-based technologies.

E-commerce has been widely employed globally. **Fig 2** illustrates the yearly rise in e-commerce revenue rate in United States of America and the rest of the world.
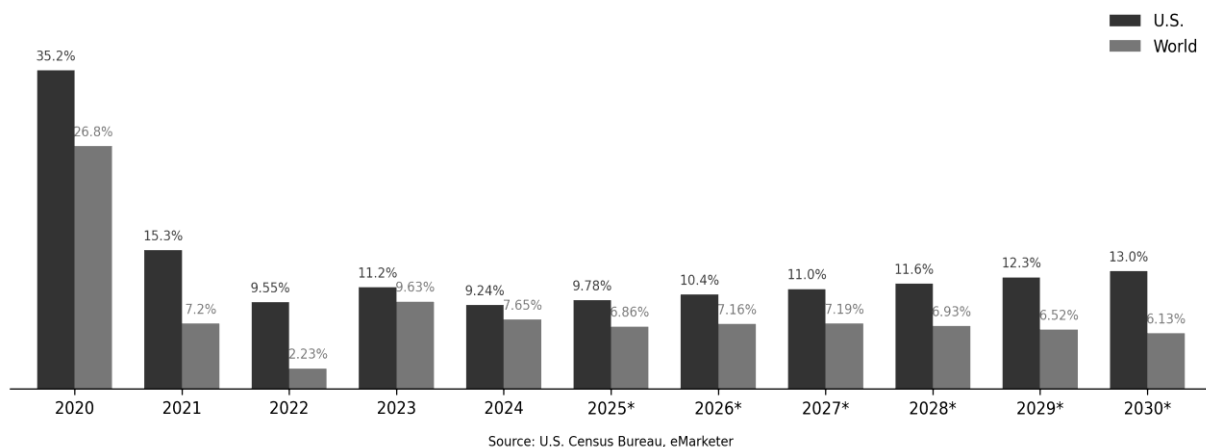

Source: U.S. Census Bureau, eMarketer

Fig 2. Yearly Business Growth of E-Commerce

Zheng et al. [7] defines 'e-commerce' as the exchange of services, goods, and information via computer networks, majorly the web. These scholars build on prior understanding to cover Intranets and emails in sharing information within the firm's stakeholders. IT (information technology) has been described in [8] as a method via which organizations conduct their

businesses and achieve competitive advantage. All these authors agree that 'e-commerce, 'World Wide Web', and 'internet' can be used interchangeably.

Adoption of E-Business Among Small Firms

Chatzoglou and Chatzoudes [9] provide insightful data to comprehend the adoption challenges of e-business, which small firms in both developing and developed countries have faced for over a decade. Even though previous literature has provided significant insights, minimal efforts have been done to reduce the cost issues linked to e-business adoption among small enterprises. Most of these literature works concentrated on determining the obstacles of its adoption, website adoption drivers, adoption patterns, and the perception of issues to e-business adoption.

For instance, Abdullah et al. [10] do not provide a remedy to cost issues. Instead, their study outlines the challenges that may be evident in different e-business adoption stages. These scholars provide a timeframe that may assist enterprise to effectively adopt e-business. Nonetheless, their concentration is majorly on operational expenses rather than methods or costs linked with the implementations of e-commerce in small businesses. According to Stockdale and Standing [11], the expense obstacles significantly deter small businesses, and have to be addressed. During their study, neither the data regarding how presently successful smaller firms had minimized the expense barrier, nor information regarding the best methodology to employ was scarce.

Obstacles to the Adoption of E-Business

Fillis, Johansson, and Wagner [12] described various challenges faced when utilizing e-commerce technology. Just like their analysis of e-business advantages, these scholars did not clarify whether challenges vary depending on the size of the enterprise. However, the main barriers recorded included insufficient time for e-business adoption, major intricacies involved in implementation process, and increased costs linked to these technologies. It is believed that different obstacles may be efficiently controlled by major firms due to their accessibility to experience and resources. Due to major limitations to resources, the level of technological adoption in small enterprises varies compared to large ones.

Ifenedo [13] reviewed the issues experienced by SMEs in adopting e-business technologies. According to the author, these enterprises face obstacles that are identified in most SMEs literature works. Nonetheless, there is a divergence point over the recorded obstacles. The authors also record the unwillingness of the management to engage in e-business as a key obstacle. On the other hand, Fillis, and Johansson [14] highlight that adoption obstacles between SMEs suppliers and consumers can be different. These scholars concluded that the obstacles between these two parties are yet to be addressed. Moreover, it is unclear whether these obstacles have any major effect on decision-making phases or processes during the implementation of this technology on an organizational level.

