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Exploring factors affecting E-Commerce Adoption of SMEs in Sri Lanka

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ABSTRACT

This paper seeks to investigate the factors that impact the adoption of E-commerce by small and medium-sized enterprises (SMEs) in Sri Lanka. Explores the impact of various determinants, including performance expectancy, effort expectancy, social influence, facilitating conditions, perceived risk, and adoption intention on the adoption of e-commerce in Sri Lankan SMEs. The study is based on SMEs in the country. The study encompasses Small and Medium Enterprises (SMEs) from four provinces across the country, spanning ten different industries. A sample of 252 Small and Medium Enterprises (SMEs) across 10 industrial sectors in 4 regions was selected using a simple random sampling technique.The results indicated that Performance Expectancy, Effort Expectancy, Facilitating Conditions, and Perceived Risk as major influences on the adoption of e-commerce significantly influenced the adoption of e-commerce by SMEs in Sri Lanka. However, it was observed that comparatively reduced influence of Social Influence on E-commerce adoption among SMEs.

Keywords: *E-Commerce, SMEs, UTAUT, Technology Adoption*

1. INTRODUCTION

The SME sector has been highlighted as an essential strategic sector in the Government of Sri Lanka's (GOSL) overall policy objectives, and it is considered as a driver of change for inclusive economic growth, regional development, job creation, and poverty reduction (Chen Chen, Sabyasachi Mitra, 2022) Small and medium-sized firms (SMEs) are considered the backbone of the Sri Lankan economy by the government since they account for more than 75 percent of all businesses, supply 45 percent of employment, and contribute 52 percent of the country's GDP(Chen Chen, Sabyasachi Mitra, 2022). Enterprises falling within the annual revenue bracket of up to Rs. 750 million will be categorized as small and medium-sized enterprises (SMEs) for the scope of this directive, aligning with the SME definition established by the Department of Industry and Commerce within its National Policy Framework for SME Development (*BSD Circular No1of 2017_0.Pdf*, n.d.)

The Internet has altered the way organizations and customers communicate since the late 1990s. Electronic commerce's emergence has played a significant part in such a corporate transition. "E-commerce is predicted to be one of the main keys to success and growth in the present competitive business climate (Almousa, 2013). The world economy is underpinned by three formidable driving forces: globalization, liberalization, and the pervasive influence of information and communication technologies (ICTs). The remarkable and exponential surge in ICT development over recent years has given rise to the phenomenon of electronic commerce (E-commerce), which has ushered in transformative changes in the contemporary business landscape. In response, organizations have undertaken a comprehensive overhaul of their business processes and models, harnessing technology to re-imagine the conception, promotion, and delivery of products and services (Chaudhury & Kuilboer, 2002)

E-commerce is described as "the selling or purchase of products or services via computer-mediated networks, between corporations, homes, people, governments, or other public or private entities (Fichter, 2008). E-commerce presents distinct opportunities for organizations in both developed and developing nations.

Nevertheless, businesses located in developing countries have exhibited a certain degree of hesitancy when it comes to integrating e-commerce into their operational workflows. Their engagement in E-commerce appears to be less pronounced in comparison to their counterparts in highly developed nations like the United States and European countries.(Kendall Jon et al., 2001)

It is commonly acknowledged that E-commerce technology has several potential benefits for firms such as SMEs. Reduced costs, improved sales, increased productivity, reduced time processing, expanded market reach, and increased consumer loyalty are some of the primary benefits shown by the existing e-commerce literature(Turban et al., 2010).

The primary objective of this study is to discern the influence of E-commerce and elucidate the key factors that play a pivotal role in fostering the adoption of E-commerce within the sphere of small and medium-sized enterprises (SMEs) in Sri Lanka. Typically, scholars have relied on TAM to explain individual E-commerce influencing factors, but its applicability is constrained by the lack of consideration for external variables and its simplicity in practical research. To address these limitations and achieve a more comprehensive research perspective with higher explanatory power, UTAUT, an integrated model of eight theoretical frameworks, including TAM, was selected.

In today's business landscape, the success of enterprises, particularly SMEs, heavily relies on access to accurate and timely information, particularly the smooth flow of data between them and their trading partners (TPs). This dependence on data underscores the potential impact of various internal and external factors on the adoption of Electronic Commerce (EC) systems. Surprisingly, there has been limited comprehensive investigation to date on the factors influencing EC system adoption and digitalization of SMEs in Sri Lanka.(Rassool & Dissanayake, 2019)

This study is of utmost importance as it fills this research gap, providing valuable insights for SMEs in Sri Lanka. By identifying the factors that may affect their EC adoption, the study aims to offer a comprehensive understanding of these factors,

which have not been previously examined together in a single model. The findings hold significant implications for SME decision-making, helping them navigate the complexities of EC system adoption and formulate effective strategies to enhance their operations and competitiveness.

