

Gender Disparities in E-commerce Adoption Barriers among Entrepreneurs in Sri Lanka

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ABSTRACT

This research study investigates the gender-based differences in e-commerce adoption barriers among entrepreneurs in Sri Lanka. Employing a quantitative research approach, a sample of 460 entrepreneurs from the Hambantota District was selected using proportionate stratified random sampling. Primary data was collected through a validated questionnaire, and data analysis involved statistical techniques such as regression analysis. The findings highlight substantial disparities in the perception of e-commerce adoption barriers between male and female entrepreneurs in Sri Lanka. Female entrepreneurs encounter unique challenges in the realm of e-commerce adoption, underscoring the significant influence of gender on shaping adoption patterns. While both genders identify Lack of awareness and knowledge of e-commerce, Lack of qualified personnel to develop and support e-commerce, and Lack of popularity for online shopping as substantial and persistent barriers, Fear and reluctance to change and Inadequate delivery networks emerge as particularly noteworthy obstacles for female entrepreneurs. These research findings hold implications for the formulation of more effective government policies and strategic initiatives aimed at fostering a dynamic entrepreneurial ecosystem, particularly to empower female entrepreneurs in developing countries.

1. Introduction

The United Nations' Sustainable Development Goals underscore the importance of human potential, dignity, gender equality, and the empowerment of women and girls. However, in many developing countries, particularly in rural areas, women encounter significant obstacles rooted in deep-seated social and cultural norms that hinder their access to education and information. These challenges manifest in women's underrepresentation in government, limited access to credit and financing, and restricted land and property ownership. Despite the overall economic growth in Sri Lanka, rural women continue to grapple with an increasing financial divide, making sustainable development a paramount concern.

Sri Lanka's female population constitutes approximately 52 percent of its 21 million people, with nearly one million living in poverty. Over two-thirds of the country's population resides

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in rural villages. Despite a commendable female literacy rate of 92.6 percent and substantial female enrollment in university education, a significant gender disparity persists within the SME sector, where only 25% of entrepreneurs are women (EDB, 2022). This stark contrast underscores the presence of an untapped reservoir of potential talent and capacity, calling for concerted efforts to bridge this gap and harness the full spectrum of entrepreneurial capabilities among women.

Economic empowerment of women is a pivotal step in addressing these challenges. Female entrepreneurship, defined as the creation and maintenance of income streams by women, can play a transformative role. However, entrenched cultural and social constraints frequently impede women's access to opportunities, information, and funding, leaving them motivated but constrained in their pursuit of success.

Globally, female-founded businesses represent one of the fastest-growing entrepreneurial segments, contributing to innovation, employment, and wealth creation. Sri Lanka has witnessed a notable surge in women-owned businesses, primarily in micro-enterprises, often within the informal economy, with a concentration in sectors such as textiles and food processing (Attygalle et al., 2014). It is estimated that 25% of establishments in Sri Lanka are run by women entrepreneurs, with rural areas exhibiting higher percentages (35 percent) compared to urban areas (28 percent) (Sri Lanka Labor Force Survey Annual Report - 2014).

Technology, particularly Information Communication Technology (ICT) and e-commerce, stands out as a key driver of economic development. E-commerce, involving the electronic buying and selling of goods and services, offers a plethora of advantages, including cost reduction, enhanced accuracy, and transformative benefits such as business process reengineering and industry value chain integration. ICT-enabled e-commerce has the potential to elevate business performance and bridge the digital divide between developed and developing economies, facilitating international trade and poverty reduction.

In Sri Lanka, the adoption of e-commerce has made significant strides in recent years, further accelerated by the COVID-19 pandemic. According to the Payments Bulletin report of 2021, the number of e-commerce transactions in Sri Lanka surged from 18.5 million in the second quarter of 2021 to 21.1 million in the second quarter of 2022.

E-commerce has the potential to create opportunities for marginalized women, particularly in developing countries like Sri Lanka. Developing ICT skills can boost the confidence and self-respect of women (Chen, 1997), and mobile phone usage for business purposes can enhance self-esteem among female micro-entrepreneurs (Chew et al., 2015). However, the literature reveals a lack of studies connecting e-commerce adoption with women's micro-entrepreneurship in rural areas (Chatterjee et al., 2020). Also, women entrepreneurs, particularly those in rural areas, confront substantial barriers in embracing technology compared to their male counterparts. To address this disparity, female entrepreneurs must equip themselves with technology skills to bolster their business competitiveness and thrive in today's global market. As highlighted by Beninger et al. (2016), technology adaptation opens new avenues for female entrepreneurs to connect with global markets, customers, and suppliers in a systematic manner.

