“Impact of women’s economic empowerment on technology entrepreneurship intentions via mediation of self-efficacy”

AUTHORS	Sura Al-Ayed Sultan Alateeg

ARTICLE INFO	Sura Al-Ayed and Sultan Alateeg (2025). Impact of women’s economic empowerment on technology entrepreneurship intentions via mediation of self-efficacy. *Problems and Perspectives in Management*, *23*(2), 433-443. doi:10.21511/ppm.23(2).2025.31
DOI	http://dx.doi.org/10.21511/ppm.23(2).2025.31
RELEASED ON	Monday, 12 May 2025
RECEIVED ON	Wednesday, 04 December 2024
ACCEPTED ON	Thursday, 10 April 2025

JOURNAL	"Problems and Perspectives in Management"
ISSN PRINT	1727-7051
ISSN ONLINE	1810-5467
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
37	2	4

BUSINESS PERSPECTIVES

LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine

www.businessperspectives.org

Sura Al-Ayed (Saudi Arabia), **Sultan Alateeg** (Saudi Arabia)

IMPACT OF WOMEN'S ECONOMIC EMPOWERMENT ON TECHNOLOGY ENTREPRENEURSHIP INTENTIONS VIA MEDIATION OF SELF-EFFICACY

Abstract

This study investigates the relationships between women economic empowerment, self-efficacy, and women technology entrepreneurship intention among women operating online businesses in Saudi Arabia. A cross-sectional study design was utilized, with data collected from 256 women entrepreneurs engaged in various online business ventures through a convenience sampling technique. This sample was chosen due to its direct relevance to the study's objective of understanding the entrepreneurial intentions of economically active women in the digital space. The analysis, conducted using structural equation modeling, revealed several important findings. Women economic empowerment was found to have a significant positive effect on self-efficacy (β = 0.607), indicating that increased economic resources and opportunities enhance women's confidence in their abilities. Additionally, self-efficacy was identified as a significant predictor of women technology entrepreneurship intention (β = 0.44), suggesting that women with higher self-confidence are more likely to pursue technology entrepreneurship. Moreover, women economic empowerment was found to have a direct effect on technology entrepreneurship intention (β = 0.351). Importantly, self-efficacy mediated the relationship between economic empowerment and entrepreneurial intentions (β = 0.267), highlighting that economic empowerment influences entrepreneurial aspirations both directly and indirectly through its impact on self-efficacy. These findings underscore the importance of economic support and confidence-building initiatives in promoting technology entrepreneurship among women. The study suggests that targeted policies and programs should focus on enhancing economic opportunities and building self-efficacy to foster greater participation in technology entrepreneurship.

Keywords empowerment, technology, entrepreneurship, self-efficacy, intention

JEL Classification M13, M21, O12, O32

Received on: 4th of December, 2024
Accepted on: 10th of April, 2025
Published on: 12th of May, 2025

Sura Al-Ayed, Ph.D., Associate Professor, Faculty of Business Studies, College of Business Studies, Arab Open University, Saudi Arabia. (Corresponding author)

Sultan Alateeg, Ph.D., Assistant Professor, Department of Management Information System, College of Business Administration, Majmaah University, Saudi Arabia.

Conflict of interest statement:
Author(s) reported no conflict of interest

INTRODUCTION

Women empowerment stands as one of the most significant social and economic priorities of the 21st century, addressing the enhancement of women's roles, especially for those marginalized within society (Ghasemi et al., 2019). Empowering women is not only a matter of individual equity but also a catalyst for broader societal progress. Women hold the potential to initiate substantial change within their families, which can have a ripple effect on the broader economic and social development of Saudi Arabia. Yet, Saudi women have historically faced several challenges in cultural, economic, educational, and employment domains. Systemic issues, such as limited access to financial resources and essential assets, which restrict autonomy and empowerment, often compound these challenges (Tawfik et al., 2020).