1.1. Significance of the Study

Incorporating the Unified Theory of Acceptance and Use of Technology (UTAUT) approach demonstrated that Performance Expectancy, Effort Expectancy, Social influence, and Perceived Risks significant influence on customer adoption of the new FinTech platforms (Goswami & Dutta, 2017). The Unified Theory of Acceptance and Use of Technology (UTAUT) represents a contemporary model extensively employed for investigating the determinants impacting technology adoption within firms(Goswami & Dutta, 2017). As markets become increasingly global and national economies grow more interconnected, understanding the factors that drive e-commerce adoption is crucial yet challenging, with little clarity about its key determinants (Awiagah et al., 2016). In numerous Colombian municipalities, the spread of electronic commerce (e-commerce) coupled with broader internet access has spurred economic growth. However, in some rural areas, limited technology access means the full benefits of e-commerce have yet to be realized.(Vélez-Muñoz et al., 2024). In today's digital era, adopting e-commerce is crucial and essential as we progress. Implementing e-commerce will significantly enhance the performance of SMEs over time (Hussain et al., 2020).

The findings of this study using the UTAUT model's variables, along with the perceived Risk to identify the factors affecting the E-Commerce adoption of SMEs will provide valuable insights to SME stakeholders regarding the development of supportive regulations that align with customers' interests in conducting financial transactions and enhancing overall business performance. The significance of SMEs lies in their crucial contribution to job creation and economic growth in Sri Lanka.(Hussain et al., 2020) By shedding light on this sector's E-commerce

development and implementation, this study aims to provide new knowledge that will benefit both researchers and practitioners.

The insights gained from this research will enable a better understanding of the factors influencing E-commerce adoption among Srilankan SMEs. This knowledge will prove valuable for government authorities and private companies, as it will help them develop effective guidelines and strategies to encourage and motivate the widespread adoption of e-commerce in the SME sector. Ultimately, this study's findings can contribute to the overall advancement of e-commerce in Sri Lanka and promote sustainable economic growth. The next section delves into a comprehensive examination of previous research on E-commerce, while section 3 delineates the conceptual framework and hypotheses. Section 4 provides an in-depth description of the model and methodology, highlighting the sources of information used. In Section 5, a thorough discussion of the estimation results is presented. Finally, in Section 6, the research offers its conclusions and discusses the implications.

2. LITERATURE REVIEW

In the contemporary landscape of globalization, the matter of global competitiveness for businesses has grown increasingly pertinent. Against the backdrop of the rapid advancements in digitalization processes, the realm of E-commerce plays a pivotal role in enhancing the competitiveness of enterprises on both national and international scales. Furthermore, it facilitates enterprises in attaining a qualitatively advanced stage of development. Scientific investigations by prominent scholars, both domestic and international, are dedicated to comprehensively exploring topics such as augmenting competitiveness, fostering innovation and investment development within enterprises, and the evolution of the E-commerce domain in the modern era of digitalization (Abramova et al., 2021; Epede & Wang, 2022)

The proliferation of digital technologies and widespread access to the Internet have paved the way for the emergence and swift expansion of diverse E-commerce systems. These encompass various models, such as business-to-business (B2B), consumer-to-consumer (C2C), business-to-consumer (B2C), business-to-government

(B2G), and government-to-consumer (G2C). Additionally, with the advent of mobile phone technologies at the turn of the century, the realm of mobile commerce, or "m-commerce," began to gain significant traction. This was largely due to the transformation of electronic commerce through the utilization of various mobile applications.(Arefiev et al., 2023)

The current business climate is becoming increasingly competitive, and this is no difference for SMEs. Businesses have always worked to improve themselves by finding better ways to suit their consumers' demands in order to stay competitive in the marketplace, both domestically and internationally (Ahmad et al., 2010). While developing countries may encounter numerous hurdles in the process of embracing e-commerce, the potential advantages are indeed substantial. E-commerce presents a promising avenue for small and medium-sized enterprises (SMEs) in developing nations to tap into global markets, enabling them to broaden their horizons. Consequently, this outreach opens doors to growth prospects, offering increased market insights that empower these enterprises to innovate, introduce new products or services, and venture into fresh markets (Lekmat, n.d.; Myovella et al., 2020).