Considering these considerations, this study aims to assess the status of female entrepreneurs in rural Sri Lanka, with a particular focus on their utilization of e-commerce for business success. The research will commence by identifying the barriers that hinder women from fully engaging in e-commerce, in comparison to men, ultimately contributing to gender equality and economic empowerment.

2. Literature Review

This literature review examines the multifaceted factors that influence the adoption of e-commerce practices among rural entrepreneurs. In the contemporary business landscape, e-commerce has evolved into an indispensable avenue for small businesses aiming to expand their market reach and bolster revenue streams. By engaging in various e-commerce activities encompassing marketing, customer support, order processing, and secure payments, small enterprises can effectively bolster their online operations (Zaied, 2012).

The adoption of ICT is not a uniform process, but one influenced by a constellation of factors, including demographic attributes such as age and gender (Venkatesh et al., 2004). Notably, these factors carry particular significance when examining marginalized groups, with rural women being a prime example. As highlighted in a World Bank Report (2016), the integration of new technologies offers rural women enhanced opportunities for participation in the labor market, thus contributing to economic empowerment and societal progress.

In addition to facilitating workforce participation, modern communication technologies hold immense potential for improved information dissemination and enhanced communication within rural areas (Narula & Arora, 2010). These technologies can effectively bridge geographical barriers and empower rural entrepreneurs with access to global markets and resources. This transformation is especially pertinent in the context of female entrepreneurship, as technology, when adapted within the confines of social and cultural norms, opens up new avenues and opportunities for women entrepreneurs (McAdam et al., 2019).

Furthermore, technology interventions have yielded tangible benefits, particularly for rural women entrepreneurs, as evidenced in the study conducted by Chatterjee et al. (2020). These interventions encompass a range of initiatives, from skill-building programs to digital literacy campaigns, all aimed at empowering rural women to harness the full potential of e-commerce and related technologies.

The literature on women entrepreneurs consistently highlights a significant gender gap in computer competence and technology adoption compared to men. Mack et al. (2017) found that women entrepreneurs often rate themselves as less computer competent, revealing a perceived proficiency disparity. Costin (2012) and Erumi-Esin and Heeks (2015) emphasize the challenges women face in gaining the necessary technological expertise due to factors like time constraints. Jome et al. (2006) specifically noted that women founders in Internet retail businesses are less familiar with ICT capabilities, a critical concern in e-commerce. These studies collectively underscore a prevalent lack of technology awareness and knowledge among women entrepreneurs, acting as a substantial barrier to technology adoption, hindering their business growth and competitiveness in the digital era.

Furthermore, it is crucial to acknowledge that fear of change plays a significant role in the resistance to technology adoption, and research consistently reveals that women tend to exhibit more pronounced fear-related responses in this context (Taylor et al., 2000). Additionally, gender differences in risk-taking behaviors have been reported (UNCTAD, 2014a). These gender-related nuances in the adoption of e-commerce and technology must be recognized and actively addressed to promote greater gender equity in the business and technology sectors.

Infrastructure limitations, such as poor internet connectivity and unequal distribution of ICT facilities, hinder ICT adoption, particularly for women in rural areas (Primo, 2003). The preference of qualified personnel for male-owned businesses over female-owned ones can impact the growth of female entrepreneurs (Bruhn, 2009).

The high cost of technology and e-commerce implementation, along with indirect or hidden costs, adds to the barriers faced by female entrepreneurs (Love et al., 2001). Complex e-

commerce processes and unsuitable products for online marketing further complicate adoption (Diffy and Dale, 2002; Degeratu A. et al., 1999). Additionally, the lack of popularity for online shopping in developing countries and the dominance of cash on delivery as a payment method pose challenges (Kapurubandara & Lawson, 2012; Bhalla, 2019).

Intense global competition, especially from large enterprises, is a significant obstacle for small businesses, and women-owned businesses may be more hesitant to compete (Croson and Gneezy, 2009; Niederle and Vesterlund, 2011). Moreover, the inadequacy of government support can hamper female entrepreneurs (Mashapure et al., 2022). Finally, inefficient distribution and delivery systems, coupled with inadequate transport and postal infrastructure, hinder e-commerce growth in developing countries. These challenges must be addressed to promote e-commerce adoption among rural female entrepreneurs.