In the realm of technology entrepreneurship, empowerment takes on an added dimension. Women's perceptions of their ability to succeed

play a critical role in their decision to engage in and persist with entrepreneurial ventures (Alateeg et al., 2024). This is particularly pertinent in Saudi Arabia, where rapid advancements in technology and digital innovation are reshaping the economic landscape. As the country prioritizes technological development, understanding the drivers of women's entrepreneurial intentions in this sector is vital. While there is growing support for women in business, addressing specific barriers and enablers – such as societal norms, access to education, mentorship, and funding – is crucial to fully unlock their potential. Efforts to promote gender-inclusive entrepreneurship not only empower women but also contribute to the nation's vision for sustainable economic development. A more comprehensive approach to understanding and addressing the factors influencing women's participation in technology entrepreneurship can lead to transformative outcomes for individuals, families, and society at large (Alateeg & Alhammadi, 2023).

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Women entrepreneurship encompasses the establishment and management of businesses by women across diverse sectors, such as technology, retail, services, and manufacturing (Yadav & Unni, 2016; Jakhar & Krishna, 2020). This field tackles distinct challenges such as restricted access to capital, gender biases, and the difficulty of balancing business ventures with family responsibilities. Women entrepreneurs often benefit from targeted support structures like mentorship programs, networking opportunities, and supportive policies (Sarfaraz et al., 2014). Their businesses significantly contribute to job creation and innovation (Cardella et al., 2020).

Women economic empowerment encompasses a broad range of factors including access to financial resources, education, and training opportunities (Tang, 2022). Economic empowerment equips women with the resources to enhance their economic position and exercise more control over their financial prospects (Laszlo et al., 2020). This empowerment is important related to technology entrepreneurship, where initial capital, technical skills, and business acumen are essential for launching and sustaining successful ventures (Al-Qahtani et al., 2020). In Saudi Arabia, recent reforms designed to boost women's involvement in the workforce and entrepreneurship highlight an increasing acknowledgment of the importance of economic empowerment in driving business success (Ali et al., 2021). However, despite these advancements, women still face challenges to get resources and opportunities, which can affect their entrepreneurial ambitions. The evolving landscape of global entrepreneurship increasingly highlights the significance of technology-driven ventures as key drivers of economic growth and innovation (Zapata-Huamaní et al., 2019). In this context, understanding the factors that influence women's participation in technology entrepreneurship is crucial, especially in regions where traditional barriers to entry remain prevalent (Shrivastava, 2021). Saudi Arabia, with its rapidly developing economy and progressive social policies, provides a compelling backdrop for examining these dynamics (Aleidi & Chandran, 2019). The intersection of women economic empowerment, self-efficacy, and women technology entrepreneurship intention represents a critical area of study in this regard.

For decades, Saudi women have faced systemic inequality and discrimination. Nevertheless, through persistence and determination, they have made considerable progress in advocating for their rights and advancing their empowerment, particularly from an economic perspective. In recent years, Saudi women have gained greater access to education, entered the workforce, and become integral contributors to the Kingdom's Vision 2030. They have also achieved higher representation in leadership roles across both government and private sectors. The Saudi government has implemented numerous initiatives aimed at empowering women in entrepreneurship, safeguarding their rights, and promoting their participation in public life, all contributing to national growth. Additionally, reforms in legislation and policy have accelerated the inclusion of women in key sectors. These long-term efforts to reform legal frameworks have provided women with increased freedom to work and participate in society, leading to tangible progress. While significant advancements have been made, further

http://dx.doi.org/10.21511/ppm.23(2).2025.31

efforts are needed to fully realize the potential of Saudi women (Varshney, 2019; Tawfik et al., 2020).

The active participation of women is crucial for Saudi Arabia's economic growth, as it holds the key to unlocking the nation's full potential. If the Kingdom is to remain competitive, particularly in its oil industry and other economic sectors, the inclusion of women in the workforce is essential for achieving Vision 2030 (Naseem & Dhruva, 2017). The discourse surrounding WE has gained considerable momentum, with women's rights becoming a pivotal issue in national policy. The Saudi government has increasingly recognized the critical role women play, making their empowerment a central element of national development agendas. Through strategic reforms in policies and regulations, women have been granted the right to contribute across all sectors of the economy. Their growing presence in both public and private domains is now seen as a driving force for poverty reduction and an essential contributor to increasing GDP of Saudi Arabia (Tawfik et al., 2020).