In a Wall Street Journal speech, Jerry Jasinowski, who served as the President of the US National Association of Manufacturers, issued a cautionary message to his fellow members “small firms need to get in the e-commerce game or they are going to be shut out of a critical part of the marketplace” (Lomerson et al., 2004) This development may have spurred the adoption of e-commerce among SMEs in the USA and other advanced nations. However, the pace of e-commerce adoption in developing nations remains notably sluggish. Although there have been empirical studies examining e-commerce adoption in developed countries like Canada and Australia (MacGregor & Vrazalic, 2004).

According to certain studies, organizations that are solely focused on e-commerce can be market leaders and even monopolies, depending on the industry (Yeng et al., 2016). According to Cecere & Acatitla, 2016,E-commerce provides a significant competitive advantage because it allows companies to expand their market for their

products. According to statistical reports sourced from "Statista," Sri Lanka has experienced remarkable e-commerce growth from 2021 to 2022. Even during the outset of 2022, amidst a significant economic crisis in Sri Lanka, the e-commerce sector displayed resilience and sustained robust growth. In fact, it is estimated that the overall e-commerce market revenue reached an impressive $2,682.00 million in 2022.(Wickramaratne, 2022)

Existing literature has pinpointed a range of factors that have a positive impact on, as well as barriers that impede the adoption of e-commerce within the small and medium-sized enterprises (SMEs) sector. The e-commerce literature is still emerging and evolving, with limited research on the adoption and practical application of e-commerce among SMEs in India. Consequently, this study is particularly pertinent within this context. In accordance with the insights garnered from the literature review, the primary categories established for this investigation encompass organizational readiness, technological factors, and innovative factors. Specifically, the constructs falling under organizational readiness include top management support, organizational competence, learning orientation, receptivity towards change, and strategic orientation (Abdullah Al-Somali et al., 2015).

Research on E-commerce adoption can be categorized into six distinct themes: factors influencing e-commerce adoption, barriers to e-commerce adoption, and implications of E-commerce adoption, the E-commerce adoption process, enhancing e-commerce adoption, and E-commerce website appeal. Within this realm of study, two prevalent theories commonly utilized by researchers are the Technological, Organizational, and Environmental (TOE) framework and the Diffusion of Innovation (DOI) theory (Khoo et al., 2018). While e-commerce adoption rates may be relatively low, there exist numerous potential strategies capable of boosting usage and improving the foundational aspects of e-commerce mechanisms (Lim et al., 2018)

In a study conducted by Arawwawala & Gunawardane, 2017) an exploration was undertaken to assess the hurdles and impediments faced by small and medium-sized enterprises (SMEs) in Sri Lanka when implementing e-commerce technologies. The

findings from this research unveiled a noteworthy correlation between customer attitudes toward e-commerce usage, information and communication technology (ICT) security, and government support, all of which have a bearing on the adoption of e-commerce technologies among SMEs in Sri Lanka.

3. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

In recent years, research on technology adoption has led to the development of various theories and models aimed at understanding and identifying the factors that influence technology adoption. Some of the prominent models include the Innovation Diffusion Theory (IDT), Theory of Planned Behavior (TPB), Theory of Reasoned Actions (TRA), Technology Acceptance Model (TAM), which is extensively used in studies related to information systems adoption, Perceived Characteristics of Innovation (PCI), Decomposed Theory of Planned Behavior (DTPB), Theory of Perceived Risk (TPR), Theory of Innovation Resistance (TIR), and the Unified Theory of Acceptance and Use of Technology (UTAUT).The Technology Acceptance Model(TAM) one of the most extensively used frameworks to predict and explain the adoption of information systems (Davis ,1989). According to TAM, perceived utility (PU) and perceived ease of use (PEU) have a significant influence on how technology is actually used as well as how it is meant to be used (F. Davis, 1989). For the current research, the UTAUT model has been selected as the most suitable theoretical framework. This model has shown significant explanatory power in similar studies, accounting for approximately 70% of the variance in behavior intention and nearly 50% in actual usage.