Designing an e-business approach as an element of the value chain in a firm can be a critical investment in DE exportation, which will necessitate more than just having an organizational meeting. It necessitates a continuous approach of collaborating with all relevant firm stakeholders, including human resource, and relevant IT experts, which can be costly to hire and maintain. Whenever a specific technology is needed to conduct a secure e-business, the SME exporter resource base has to be equipped with required skills to effectively manage and implement it, which in turn requires financial investment.

In order to enhance electronic financial transactions, these exporters should not only require finance, but also the ability to establish user trust and enhance reputation. As a result, it might be necessary to strategically analyze e-business potentials and establish collaboration with key financial service providers such as insurance firms, banking systems, and other non-banking institutions. As these firms shift to a deeper phase of e-business transformation, driving forces transit towards not only to technological systems, but also organizational resources like funds, management skills, and IT-business expertise.

E-Commerce Privacy, Security, and Cross-Border Risk

Hu and Xu [15] supported their study by commenting that information leakage has been diverse in various cross-border e-business platforms. These platforms are loaded with large volumes of data such as customer addresses, and payment records, which make them a regular target by cyber attackers who are interesting in hacking payment systems and servers. Data leakage can significantly expose users' bank accounts as well as personal data of potential users. The disclosed data can include geographical location, data of birth, email address, phone numbers, and their usernames. This challenge has over the years sparked massive debates concerning the rights to privacy and implementation of laws meant for data protection globally. In their study, the scholars concluded that many countries seek to strengthen existing laws and measures that minimize these violations.

The issues discussed by the above authors are solely not for consumers alone since they can escalate to litigation. Moreover, the variations between data privacy protection stands of various countries complicate the process of compliance management. The EU's General Data Protection Regulation (GDPR) has come a major data protection protocol necessitating firms to establish favorable conditions such as Data Protection Impact Assessment (DPIA) and Standard Contractual Clause (SCC) to enhance international data transfer compliance. If firms do not abide to GDPR provisions, they can heavily be fined. However, reasons for fine imposition can vary depending on country, and according to data and privacy protection requirements by GDPR and CCPA.

Consumer Trust, Perceived Risks, and Cultural Difference in Global E-Commerce Platforms
In reference to study by Wang, Cavusoglu, and Deng [16], many e-commerce platforms with secure payment processes and are user-friendly have a competitive advantage. Therefore, both related works on cultural difference and e-commerce continue to expand in relation to increasing inquiries from field practitioners. However, there is still scarcity in research regarding the connection between culture and different consumer evaluation metrics regarding online perceive threat, truest, and usability. The element of culture and its theory have been employed by globalists to evaluate market entries through physical retail shops and to design communication plans. Even so, literature on e-commerce is majorly focused on reviewing the behavior of consumers and its dynamics in western countries, which are mostly developed.

Few scholars have reviewed how the global landscape of the web complicates the enhancement of consumer trust. Conventional marketing contexts show that customer trust is mostly enhanced when the customer has an inherently positive perception towards trust, engages with professional salesperson, or has initially engaged with merchants, is protected by legal/social systems, and project long-term relationship with merchants. When consumers are distributed globally, these sources of trust are not readily available for merchants to leverage.

In reference to Schumann et al. [17], the key principles of trust may vary depending on country. Consumers from individualistic countries can have a higher trust tendency and are most disposed to depend on their faith in the merchant concerning components derived from interpersonal websites. However, this is different for consumers in collectivistic countries. These scholars discovered that impersonal and personal sources of data had certain implications on individuals across distinct cultures. Empirical study concerning how a nation's culture impacts trust and relevant trust-building frameworks has been requested by Doney, Cannon, and Mullen [18].

III.   METHODOLOGY

We employed mixed-methods study design, which integrates a special methodology meant to assess consumer-based, financial, infrastructural, regulatory, and technological challenges in e-business globally, in relation to the size of the firm (see **Fig 3**). Our approach corresponds to the need to evaluate the approximate number of key threats (such as cyberattacks, regulations, logistics, technological adoption, etc.) and to justify the disparities witnesses in regions discussed in Section IV.
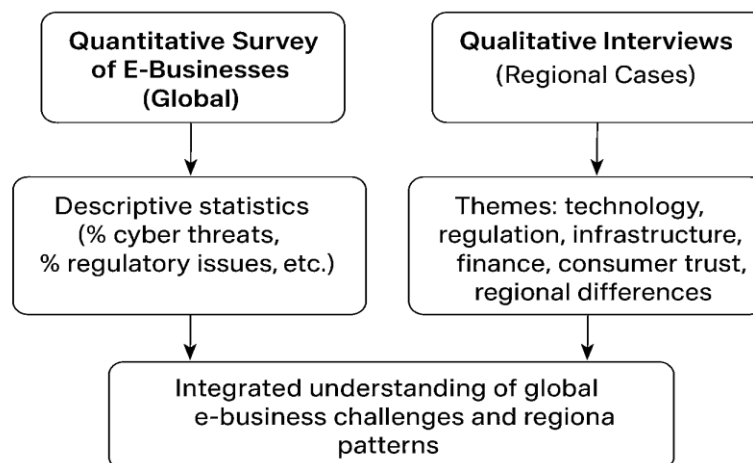