Tech entrepreneurship intention refers to the desire to start and manage technology-focused businesses (Mivehchi, 2019). This includes developing new technologies or innovative applications of existing ones. Factors influencing tech entrepreneurship intention include a passion for technology, market opportunities, and the readiness to engage in tech innovation (Paoloni et al., 2019). Success in tech entrepreneurship typically requires a combination of technical skills, business knowledge, and access to resources such as tech incubators, accelerators, and funding sources. This intention often intersects with women entrepreneurship, as many women are increasingly pursuing tech ventures, leveraging their skills to contribute to the tech industry and drive innovation (Pinem, 2019).

Women technology entrepreneurship intention refers to the motivation and determination of women to engage in entrepreneurial ventures within the technology sector (Aleidi & Chandran, 2019). This concept highlights the desire of women to establish, develop, or manage businesses that leverage technological innovations or operate within tech-driven industries (Shrivastava, 2021). Several key factors influence women's intentions in this area (Zapata-Huamaní et al., 2019). Additionally, economic empowerment – including access to financial resources, independence, and supportive policies – enables women to see entrepreneurship as a viable career path in the tech sector.

Women's Economic Empowerment involves enhancing women's control over economic resources, increasing their financial independence, and improving their economic status (Al-Qahtani et al., 2020). This concept is multifaceted and includes ensuring women have access to financial resources, which are crucial for starting and sustaining businesses, investing in education, and improving their living conditions (Ali et al., 2021). Additionally, educational and vocational training plays a vital role, as acquiring relevant skills and knowledge can significantly boost women's employability and entrepreneurial potential. Dahlum et al. (2022) demonstrated a robust correlation between women's political empowerment and economic growth, with the former significantly enhancing technological advancement. Numerous studies have highlighted the influence of gender equality and female empowerment on economic performance, including growth metrics (Cuberes & Teignier, 2014; Altuzarra et al., 2021; Santos Silva & Klasen, 2021). The capacity to leverage social capital and collective responsibility facilitates the empowerment of female entrepreneurs, enabling them to expand their businesses and sustain their entrepreneurial ventures. Sustainable entrepreneurship provides female entrepreneurs with the opportunity for professional development while maintaining the flexibility to balance work and family commitments (Yudiastuti et al., 2021). The research on SMEs revealed that female-led firms in the informal sector exhibited lower average value-added, whereas women-led medium-sized enterprises in the formal sector demonstrated higher value-added in Vietnam (Bui & Long, 2021). Manzoor et al. (2018) underscored the critical need for genuine empowerment and societal inclusion of women. Female entrepreneurs often engage in the informal economy due to various factors such as poverty, inflation, and the necessity to support and enhance family income.

Self-efficacy is the belief an individual holds in their ability to carry out actions required to achieve specific performance outcomes. This concept, central to Albert Bandura's social cognitive theory, em-