Upon reviewing the existing literature, it becomes apparent that innovation diffusion theory (Rogers, 2003) has been widely adopted as the fundamental theoretical framework for the majority of research focused on the diffusion of innovation (Kendal & Stacey, 2002; Tan & Gilbert, 2003). Innovation can be described as any notion, practice, or object that is perceived as novel by an individual. According to Rogers, diffusion refers to the process through which an innovation is communicated over time among the members of a social system (Rogers, 2003). In Rogers' study

[2003], it was discovered that a technological innovation is more likely to diffuse rapidly if it is perceived to possess five key attributes: relative advantage, complexity, compatibility, trialability, and observability. These attributes serve as the primary determinants that account for 49% to 87% of the variance in the rate of adoption. Numerous studies have incorporated these attributes when investigating factors influencing technology adoption and have consistently found that relative advantage stands out as one of the most significant predictors of an innovation's adoption rate.

Unified Theory of Acceptance and Use of Technology (UTAUT)

Venkatesh formulated the Unified Theory of Acceptance and Use of Technology (UTAUT) model, which represents a unified approach, amalgamating conceptual and empirical resemblances from eight different models to elucidate the technology acceptance process. As many constructs in existing theories share similarities, the logical step was to map and integrate them, resulting in a comprehensive and unified theoretical model (Venkatesh et al., 2003).The UTAUT model comprises four key constructs, as identified by Venkatesh et al., 2003, Performance Expectancy, Effort Expectancy, Social Influences, and Facilitating Conditions. Performance expectancy pertains to an individual's perception of how using an innovation can enhance their performance. Effort expectancy, similar to TAM, gauges an individual's perception of the ease of use associated with the innovation. Social influence relates to an individual's perception of the significance placed on using the innovation by influential people around them. Lastly, facilitating conditions assess the extent to which an individual perceives that the necessary organizational and technical infrastructure is in place to support the use of the system. These constructs jointly contribute to understanding the acceptance and adoption of technology within the UTAUT framework.

Purpose

Studies have confirmed that performance expectancy has a positive influence on the adoption of new Internet banking services (Daka & Phiri, 2019). Researchers often

link performance expectancy as a core construct with the theory of perceived usefulness, initially introduced by M.A. Davis, 2009.

Effort Expectancy

Users' willingness to adopt and use technology hinges on their perception of ease and minimal effort required in utilizing all available features. Effort expectancy is explicitly defined as the ease of accessing the new technology platform (Daka & Phiri, 2019b). In a study conducted in the banking industry of the United Arab Emirates (UAE), effort expectancy was correlated with the level of digital accessibility, which plays a pivotal role in supporting organizational performance (Dwivedi et al., 2021).

Social Influence

Social influence is closely linked to an individual's perception of the direct impact others have on their decisions, and it often holds significant sway in the adoption of FinTech services in the banking industry (Kurniasari et al., 2022; Venkatesh et al., 2003b). Within such relationships, group networking fosters social capital sources of funds, which are easily accessible among the inner circle (Dwivedi et al., 2021). The advancement of FinTech further facilitates virtual networking relationships and transactions, transforming the way interactions and transactions are conducted (Venkatesh et al., 2003).

Facilitating Conditions

Facilitating conditions (FC) refer to the extent to which individuals believe that there is an organizational and technical infrastructure in place to support the use of the system (Venkatesh, 2003). Previous research, as noted by Huang & Kao, 2015, has consistently demonstrated that facilitating conditions significantly influence the adoption and usage behaviors of innovative technologies. In this study, the researcher aims to investigate whether respondents have the necessary resources to utilize

Internet Banking effectively. The availability of such resources will enable clients to adopt and embrace e-banking services.

Perceived Risk

Perceived risk is a notable hindrance in the context of financial consumption (Kim et al., 2008). People may find it challenging to predict the potential consequences of their actions due to uncertain factors, a phenomenon referred to as perceived risk (D. Zhang et al., 2023). Hassan categorized perceived risk into eight categories, including finance, function, time, society, psychology, body, source, and privacy(Hassan et al., 2006). Research has shown that perceived risk significantly and negatively affects users' intention to use e-commerce (Li & Yuan, 2021). Within the e-commerce environment, when users perceive risks such as logistics delays, product quality not meeting expectations, and the risk of personal privacy being compromised, their intention to use the platform diminishes (Li & Yuan, 2021). In the context of farmers considering E-commerce, their adoption intention decreases as the perceived risks and uncertainties associated with the platform increase.

E commerce Adaptation

The decision to adopt E-commerce was found to be influenced by the interest and preference of using this digital technology for business transactions (Kurniasari et al., 2022). As this research was conducted in the context of SME businesses, the business profile played a vital role in shaping the adoption behavior of technology (Goo & Heo, 2020). Once users feel comfortable and familiar with using the new technology for business transactions, they are more inclined to adopt it.