Fig 3. Study Design of Global E-Business Issues

Study Design
In this study, we configured a mixed-methods approach to integrate structural survey according to quantitative research that complement semi-structured qualitative interviews. We quantified a significant number of companies facing particular challenges, i.e., 68% facing cyberattacks, 54% facing technological adoption issues, 62% facing regulatory compliance issues, etc. Our qualitative data revealed contextual examples regarding why and how these issues manifest in countries such as India, Canada, Nigeria, Brazil, and other countries.

Study Regions, Sampling, and Population
Our sample population integrated businesses engaged with online selling and delivery of digital products and services. These were SMEs and large organization in South Asia, Africa, Latin America, Asia-Pacific, Europe, and North America. We employed an eligibility criterion that required respondents to be directly involved in online strategic decision-making, technology, and operations to provide accurate feedback on consumer behavior, financial consideration, infrastructure, regulatory compliance, and cyber threats.

We also adopted a purposive sampling methodology to access companies, which are exposed to domestic and cross-border businesses, mostly in new markets that have improved regulatory, and high infrastructural challenges. Our final sample (as it denotes in our regional stories and percentages) registered variation not only among developed settings (such

as Australia, South Korea, Japan, EU, and North America) but also in developing/new settings (such as Sri Lanka, Bangladesh, India, Kenya, Nigeria, Argentina, Mexico, Brazil).

Data Collection Processes
Quantitative Survey
We designed a questionnaire into a structured version to evaluate the prevalence and severity of particular e-commerce challenges on 7 major fields, such as consumer, cultural, economic, financial, infrastructural, regulatory, and technological components in **Table 1**.

Table 1. Methodological Configuration

Component	Details
Major focus	Consumer, cultural, economic, financial, infrastructural, legislative, and technological issues in e-commerce.
Analysis unit	E-commerce firms (both big and small) that conduct business across borders and online.
Geographic region	South Asia, Africa, Latin America, Asia-Pacific, Europe, and North America, as evident in Section IV.
Approaches	Semi-structured interview and online polls, which investigated disparities and challenges across different regions.
Output	Percentages of major types of issues (trust, finance, infrastructure, regulatory compliance, tech integration, and cyber risks), including statements from individuals in different countries.

The questionnaire required participants to rate how often their business has experiences challenges such as integration of novel technologies (blockchain, AI); cyberattacks (data breaches, hacking, and ransomware); regulatory issues (cross-boarder trade protocols, GDPR); infrastructural issues (supply chain, logistics, internet quality), or had general consumer issues (willingness to purchase online, trust). Digital surveys were conducted to show the digitality of targeted businesses and also to access participants in different regions. Responses provided descriptive statistics, which we employed in Section IV.

Qualitative Interviews
We selected a particular group of participants to interview them in semi-structured sessions, which enhance collaboration in surveys that seek to comprehend market and regional variations. Our interview questions are in correspondence to survey regions and required respondents to explain their perception regarding sophisticated cyberthreats in North America, their coping mechanisms with GDPR, and how they solved cross-border logistics within the Asian-Pacific region. In addition, the questions focused on addressing logistics and connectivity issues in Africa and Latin America, and overcome regulatory and infrastructural issues in South Asia.
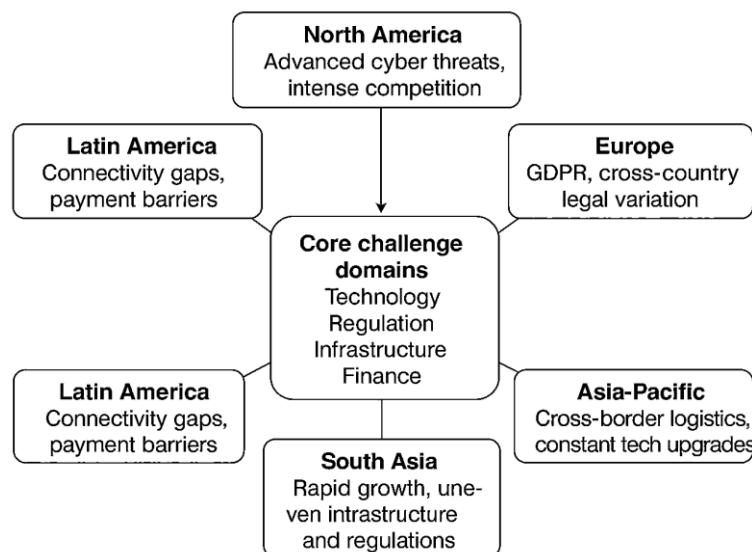

Fig 4. E-Business Adoption Issues

Our interviews provided a nation-wide account with highlighted that Brazilian companies find it challenging to access rural marketplaces. On the other hand, Nigerian firms face issues with poor internet connectivity. The UE and Canadian participants discussed about continued consumer trusts, and compliance issues, while South Asia and India commented about

regulatory liberalization, and infrastructural issues. Semi-structured interview formats compared different regions effortlessly, and provided an opportunity to add new industry-specific themes such as fintech compliance and fashion trends.