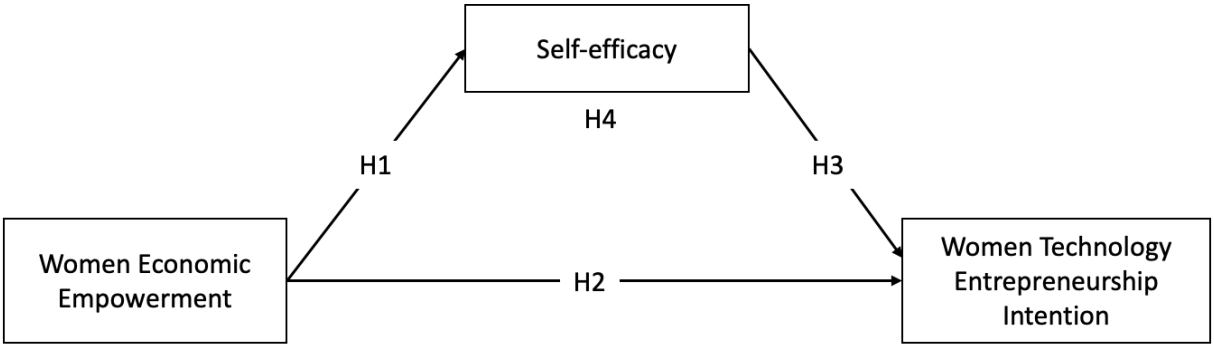

Figure 1. Research model

phasizes the role of self-perception (Bandura, 2001). Self-efficacy affects various domains of life, including academic achievements, career success, and personal growth (Abele & Spurk, 2009). They tend to approach difficult tasks with a sense of confidence and perseverance, which significantly enhances their performance and outcomes. Self-efficacy is crucial as it affects an entrepreneur's confidence in their ability to manage and grow their business. High levels of self-efficacy enable entrepreneurs to navigate obstacles, adapt to changes, and capitalize on opportunities (Gielnik et al., 2020). It influences their decision-making processes, risk-taking behavior, and overall resilience in the entrepreneurial journey (Setiawan, 2014).

For women aspiring to enter the technology sector, high self-efficacy can enhance their confidence in handling technological challenges, pursuing innovative ideas, and managing entrepreneurial tasks. Women's economic empowerment involves gaining control over resources, financial independence, and improved social status, which can positively influence their entrepreneurial aspirations. However, the direct relationship between economic empowerment and technology entrepreneurship intention might be influenced by self-efficacy. Specifically, economic empowerment can enhance women's self-efficacy by providing them with resources, opportunities, and a supportive environment that boosts their confidence in their entrepreneurial abilities.

This study aims to investigate the relationships between women economic empowerment, self-efficacy, and women technology entrepreneurship intention among women operating online businesses in Saudi Arabia. Hence, the following hypotheses are proposed:

H1: Women economic empowerment influences self-efficacy.

H2: Women economic empowerment influences women technology entrepreneurship intention.

H3: Self-efficacy influences women technology entrepreneurship intention.

H4: Self-efficacy mediates between women economic empowerment and women technology entrepreneurship intention.

Figure 1 presents a research model.

2. METHODOLOGY

A cross-sectional study design was used for this research, focusing on women who operate online businesses in Saudi Arabia. This specific group was selected due to its increasing role in the digital economy and its potential to drive innovation and economic growth. Women entrepreneurs engaged in online businesses represent a growing segment of the Saudi economy, particularly in light of national policies promoting digital transformation and female economic participation. The study's focus on this demographic provides insights into how economic empowerment and self-efficacy influence their entrepreneurial intentions, addressing gaps in research on female entrepreneurship in emerging markets. Data were gathered from 256 participants using a convenience sampling technique, which facilitated practical data collection from women actively engaged in e-commerce, digital services, and online retail. To gauge responses, a 5-point Likert scale was utilized, enabling participants to express their level

http://dx.doi.org/10.21511/ppm.23(2).2025.31

of agreement or disagreement with various statements. The survey included measures for three key constructs: women economic empowerment, assessed through 3 items adapted from Scheyvens (1999) and Hassan et al. (2022); self-efficacy, evaluated with 5 items adapted from Yoopetch (2021) and Al-Rashdi and Abdelwahed (2022); and women technology entrepreneurship intention, measured using 3 items adapted from Lee et al. (2004) and Hassan et al. (2022). Data analysis was performed using structural equation modeling with SmartPLS software, version 4, to measure the relationships among these constructs and test the proposed hypotheses.

3. RESULTS

Table 1 presents the profile of the participants (n = 256), all of them are women in Saudi Arabia. The majority of participants fall within the 35-44 age group (44%), followed by 25–34-year-olds (35%), and a smaller portion aged 45-54 years (21%). In terms of education, 71% hold a Bachelor's degree, while 29% have a Master's degree. Regarding work experience, nearly half of the participants (46%) have 1-5 years of experience, indicating a large number of relatively early-career professionals. Additionally, 30% have 6-10 years of experience, while 12% have less than 1 year, and another 12% possess 11-15 years of experience. These data reflect a predominantly mid-aged, well-educated group of women with diverse professional experience levels, concentrated mainly in the early to mid-career stages.