3. Methodology

This study adopted a quantitative approach, to investigate disparities in e-commerce adoption barriers among male and female entrepreneurs in Hambantota, Sri Lanka. A carefully selected sample size of 460 small business owners within the region was meticulously chosen using a stratified random sampling approach to ensure the sample's representativeness. Data collection was conducted through a meticulously designed structured questionnaire, carried out with the assistance of development officers from the Small Enterprise Development division in Hambantota. Impressively, the study achieved a remarkable response rate of approximately 98%. The sample for this study comprised 238 male entrepreneurs and 211 female entrepreneurs, representing a diverse cross-section of the entrepreneurial landscape in the region.

The dependent variable of this study is e-commerce adoption, which is operationalized using four e-commerce activities: electronic advertising and marketing, electronic order and delivery, electronic customer support, and electronic payment. This was measured using a single question that asked respondents about their adoption or adoption plans for use four e-commerce activities. The question utilized a five-point Likert scale ranging from (1) do not plan to use it to (5) current user. The independent variables in this study consist of thirteen (13) e-commerce adoption barriers that have been identified in the literature. These barriers are measured using a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1), as indicated in the questionnaire provided.

The collected data were analyzed using R software. Multiple regression analysis technique was used to gauge the effect of these barriers on e-commerce adoption within each gender category, providing valuable insights into the dynamics of e-commerce adoption in the region. The equation for the regression model is as follows:

$$EA_i = \beta_0 + \beta_1 K_i + \beta_2 F_i + \beta_3 I_i + \beta_4 S_i + \beta_5 C_i + \beta_6 X_i + \beta_7 H_i + \beta_8 T_i + \beta_9 P_i + \beta_{10} O_i + \beta_{11} M_i + \beta_{12} G_i + \beta_{13} D_i + \epsilon \quad (1)$$

Table 1.
Notation of Variables

Statistic	Type of Variables	Variable Definition
EA_i	Quantitative Continuous	e-commerce adoption
K_i	Ordinal	Lack of awareness and knowledge of e-commerce
F_i	Ordinal	Fear and reluctant to change
I_i	Ordinal	Inadequate telecommunications infrastructure
S_i	Ordinal	Lack of qualified personnel to develop and support ecommerce
C_i	Ordinal	High cost of technology and implement e-commerce
X_i	Ordinal	Complex business process activities
H_i	Ordinal	Indirect or hidden cost associated with e-commerce
T_i	Ordinal	Unsuitable products for online marketing
P_i	Ordinal	Lack of popularity for online shopping
O_i	Ordinal	Lack of adoption of digital payments
M_i	Ordinal	Higher competition
G_i	Ordinal	Lack of government support
D_i	Ordinal	Inadequate delivery networks
β_0		Constant
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$		Coefficient
$\beta_8, \beta_9, \beta_{10}, \beta_{11}, \beta_{12}, \beta_{13}$		
ε		error terms

4. Data Analysis and Findings

The analysis of this study encompasses multiple regression techniques to comprehensively examine the intricacies of e-commerce adoption barriers among male and female entrepreneurs in Sri Lanka. Assumptions such as correlation, normality, linearity, homoscedasticity, and multicollinearity were tested to ensure the validity and accuracy of the regression analysis. Table 02 and 03 serve as a comprehensive exposition of the outcomes derived from an intricate multiple regression analysis, meticulously designed to explore the multifaceted domain of e-commerce adoption barriers among male and female entrepreneurs in Sri Lanka. This analytical endeavor is dedicated to unveiling the intricate interplay between the dependent variable, e-commerce adoption, and a plethora of potential hurdles characterized as independent variables.

The results of the regression analysis on e-commerce adoption barriers among male entrepreneurs in Sri Lanka reveal several critical insights. The most significant deterrent to e-commerce adoption is a Lack of awareness and knowledge of e-commerce, as indicated by its substantial negative coefficient (-0.375) and highly significant p-value (0.000), underlining the importance of educational efforts in promoting e-commerce. Furthermore, a Lack of qualified personnel to develop and support e-commerce also emerges as a substantial barrier, with a negative coefficient (-0.203) and a low p-value (0.001), highlighting the need for workforce development in this field. Similarly, Lack of popularity for online shopping has a negative coefficient (-0.129) with a significant p-value (0.009), suggesting that a lack of popularity for online shopping is a significant barrier.

Table 2.