Behavioral Intention

Social psychologists have extensively delved into the realm of behavioral intentions and their connections to future actions. Behavioral intention, in this context, pertains to the extent to which an individual has consciously developed intentions to engage or abstain from specific future behaviors (Henk Aarts, Bas Verplanken, 2006). In

alignment with psychological models that universally assert that individual actions are forecast and shaped by personal intent, the Unified Theory of Acceptance and Use of Technology (UTAUT) posited and demonstrated that behavioral intention wields substantial influence over technology adoption and utilization (Venkatesh et al., 2003; Venkatesh & Zhang, 2010).

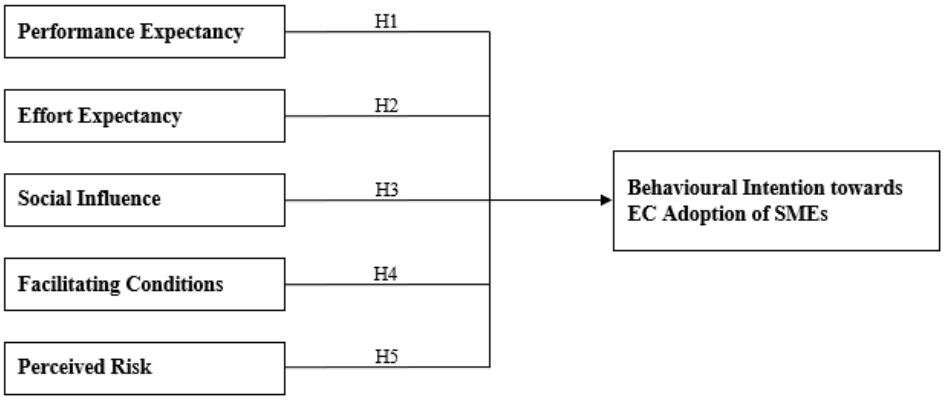
Based on the proposed framework, the study was able to formulate the following hypotheses

- H1: Performance Expectancy has a positive effect on E-commerce Adoption in Sri Lankan SMEs.
- H2: Effort Expectancy has a positive effect on E-commerce Adoption in Sri Lankan SMEs.
- H3: Social Influence has a positive effect on E-commerce Adoption in Sri Lankan SMEs
- H4: Customer Trust has a positive influence on E-commerce Adoption in Sri Lankan SMEs.
- H5: Perceived risk negatively affects SMEs' adoption intention to e-commerce for their day-to-day transactions.

4. METHODOLOGY

This research employed the Unified Theory of Acceptance and Use of Technology (UTAUT) as its conceptual framework, integrating the concepts of consumers' trust and regulatory services. Utilizing a quantitative approach with hypothesis testing, the study aimed to examine the impact of UTAUT variables, along with trust and regulatory services variables, on E-Commerce adoption within SME Businesses in Sri Lanka. The data for this study was collected through an online survey.

Figure 1: Conceptual Framework



4.1. Research Methodology

The research employed a deductive approach, as the conceptual framework was constructed from existing literature, and a quantitative cross-sectional design was adopted. The study focused on Small and Medium Enterprises (SMEs) in 4 regions and 10 industrial sectors. (Figures 1,2,3) Utilizing a simple random sampling technique, a sample of 252 SMEs was selected. The sample size decision was influenced by a previous study conducted in the same area by (Arawwawala & Gunawardane, 2017) owing to the limited availability of research data specific to district-wise analysis in this field

In this study, the primary measurement method utilized was a questionnaire, employing a five-level Likert scale ranging from 1 to 5. The scale was designed to correspond to responses such as "strongly disagree," "somewhat disagree," "neutral," "somewhat agree" and "strongly agree," respectively. All questionnaire items were derived from existing literature. The detailed questionnaire design is presented in the following Table.