Data Analysis

We analyzed our descriptive statistics data using percentages and frequencies to effectively quantify the number of firms that faced each type of challenges reported by respondents. The findings in Sectio IV show that majority faced cyberattacks as a significant technical issue, which some reported infrastructural issues. Our thematic analysis was achieved using transcripts, with particular codes retried from the surveyed regions, and industry-based themes identified above. These themes were then reviewed by different regions to clarify why logistics and infrastructure were viewed as significant in Latin America and Africa, while cybersecurity and regulatory compliance issues were witnessed in North America and Europe.

Ethics and Quality Assurance

We review every challenge in **Fig 4** in order to determine internal consistency against standard reliability statistics to ensure items such as regulatory or technological issues were consistent. In order to determine content validity, different items were matched to existing literature to existing obstacles to e-business in developed and developing markets. Moreover, this was refined using repeated cycles to effectively fit certain challenge groups (consumer, cultural, economic, financial, infrastructural, regulatory, technological) identified in our study.

IV. RESULTS AND DISCUSSION

Our findings reveal significant technical issues that e-businesses face, as depicted by both qualitative and quantitative data illustrated in **Fig 5**. It is significant to note that approximately 68% of participants shared their views on data breaches, hacking, and ransomware attacks, which significantly undermine the reputation of a firm. Model cybersecurity approaches are therefore needed to mitigate these attacks. Nonetheless, various firms still face challenges implementing necessary mitigating efforts. Our results are consistent with global patterns of cyberattacks happening in various businesses.
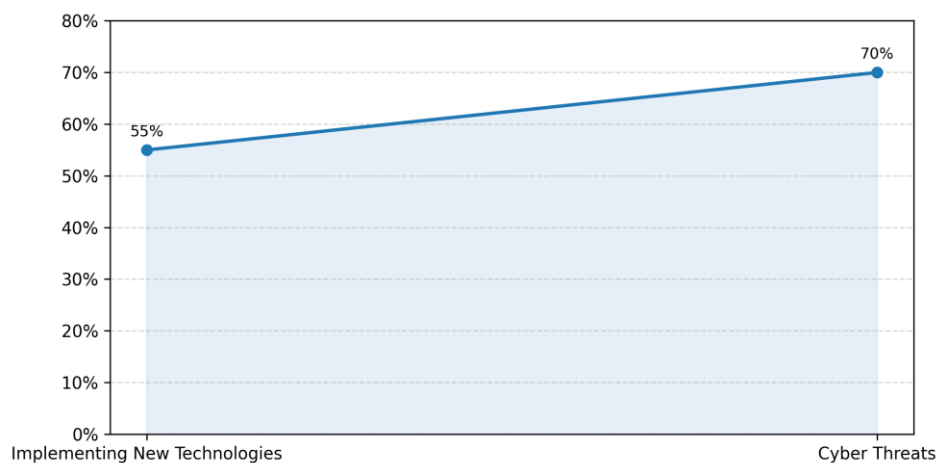

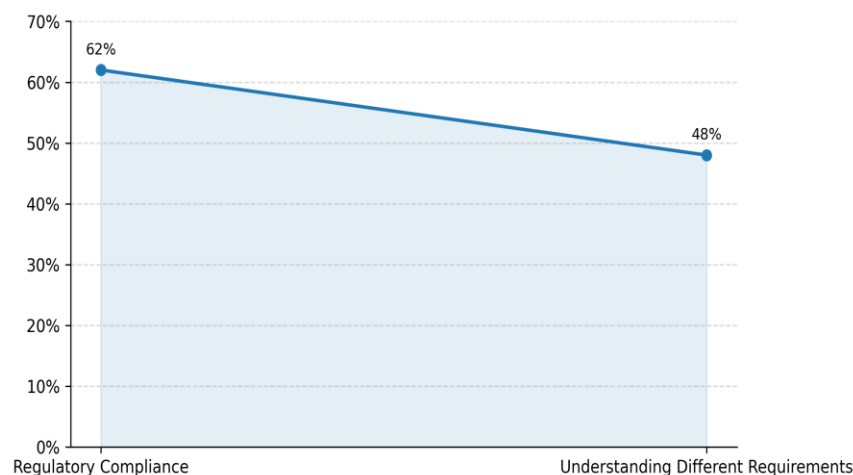**Fig 5.** Technological Adaptation Issues

Fig 6. Regulation Issues to E-Business Adaptation

In addition, approximately 54% of participants commented that they face issues integrating novel technologies into their present business processes. This is even worse for SMEs, which typically do not have the required technological knowledge and financial capital required for such business transitions. However, 1 Brazilian SME reported deploying high development technologies, like blockchain and AI. In reference to the surveyed data, large firms and SMEs differ when in comes to integrating novel technologies in modern digital ecosystems.