Results of Regression Analysis - Barriers Impacting E-commerce Adoption for Male Entrepreneurs

Variable	Beta	Standard error	t-value	Sig.
(Intercept)	5.198	0.213	24.317	0.000
Lack of awareness and knowledge of e-commerce	-0.375	0.054	-6.574	0.000
Fear and reluctant to change	-0.047	0.055	-0.856	0.393
Inadequate telecommunications infrastructure	0.025	0.058	-0.438	0.662
Lack of qualified personnel to develop and support e-commerce	-0.203	0.063	-3.219	0.001
High cost for technology and implement e-commerce	0.098	0.060	1.620	0.106
Complex business process activities	-0.048	0.051	-0.951	0.342
Indirect or hidden cost associated with e-commerce	0.029	0.058	0.507	0.612
Unsuitable products for online marketing	0.071	0.054	1.322	0.187
Lack of popularity for online shopping	-0.129	0.049	-2.601	0.009
Lack of adoption of digital Payments	0.110	0.058	1.898	0.059
Higher e-commerce competition	0.021	0.052	0.411	0.681
Lack of government support	-0.033	0.057	-0.577	0.564
Inadequate delivery networks	-0.095	0.059	-1.588	0.113
N=238, F = 20.3, p-value: < 2.2e ⁻¹⁶ , Adjusted R-squared (R ²) = 0.513				

Conversely, factors like Fear and reluctant to change, Inadequate telecommunications infrastructure, and High cost for technology and implementing e-commerce appear to have less influence on e-commerce adoption, with their p-values indicating limited statistical significance. Nevertheless, it's important to consider these findings holistically, as multiple factors interact to shape e-commerce adoption behaviour, with an overall model R-squared value of 0.513 and a highly significant F-statistic (20.3). Addressing these barriers comprehensively could facilitate a more widespread embrace of e-commerce among male entrepreneurs in Sri Lanka.

Table 3.

Results of Regression Analysis - Barriers Impacting E-commerce Adoption for Female Entrepreneurs

Variable	Beta	Standard error	t-value	Sig.
(Intercept)	5.629	0.208	26.935	0.000
Lack of awareness and knowledge of e-commerce	-0.20	0.053	-5.077	0.000
Fear and reluctant to change	-0.175	0.062	-2.827	0.005
Inadequate telecommunications infrastructure	0.120	0.063	1.890	0.060
Lack of qualified personnel to develop and support e-commerce	-0.215	0.065	-3.272	0.001
High cost for technology and implement e-commerce	-0.026	0.058	-0.442	0.659
Complex business process activities	-0.048	0.057	0.847	0.397
Indirect or hidden cost associated with e-commerce	0.017	0.065	0.264	0.791
Unsuitable products for online marketing	0.027	0.055	0.494	0.621
Lack of popularity for online shopping	-0.110	0.052	-2.122	0.035
Lack of adoption of digital Payments	-0.006	0.064	-0.096	0.923
Higher e-commerce competition	0.071	0.051	1.381	0.168
Lack of government support	-0.005	0.062	-0.081	0.935
Inadequate delivery networks	-0.184	0.063	-2.900	0.004
N=211, F = 15.48, p-value: < 2.2e ⁻¹⁶ , Adjusted R-squared (R ²) = 0.471				

The foremost and most substantial barrier identified in this analysis is the Lack of awareness and knowledge of e-commerce. The negative coefficient of -0.20 and the highly significant p-

value of 0.000 emphasize the pivotal role of educational initiatives. The Fear and reluctance to change emerges as another noteworthy barrier, supported by a negative coefficient of -0.175 and a significant p-value of 0.005. The Lack of qualified personnel to develop and support e-commerce is substantiated as a substantial impediment, with a negative coefficient of -0.215 and a highly significant p-value of 0.001. Similarly, Lack of popularity for online shopping has a negative coefficient (-0.110) with a significant p-value (0.035), suggesting that a lack of popularity for online shopping is a significant barrier. Inadequate delivery networks emerge as a significant barrier, as denoted by its negative coefficient of -0.184 and a highly significant p-value of 0.004. Addressing this logistical challenge is imperative to facilitate seamless e-commerce operations among female entrepreneurs. The analysis indicates that factors such as Inadequate telecommunications infrastructure, High cost for technology and implementing e-commerce, and Complex business process activities may not be the primary barriers faced by female entrepreneurs in Sri Lanka, as suggested by their p-values, which indicate limited statistical significance. While Lack of adoption of digital payments, Higher e-commerce competition, and Lack of government support exhibit varying degrees of influence, they may not be the primary impediments to e-commerce adoption, as indicated by their p-values. The adjusted R-squared value of 0.471 suggests that the model explains approximately 47.1% of the variance in e-commerce adoption among female entrepreneurs in Sri Lanka. The highly significant F-statistic (15.48) further affirms the overall model's statistical significance.