Table 1: The Indicators of Each Variable

Variables	Dimensions	Instruments	References
Performance Expectancy (Independent Variable	Financial Transaction Accessibility (X1)	• The utilization of the EC system enables me to accomplish tasks swiftly. • Employ the EC system to enhance the growth of my business. • I encounter no difficulties in utilizing the EC system.	(Venkatesh et al., 2003)
Effort Expectancy (Independent Variable)	Digital Accessibility (X2)	• The EC platform proves to be beneficial in supporting my work. • My interaction with the system is straightforward and easy to understand. • EC is characterized by its simplicity and ease of use. • Learning to operate the system is easy to me.	(Venkatesh et al., 2003) (Tian et al., 2023)
Social Influence (Independent Variable)	Group Networking (X3)	• I actively participate in social media groups. • I consistently engage in communication with other members of the group. • I frequently conduct online business transactions. • The government or the village people, societies encourage me to participate in e-commerce	(Venkatesh et al., 2003d) (Y. Zhang et al., 2017)
Facilitating Conditions (Independent Variable)	Relationship Quality (X4)	• My living environment supports me to use E-commerce • My working environment supports me to use E-commerce • Using E-commerce is compatible with my life • Help is available when I get problems in using E-commerce	(Kurniasari et al., 2023)
Perceived Risk (Independent Variable)	Related Risk (X5)	• I have concerns that e-commerce may lead to financial losses. • I am apprehensive about potential privacy leaks in e-commerce.	(Guo et al., 2022)

		• I am worry about after-sales support in e-commerce	
Behavioral intention towards EC adoption of SMEs (Dependent Variable	Customer Decision (Y)	• I am motivated to encourage people around me to adopt e-commerce. • I strongly believe that adopting e-commerce brings numerous benefits. • I am personally willing to adopt e-commerce in my own practices. • I intend to continue using the E-Commerce platform in the next few months • I plan to continue to use E e-commerce platform frequently	(Venkatesh et al., 2003)

4.2. Measurement Model

The collected data was organized and examined using both descriptive and inferential statistics. To evaluate the formulated hypotheses, multiple regression analysis was utilized. The research variables' psychometric properties were analyzed to ensure reliability and consistency in measurements. Reliable measurement is essential for achieving stable results. For each composite variable, its reliability or internal consistency was evaluated by computing the Cronbach's alpha coefficient. Moreover, inter-item correlation and item-total correlation were calculated to identify specific weaknesses in a composite variable that Cronbach's alpha might not reveal.

5. FINDINGS

In the data analysis section of the thesis, a comprehensive examination was conducted with responses from 252 Small and Medium-sized Enterprises (SMEs) across 10 distinct industry sectors. The distribution of respondents revealed that the Retail sector constituted the largest share, accounting for 24.6%, followed by the Manufacturing sector at 19.8%. Additionally, the Service sector represented 16.7% of the respondents, while the agriculture sector constituted 11.1%. This dataset reflects a well-rounded cross-section of SMEs across various industry sectors. The

total sample population indicates a predominant representation of male SME owners, constituting 82.5%, while women entrepreneurs account for 17.5% of the sample.

It is noteworthy that the SMEs surveyed exhibit a diverse range of experience levels. Specifically, 23% of the sample has 1-5 years of experience, while 31.7% have accumulated 6-10 years. Furthermore, 27.8% fall within the 11-15 years' experience bracket, with 6.3% having 16-25 years of experience. A notable 11.1% of SMEs in the sample boast more than 25 years of experience. This broad spectrum of experience levels among SMEs within the dataset provides a rich foundation for conducting a comprehensive and insightful analysis.

In the analysis using SPSS, a reliability assessment was conducted using Cronbach's Alpha Coefficient, to gauge the initial consistency of scores for each scale. The results of this analysis demonstrated the reliability of the examined data, as all Cronbach's Alpha coefficients surpassed the threshold of 0.70. Consequently, the data of the five variables can be deemed reliable and consistent. For detailed statistics, refer to Table 1, "Reliability Statistics".

Based on the descriptive statistics presented in Table 2, the Performance Expectancy variable exhibits a notable average mean value of 3.70, falling within the range > 3.67. Additionally, the standard deviation is reported at 0.896. In the context of Sri Lankan SMEs, this indicates a high level of Performance Expectancy on E-Commerce adoption. Nevertheless, as indicated by the descriptive statistics in Table 6, the Perceived Risk variable demonstrates an average mean value of 3.14, falling within the range of 2.33 and 3.67. The standard deviation is reported at 0.88. In the context of Sri Lankan SMEs, this suggests a moderate level of perceived risk associated with E-commerce adoption among these enterprises.

Similarly, based on the descriptive statistics outlined in the thesis, Effort Expectancy, Social Influence, and Facilitating Conditions all exhibit mean values exceeding 3.67, accompanied by standard deviations surpassing 0.80. This evidence leads to the conclusion that Sri Lankan SMEs demonstrate a high level of orientation towards the aforementioned factors in the context of e-commerce adoption.

According to the descriptive statistics provided in Table 7, the Behavioral Intention concerning E-commerce adoption exhibits a noteworthy average mean value of 4.1, well within the range exceeding 3.67. The accompanying standard deviation is reported at 0.896. In the context of Sri Lankan SMEs, this signifies an exceptionally high level of behavioral intention toward E-commerce adoption among these enterprises.