Technological Challenges of Global E-Business Adaption
Regulatory Issues
For many decades, regulation has been a major concern in e-business implementation. **Fig 6** shows the regulatory challenges faced using adaptation. The principal issue raised by 62% of interviewed participants was compliance to regulations. Evidently, there was stringent compliance to GDPR in the EU. In addition, 47% of firms actively engaged in cross-border e-business has an issue comprehending trade tariffs, customs, and regulations in other countries. One of the participants at a firm located in the EU highlighted that distinctions between the legal the legal protocols in different member states, as well as GDPR, complicate compliance without the assistance of legal counsel. In addition, the increase of regulatory issue is the dynamic state of rules and regulations determining the marketplaces, which may necessitate long-term efforts to change.

Infrastructure Issues
Fig 7 illustrates the infrastructure issues faced by firms. Barriers to e-business implementation have been experiences by majority of poor nations. Technology and the Internet has sparked significant developmental issues, according to 58% of participants in Latin America and Africa. In addition, half of the participants showed that supply chain and logistics challenges results to high costs and delays. A respondent in Nigeria reported that patchy connectivity is an issue in most areas, especially when it comes to effective communication and marketing with customers. Our study showed that poor infrastructure upgrades slow down accessibility to the market resulting to reduced productivity and enhanced operating expenses.
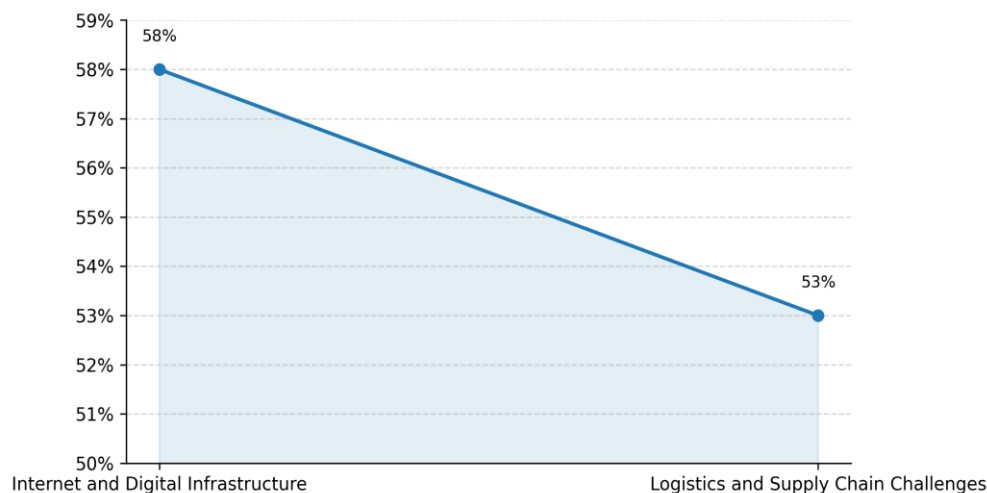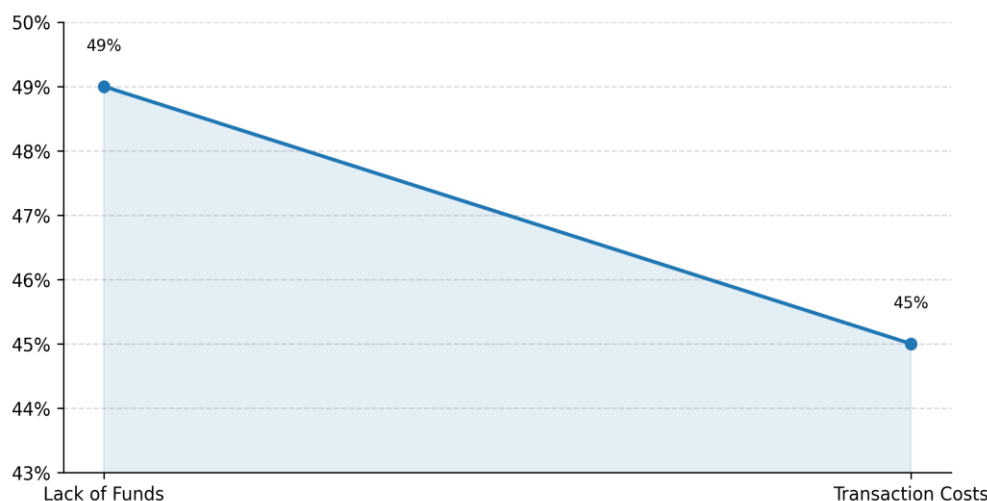