5. Discussion

This comparative analysis of e-commerce adoption barriers among male and female entrepreneurs in Sri Lanka reveals several noteworthy insights. Both demographic groups unanimously acknowledge the lack of awareness and knowledge of e-commerce as a major obstacle, highlighting the urgent need for robust educational programs tailored to disseminate knowledge, provide training, and raise awareness about the potential of e-commerce (Ghobakhloo et al., 2013; Nazir & Roomi, 2020).

The mutual recognition of the lack of qualified personnel to develop and support e-commerce as a substantial barrier emphasizes the importance of crafting targeted workforce development initiatives aimed at nurturing e-commerce expertise within these entrepreneurial communities. Syed et al.'s (2012) research findings regarding the scarcity of ICT personnel in developing economies, often commanding high salaries and favoring larger organizations, closely align with the challenges faced by Sri Lankan small businesses. Therefore, it is imperative to design specialized training and capacity-building programs that equip entrepreneurs and their teams with the requisite skills to effectively navigate the complexities of e-commerce platforms and technologies.

The persistent lack of popularity for online shopping emerges as a pervasive obstacle encountered by both male and female entrepreneurs in Sri Lanka. This shared challenge can be attributed to the prevailing South Asian consumer culture, where shopping is a cherished family activity and physical stores play a central role. As corroborated by prior research (Lim et al., 2016; Kumaning & Godfred, 2019), online shopping struggles to gain traction in this cultural context. This preference for in-person shopping experiences is further reinforced by studies such as Nazir & Roomi (2020). Furthermore, Kapurubandara & Lawson's (2006) research indicates that limited awareness and knowledge about e-commerce among small businesses and consumers contribute significantly to the lack of popularity of e-commerce in Sri Lanka. Several interconnected factors, including cultural inclinations, inadequate digital infrastructure, and restricted awareness and knowledge levels, collectively contribute to this enduring challenge.

A notable gender-specific difference emerges in the form of heightened fear and reluctance to change among female entrepreneurs, surpassing the levels observed in their male counterparts. This psychological barrier, consistent with the findings of Taylor et al. (2000), underscores the imperative of implementing mentorship programs, fostering peer support networks, and providing psychological support services tailored to the unique needs of female entrepreneurs. These initiatives are poised to mitigate these pronounced fears and create a more conducive environment conducive to innovation and adaptability. Recognizing and addressing these gender-specific psychological barriers holds the key to fostering a more inclusive and dynamic entrepreneurial landscape.

In the context of Sri Lankan culture and family structures, it is important to recognize the prevailing power dynamics, where men traditionally hold positions of authority and decision-making within households. As a result, female entrepreneurs often conduct their businesses within the limitations set by their husbands. This dependence on spousal consent can present significant challenges for women who aspire to introduce new changes to their businesses. The fear of taking independent actions without their husbands' permission is a legitimate concern for many women in this cultural context. The deeply ingrained societal norms and gender roles can deter women from pursuing innovative strategies or making necessary adjustments to their business operations. This fear of stepping outside traditional boundaries can hinder their entrepreneurial growth and inhibit their ability to respond effectively to changing market dynamics.

Additionally, a significant portion of the female entrepreneurial community in Sri Lanka consists of widows who shoulder the responsibility of supporting their families, including children and elderly parents. Their businesses often serve as the primary means of livelihood. Consequently, the fear of failure and its potential impact on their ability to provide for their families can be paralyzing. The prospect of introducing new changes to their businesses becomes even more daunting in this context, as any misstep may jeopardize their ability to sustain their households. Considering these challenges, it is imperative for societal and economic stakeholders to recognize and address the structural and cultural barriers that impede the growth and innovation of female-led businesses in Sri Lanka. Initiatives that promote gender equality, provide training and support for women entrepreneurs, and foster an environment where women can make independent decisions and embrace change without fear of repercussions are vital for empowering women to thrive as entrepreneurs and contribute more significantly to their families and the broader economy.

The prominence of inadequate delivery networks as a significant barrier for female entrepreneurs accentuates the imperative of rectifying logistical challenges. Given the paramount importance of efficient logistics and reliable customer support in e-commerce, addressing these issues is pivotal to meeting customer expectations, ensuring timely order fulfillment, and building consumer trust - all critical factors contributing to the success of e-commerce endeavors.