Table 8 presents both the descriptive statistics and inter-correlational values among the variables. Noteworthy are the statistically significant correlations observed between the adoption of e-commerce, Performance Expectancy, Effort Expectancy and Social Influence. In contrast, there was no significant correlations found between Perceived Risk with the adoption of e-commerce.

The outcomes of the multiple regression analysis are outlined in Tables 9 and 10. In Table 8, it is revealed that the R-square value was 0.675 ($F = 102.004$ $p < 0.001$), indicating that approximately 67.5% percent of the variability in e-commerce adoption can be accounted for by Performance Expectancy, Effort Expectancy, social Influence, Facilitating Conditions and perceived Risk. Additionally, the Durbin–Watson value of 2.035 (within the range of 1.53 to 2.50) suggests the absence of autocorrelation issues in the dataset.

Within Table 9, the p-values associated with Performance Expectancy, Effort Expectancy, Facilitating Conditions and Perceived Risk were all below 0.05. This implies that Performance Expectancy, Effort Expectancy, Facilitating Conditions and Perceived Risk significantly impact the adoption of e-commerce in the selected SMEs in Sri Lanka. Conversely, the p-value for Social Influence exceeded 0.05, signifying that perceived benefits do not exert a significant influence on e-commerce adoption.

Among these factors, Facilitating Conditions demonstrated the highest coefficient value ($B = 0.399$), closely followed by Effort Expectancy ($B = 0.288$).

6. DISCUSSIONS AND CONCLUSION

In conclusion, the thorough data analysis of 252 Small and Medium-sized Enterprises (SMEs) across diverse industry sectors in Sri Lanka has yielded valuable insights into the factors influencing E-commerce adoption. The dataset, encompassing a well-rounded cross-section of SMEs, predominantly led by male owners, reflects a diverse range of experience levels. The reliability assessment using Cronbach's Alpha Coefficient establishes the trustworthiness of the data, ensuring consistency across the five variables examined. Therefore, the study exhibits strong construct reliability. Convergent validity evaluates how well the items measuring a construct come together to gauge a singular concept.(Sujatha & Karthikeyan, 2021)

Descriptive statistics highlight the high level of Performance Expectancy in E-commerce adoption among Sri Lankan SMEs, indicating a robust inclination toward leveraging digital platforms. Despite a moderate level of Perceived Risk, other factors such as Effort Expectancy, Social Influence, and Facilitating Conditions exhibit a high level of orientation, emphasizing the readiness of SMEs to embrace E-commerce. The exceptionally high Behavioral Intention mean value underscores the eagerness of these enterprises to adopt E-commerce. Additionally, existing literature provides evidence supporting the influence of these factors on e-commerce adoption. (Yu, 2012)

In addition, this study sheds light on the critical determinants influencing the adoption of E-commerce among Small and Medium-sized Enterprises (SMEs) in Sri Lanka, recognizing the pivotal role of this sector in the nation's economic landscape. Leveraging the Unified Theory of Acceptance and Use of Technology (UTAUT), the research identifies key factors such as Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, and Perceived Risk. The study reveals a strong inclination of Sri Lankan SMEs towards embracing E-commerce, with Performance Expectancy, Effort Expectancy, and Facilitating Conditions emerging as significant influencers. In a study conducted on the adoption of e-commerce among

Indian women-owned SMEs, a comparable conclusion was reached (Goswami & Dutta, 2017)

Notably, the research underscores a subtle aspect specific to the Sri Lankan context: a comparatively reduced influence of Social Influence on E-commerce adoption among SMEs, diverging from its acknowledged impact in other contexts. This nuanced insight adds substantial value to the current understanding of the dynamics surrounding E-commerce adoption.

In summary, the study identified Performance Expectancy, Effort Expectancy, Facilitating Conditions and Perceived Risk as major influences on the adoption of e-commerce. The findings suggest that future research endeavors should delve into these significant factors to gain a more comprehensive understanding of the dynamics influencing the adoption of e-commerce. By considering these nuanced elements, future studies can contribute valuable insights to the evolving landscape of e-commerce adoption, fostering a deeper and more holistic comprehension of the various determinants at play in different contexts.