Fig 7. Environmental Issues

Fig 8. Financial Issues

Financial Issues

Our survey indicate that e-business are susceptible to number cyber risks, which can be grouped into consumer-based, economic, cultural, financial, and technical factors. Technical challenges such as cyberattacks (68%), and issues with adopting novel technology (54%) were also a technical challenge in many SMEs. In reference to **Fig 8**, approximately 49% of participants showed that they could not grow their firms or enhance their technological adoption due to financial limitations, while 45% revealed that high transaction costs were a major concern. Integrated with economic issues during marketing in merging nations, such as high inflation rates and currency variation, which make it challenging to plan long-term, there are cultural distinctions that necessitate products and marketing tactics to be modified to conform to local consumer value.

Consumer Issues

The challenges that come with customers have been displayed in **Fig 9**. Incapability to cope up with the changing consumer demands (48%) and lack of trust (55%) were two major consumer-based challenges. In that regard, firms faced continued internet fraud and cyber threats. These limitations to expansion and technological innovation depend on the size of the business or its location. To effectively address these issues and guarantee progressive e-business growth on a global scale, particular tactics, additional investment in new technology, emphasis on consumer truest, and cultural diversity are fundamental.
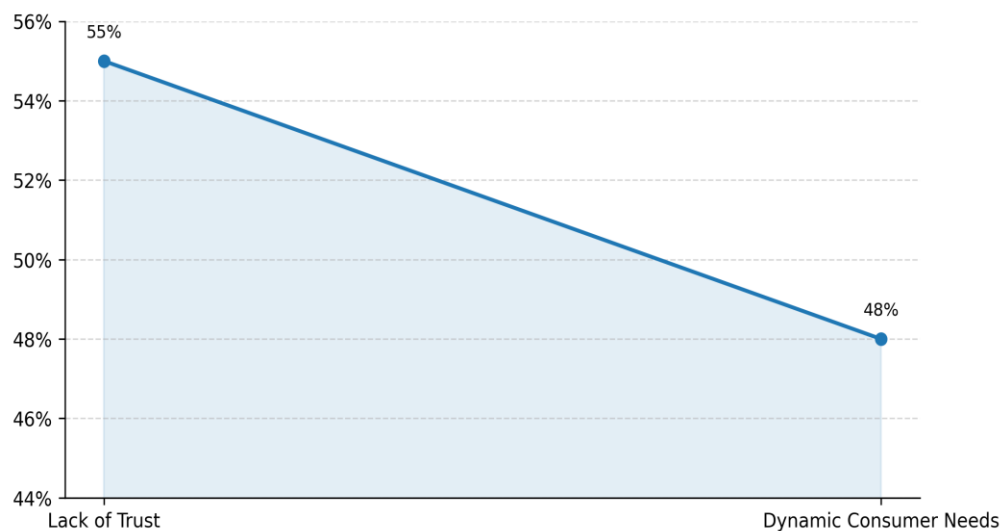

Fig 9. Customer-Related Issues

A Canadian participant demonstrated that the challenge of customer trust is here to stay, since a major section of users globally still avoid online shopping because of its general risks of cyberattacks, mostly when referring to unpopular firms. Therefore, it is fundamental for firms to invest more on client demand, and market research to survive in the current competitive digital market. This research shows that global e-businesses face complex issues depending on business size and region. These issues necessitate businesses to formulate novel methodologies and allocate technological resources that mitigate them effectively.

Market and Regional Distinctions

E-commerce enterprise issues vary based on markets and geographical regions stipulated by technological disparity, cultures, economic stability, infrastructure, and legal systems. These disparities necessitate customizes plants to traverse the challenges, benefits, and offers in certain regions and local marketplaces.

Marketplace and Region Disparities in E-Business Adoption
Latin America

To penetrating the Latin American Market, e-business firms have to encounter novel linguistic, socio-economic, and cultural challenges. Contrary to certain beliefs, Latin America is not considered monolithic. It is a combination of sovereign states whose topographical dimension is diverse and complex, and whose cities are interlined ineffectively, and lack the accessibility to navigate ports, canals, and advanced air transportation.

These regions have mixed marketplaces, which by sharing one language (except Brazil) differ in demographic, technical, cultural, political, and economic factors. It is also significantly easier to assume that the Spanish spoken in Latin America is monolithic, or bear a single slang style or accent dominating the entire region. Idioms used in Spain do not have 17 different countries, as words have distinct meaning in various regions that can prove to be a challenge with e-businesses trading in Latin America.