One of the pronounced challenges facing female entrepreneurs, especially in rural areas, is the difficulty of engaging with delivery services. This resonates with the findings of Lawrence & Tar (2010) and Adel A. Alyoubi (2015), underlining the pivotal role of a dependable delivery network and support system, particularly for small businesses. Investing in the enhancement of logistical infrastructure, including last-mile delivery systems and transportation networks, becomes imperative to facilitate the seamless operation of e-commerce. Also, many of these entrepreneurs are compelled to transport their products to centralized courier points, a task that becomes particularly onerous for women due to the prevailing scarcity of female vehicle ownership and driving licenses in Sri Lanka. Indeed, addressing the issue of night-time

transportation and the establishment of nocturnal businesses presents a substantial challenge in a country like Sri Lanka, particularly for women. This challenge is exacerbated by the prevailing concerns about the safety of women working at night. The environment, regrettably, remains far from conducive to ensuring the well-being and security of female entrepreneurs and workers during nocturnal hours.

Sri Lanka, like many other countries, grapples with persisting safety concerns, which disproportionately affect women when working or commuting during nighttime hours. These concerns encompass various facets, including but not limited to personal safety, harassment, and the absence of appropriate infrastructure and support systems. As a result, the prospect of women engaging in business activities during the night becomes significantly constrained.

The safety and security of individuals, irrespective of their gender, must always be a paramount consideration. Therefore, addressing these safety concerns is not only vital for fostering gender equality but also for creating an environment conducive to the economic participation of all individuals. It is imperative that concerted efforts are made to improve the safety infrastructure and policies, allowing women to engage in nighttime entrepreneurship and employment with confidence and without compromising their well-being. While recognizing the importance of facilitating nighttime business activities, it is essential to acknowledge and address the existing safety challenges that disproportionately affect women in Sri Lanka. Only through a comprehensive approach that ensures the safety and security of all individuals can we create an inclusive and enabling environment for women to thrive in nighttime entrepreneurship and contribute to the growth and prosperity of the nation.

While some barriers were found to be non-significant in the multiple regression analysis for entrepreneurs in Sri Lanka, it is essential to recognize the unique context and challenges that may shape e-commerce adoption. Factors such as inadequate telecommunications infrastructure, high cost of technology and implementing e-commerce, complex business process activities, indirect or hidden costs associated with e-commerce, unsuitable products for online marketing, lack of adoption of digital payments, and lack of government support did not emerge as significant barriers. This suggests that Sri Lanka's entrepreneurial landscape may be influenced by distinctive factors, and addressing these barriers may not be the primary focus.

6. Conclusion

In conclusion, the comparative analysis of gender differences in barriers to e-commerce adoption among entrepreneurs in Sri Lanka highlights several critical insights. Both male and female entrepreneurs identify Lack of awareness and knowledge of e-commerce as a significant obstacle, emphasizing the urgent need for comprehensive educational programs to raise awareness, provide training, and disseminate knowledge about e-commerce opportunities. Additionally, both groups face challenges related to the Lack of qualified personnel to develop and support e-commerce, underscoring the importance of workforce development initiatives tailored to equip entrepreneurs with essential e-commerce skills. The persistent Lack of popularity for online shopping is a significant and consistent barrier for both genders, rooted in cultural preferences, inadequate digital infrastructure, and limited awareness and knowledge about e-commerce.

Female entrepreneurs exhibit a more pronounced Fear and reluctance to change, highlighting the necessity of gender-specific strategies such as mentorship programs and psychological support services to alleviate these fears and foster a more innovative and adaptable entrepreneurial environment for women. Furthermore, Inadequate delivery networks emerge as a significant hurdle for female entrepreneurs, emphasizing the need to address logistical challenges to facilitate seamless e-commerce operations. Investment in improving logistical

infrastructure, especially in rural areas, is pivotal to enhance the ability of female entrepreneurs to provide excellent customer support and deliver quality service.

Reflecting these findings, fostering e-commerce adoption in Sri Lanka requires a multifaceted approach that addresses gender-specific psychological barriers, enhances educational opportunities, develops e-commerce skills, and invests in logistical infrastructure. By recognizing and mitigating these barriers, Sri Lanka can create a more inclusive and dynamic entrepreneurial landscape, unlocking the potential for sustainable e-commerce growth among both male and female entrepreneurs.

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