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ANNEXURES

Table 1: Reliability Statistics

Variable	No of items	Cronbach's Alpha
Performance Expectancy	3	**.737**
Effort Expectancy	4	**.903**
Social Influence	4	**.798**
Facility Conditions	4	**.900**
Perceived Risk	3	**.791**

Table 2: Descriptive Statistics- Performance Expectancy

Item	N	Mean	Std Deviation
PE1	252	3.82	1.132
PE2	252	3.87	1.093
PE3	252	3.41	1.179
Average	252	3.70	0.919

Source: Survey Data

Table 3: Descriptive Statistics- Effort Expectancy

Item	N	Mean	Std Deviation
EE1	252	3.88	1.098
EE2	252	3.79	0.997
EE3	252	3.90	0.973
EE4	252	3.83	1.079
Average	252	3.85	0.913

Source: Survey Data

Table 4: Descriptive Statistics- Social Influence

Item	N	Mean	Std Deviation
SI1	252	3.77	1.035
SI2	252	3.78	0.918
SI3	252	3.82	1.125
SI4	252	3.17	1.151
Average	252	3.63	0.837

Source: Survey Data

Table 5: Descriptive Statistics- Facilitating Conditions

Item	N	Mean	Std Deviation
FC1	252	3.81	1.162
FC2	252	3.89	1.102
FC3	252	3.90	1.139
FC4	252	3.71	1.072
Average	252	3.83	0.982

Source: Survey Data

Table 6: Descriptive Statistics- Perceived Risk

Item	N	Mean	Std Deviation
PR1	252	2.98	1.021
PR2	252	3.21	1.066
PR3	252	3.22	1.055
Average	252	3.14	0.880

Source: Survey Data

Table 7: Descriptive Statistics- Behavioral Intention

Item	N	Mean	Std Deviation
BI1	252	4.02	0.914
BI2	252	4.06	0.917
BI3	252	4.09	0.945
BI4	252	3.98	1.029
BI5	252	4.01	0.974
Averagr	252	4.03	0.878

Source: Survey Data

Table 8: Correlation Summary

		PE	EE	SI	FC	PR	BI
PE	Pearson Correlation	1	.717**	.526**	.478**	.025	.596**
	Sig. (2-tailed)		.000	.000	.000	.694	.000
	N	252	252	252	252	252	252
EE	Pearson Correlation	.717**	1	.651**	.580**	-.026	.699**
	Sig. (2-tailed)	.000		.000	.000	.682	.000
	N	252	252	252	252	252	252
SI	Pearson Correlation	.526**	.651**	1	.670**	.055	.651**
	Sig. (2-tailed)	.000	.000		.000	.389	.000
	N	252	252	252	252	252	252
FC	Pearson Correlation	.478**	.580**	.670**	1	-.019	.735**
	Sig. (2-tailed)	.000	.000	.000		.764	.000
	N	252	252	252	252	252	252
PR	Pearson Correlation	.025	-.026	.055	-.019	1	.085
	Sig. (2-tailed)	.694	.682	.389	.764		.178
	N	252	252	252	252	252	252
BI	Pearson Correlation	.596**	.699**	.651**	.735**	.085	1
	Sig. (2-tailed)	.000	.000	.000	.000	.178	
	N	252	252	252	252	252	252

**. Correlation is significant at the 0.01 level (2-tailed).

Table 9, Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.821[a]	.675	.668	.50613	2.035

a. Predictors: (Constant), PR, FC, PE, SI, EE
b. Dependent Variable: BI

Table 10 : Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.337	.196		1.720	.087
	PE	.113	.050	.118	2.247	.026
	EE	.288	.058	.299	4.984	.000
	SI	.095	.057	.091	1.656	.099
	FC	.399	.045	.446	8.766	.000
	PR	.093	.037	.094	2.551	.011

a. Dependent Variable: BI

Figure 1: Industry Sectors of Data Sample

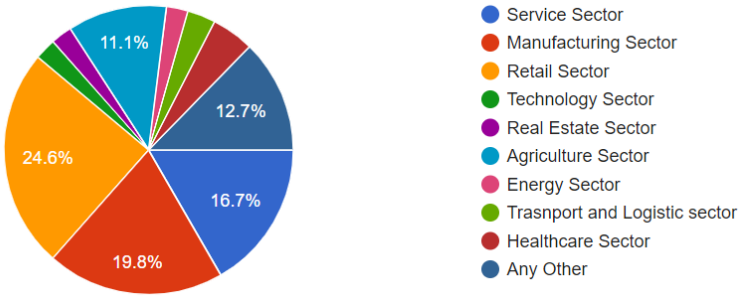

Figure 2: No of Years in Business of the business entities in the business