E-businesses targeting Latin America should note that internationalization of global development and regulatory dynamics does not ensure regional prosperity. Even country in Latin America has to meets its own economic and cultural challenges. Effective e-commerce takes a holistic perspective of their actions and realisms of the web. In order to remain competitive within Latin American marketplace, e-business players have to come up with measures of providing new value and innovation to potentially hesitant or conservative customers.

This becomes evident in Argentina, Mexico, and Brazil, where users subscribe to cellphone and internet services for online shopping. However, the restrictions of physical infrastructure, such as logistical and internet connectivity systems, might speed up growth. Another obstacle affecting e-business in this domain is the deficiency of digital literacy and challenges related to payment frameworks. Firms commented that it was significantly difficult to service rural and inaccessible areas during to poor internet connectivity. According to an entrepreneur in Brazil, firms encounter issues when entering rural markets due to inadequate logistics, and poor internet access. As a result, it is challenging to initiate e-business activities.

Asia-pacific

Advanced markets such as Australia, South Korea, and Japan have advanced technological platforms and high e-business service demand, particularly in Asia-Pacific areas. Nonetheless, these Asian economies face issues in cybersecurity, and global trade. South Korean and Japanese e-businesses faced issues handling the complexities of cross-border laws and logistics in regards to regional trade partners. In addition, provided the dynamic technology-based ecosystem, continued development is necessary. According to an interview with a South Korean firm's spokesperson, the connection between cross-border trade policies and regulations is both cumbersome. In addition, the spokesperson cited the need to increase the speed of technological adoption in the wake of competitive rivalry.

Africa

Various African countries show a lack in the 'novel end-user technologies', which define the current e-business landscape. This problem is mostly exacerbated with internet-related technologies. Africa has always been regarded in a 'catch-up' position regarding the implementation of advanced technology. Internet services in various African nations are featured by bandwidth constraints, which lead to ineffective and sluggish connections. A respondent asserted that a country's total population can have merely 256 kb/sec, similar to a single 'baseline local broadband connection' in many developed countries.

The lack of ICT expertise has been a major contributing factor to the growth of Africa's digital divide. A major segment of Africa's population does not have the required expertise in using various technologies such as Internet and computers. This emanates from the widespread lack of ICT education and training. Cultural dynamics have, to a particular level, limited ICT competency in Africa. In multiple responses, interviews posited that face-to-face transactions are preferred to technological approaches, which are considered unwelcoming and impolite. This position may be valid in scenarios when communities prioritize preserving traditional practices, such as negotiation handshakes.

South Asia

In many South Asian countries, Inda tops the list in e-business dues to its large population and rapidly increasing adoption to new technologies. Standards and policies, which enhance computer literacy, alongside efforts to minimize the gad between uniformed users and information bearers are critical to the development and expansion of e-commerce in this region. Nonetheless, infrastructural deficiency and regulatory constrains will impede growth. In [19], an Indian businessman commented that government initiates are advantageous, but there are still existing issues with overwrought procedures and infrastructure. This significantly refers to Sri Lanka and Bangladesh where restrictive legislations and insufficient technological support are the dominant concerns that e-businesses have to mitigate.

V.   CONCLUSION

Lastly, our study underscores cross-border research of issues affecting multi-national e-businesses. Our findings reveal that many of these barriers include technological obstacles such as cyberattacks, technology infrastructure, budget constraints, consumer trust, and regulatory compliance. Even though no firm is immune to these obstacles, the depth of their impact is different according to company size and geographical location. High-tech e-businesses face more cyber attaches, and regulatory issues, whereas those in developing nations are constrained by web connectivity, logistical, and infrastructural issues. In addition, the scarcity of resources is mostly faced by SMEs in developing countries. The insights from this study underscore the need for firm- and region-based policies and strategies that will mitigate these issues and enhance competitive rivalry and sustainable development.

CRediT Author Statement
The authors confirm contribution to the paper as follows:
Conceptualization: Anandakumar Haldorai; **Methodology:** Anandakumar Haldorai; **Writing- Original Draft Preparation:** Anandakumar Haldorai and Evelyn Sharma; **Supervision:** Anandakumar Haldorai; **Writing- Reviewing and Editing:** Anandakumar Haldorai and Evelyn Sharma; All authors reviewed the results and approved the final version of the manuscript.

Data Availability
The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interests
The authors declare no conflict of interest

Funding
No funding agency is associated with this research.

Competing Interests
There are no competing interests.

References

[1]. S. Mostafa, P. Palmer, and Q. Nguyen, "Evolution of E-Commerce in Business: A Review," The Palgrave Handbook of Breakthrough Technologies in Contemporary Organisations, pp. 341–355, Jan. 2025, doi: 10.1007/978-981-96-2516-1_27.

[2]. D. D. Phan, "E-business development for competitive advantages: a case study," Information & Management, vol. 40, no. 6, pp. 581–590, Apr. 2003, doi: 10.1016/s0378-7206(02)00089-7.

[3]. M. L. Marks, "A framework for facilitating adaptation to organizational transition," Journal of Organizational Change Management, vol. 20, no. 5, pp. 721–739, Aug. 2007, doi: 10.1108/09534810710779126.

[4]. C. W. Holsapple and M. Singh, "Toward a unified view of electronic commerce, electronic business, and collaborative commerce: a knowledge management approach," Knowledge and Process Management, vol. 7, no. 3, pp. 151–164, Jan. 2000, doi: 10.1002/1099-1441(200007/09)7:3.

[5]. F. Soliman and M. A. Youssef, "Internet-based e-commerce and its impact on manufacturing and business operations," Industrial Management & Data Systems, vol. 103, no. 8, pp. 546–552, Nov. 2003, doi: 10.1108/02635570310497594.

[6]. K. S. Soliman, "Internet-Based Business-To-Business Electronic Commerce: A CIO's Perspective," Information Systems Management, vol. 20, no. 1, pp. 35–41, Jan. 2003, doi: 10.1201/1078/43203.20.1.20031201/40082.5.

[7]. Q. Zheng, S. Li, Y. Han, J. Dong, L. Yan, and J. Qin, "Fundamentals of E-commerce," in Introduction to E-commerce, 2009, pp. 3–76. doi: 10.1007/978-3-540-49645-8_1.

[8]. T. C. Powell and A. Dent-Micallef, "Information technology as competitive advantage: the role of human, business, and technology resources," Strategic Management Journal, vol. 18, no. 5, pp. 375–405, May 1997, doi: 10.1002/(sici)1097-0266(199705)18:5.

[9]. P. Chatzoglou and D. Chatzoudes, "Factors affecting e-business adoption in SMEs: empirical research," Journal of Enterprise Information Management, vol. 29, no. 3, pp. 327–358, Apr. 2016, doi: 10.1108/jeim-03-2014-0033.

[10]. Abdullah, B. Thomas, L. Murphy, and E. Plant, "An investigation of the benefits and barriers of e-business adoption activities in Yemeni SMEs," Strategic Change, vol. 27, no. 3, pp. 195–208, May 2018, doi: 10.1002/jsc.2195.

[11]. R. Stockdale and C. Standing, "A classification model to support SME e-commerce adoption initiatives," Journal of Small Business and Enterprise Development, vol. 13, no. 3, pp. 381–394, Jul. 2006, doi: 10.1108/14626000610680262.

[12]. Fillis, U. Johansson, and B. Wagner, "A conceptualisation of the opportunities and barriers to e-business development in the smaller firm," Journal of Small Business and Enterprise Development, vol. 10, no. 3, pp. 336–344, Sep. 2003, doi: 10.1108/14626000310489808.

[13]. P. Ifinedo, "Internet/e-business technologies acceptance in Canada's SMEs: an exploratory investigation," Internet Research, vol. 21, no. 3, pp. 255–281, Jan. 2011, doi: 10.1108/10662241111139309.

[14]. A. Wagner, I. Fillis, and U. Johansson, "E-business and e-supply strategy in small and medium sized businesses (SMEs)," Supply Chain Management an International Journal, vol. 8, no. 4, pp. 343–354, Sep. 2003, doi: 10.1108/13598540310490107.

[15]. J. Hu and L. Xu, "Cross-Border E-Commerce business model based on big data and blockchain," Mobile Information Systems, vol. 2022, pp. 1–11, Aug. 2022, doi: 10.1155/2022/9986371.

[16]. S. Wang, H. Cavusoglu, and Z. Deng, "Early mover advantage in e-commerce platforms with low entry barriers: The role of customer relationship management capabilities," Information & Management, vol. 53, no. 2, pp. 197–206, Oct. 2015, doi: 10.1016/j.im.2015.09.011.

[17]. J. H. Schumann et al., "Drivers of Trust in Relational Service Exchange: Understanding the importance of Cross-Cultural Differences," Journal of Service Research, vol. 13, no. 4, pp. 453–468, May 2010, doi: 10.1177/1094670510368425.

[18]. P. M. Doney, J. P. Cannon, and M. R. Mullen, "Understanding the influence of national culture on the development of trust," Academy of Management Review, vol. 23, no. 3, pp. 601–620, Jul. 1998, doi: 10.5465/amr.1998.926629.

[19]. R. Ramamurti, "Can governments make credible promises? Insights from infrastructure projects in emerging economies," Journal of International Management, vol. 9, no. 3, pp. 253–269, Jan. 2003, doi: 10.1016/s1075-4253(03)00036-x.

Publisher's note: The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations. The content is solely the responsibility of the authors and does not necessarily reflect the views of the publisher.