Table 1. Participants profile (n = 256)

	Frequency	Percent
Age		
25-34	89	35%
35-44	113	44%
45-54	54	21%
Education		
Bachelor's degree	183	71%
Master's degree	73	29%
Experience		
Less than 1 year	31	12%
1-5 years	119	46%
6-10 years	76	30%
11-15 years	30	12%

Table 2 outlines the measurement model results, confirming the reliability and validity of the study's constructs. Women Economic Empowerment shows a Cronbach's alpha of 0.742, CR of 0.853, and AVE of 0.662, indicating strong reliability and convergent validity. Self-efficacy has a Cronbach's alpha of 0.833, CR of 0.882, and AVE of 0.599, demonstrating solid reliability. Women Technology Entrepreneurship Intention has a Cronbach's alpha of 0.788, CR of 0.778, and AVE of 0.54, indicating moderate reliability. All item loadings exceed 0.7, confirming the model's validity. Table 3 demonstrates the discriminant validity of the constructs using the Fornell-Larcker criterion, confirming that they are distinct.

Table 4 presents the path coefficients and statistical significance of the hypothesized relationships, providing empirical validation for the study's theoretical framework. The path from women economic empowerment to self-efficacy ($\beta = 0.607$, $p < 0.001$) indicates a strong and positive association, affirming that financial resources, business opportunities, and economic autonomy significantly boost women's confidence in their entrepreneurial capabilities. This suggests that policies aimed at increasing economic support can directly enhance women's self-efficacy, thereby creating a more favorable environment for entrepreneurial engagement.

The relationship between women economic empowerment and women technology entrepreneurship intention ($\beta = 0.351$, $p < 0.001$) is statistically significant, confirming that economic empowerment directly stimulates entrepreneurial aspirations. This highlights the crucial role of financial independence, access to resources, and market opportunities in encouraging women to explore technology-based ventures. Therefore, governments and policymakers should design financial assistance programs and infrastructure that facilitate women's access to digital entrepreneurship.

The path from self-efficacy to women technology entrepreneurship intention ($\beta = 0.44$, $p < 0.001$) further demonstrates that self-confidence and personal belief in one's abilities are crucial determinants of entrepreneurial intention. Women who perceive themselves as competent and capable are more inclined to pursue business ventures, particularly in the technology sector. Training programs that foster leadership skills, business acumen, and technological literacy can thus play a vital role in enhancing self-efficacy and, subsequently, entrepreneurial participation.

Table 2. Measurement model

Items and constructs	Loadings	Cronbach's alpha	Composite reliability	Average Variance Extracted (AVE)
Women Economic Empowerment		0.742	0.853	0.662
"EE1: My online business brings lasting economic gains to a local community"	0.721			
"EE2: The cash earned from my online business is shared between many households in the community"	0.878			
"EE3: There are visible signs of improvement from the cash that is earned from my online business"	0.863			
Self-efficacy		0.833	0.882	0.599
"SEF1: I can solve the problems that happen to my life"	0.736			
"SEF2: I have control over things that happen in my life"	0.805			
"SEF3: If I set my mind on some goals, I can do it effectively"	0.816			
"SEF4: My actions can result in what will happen to me in the future"	0.763			
"SEF5: I can change and fix important things to make it better for the future"	0.747			
Women Technology Entrepreneurship Intention		0.788	0.778	0.54
"WTEI1: I will recommend others to invest in ecommerce business projects"	0.795			
"WTEI2: I will continue to invest in ecommerce business-related projects"	0.712			
"WTEI3: I can stand the inconvenience caused by ecommerce business-related projects"	0.714			

Table 3. Discriminant validity (Fornell-Larcker criterion)

Items and constructs	Women Economic Empowerment	Self-efficacy	Women Technology Entrepreneurship Intention
Women Economic Empowerment	0.814		
Self-efficacy	0.607	0.774	
Women Technology Entrepreneurship Intention	0.618	0.653	0.735

Finally, the mediation effect of self-efficacy in the relationship between women economic empowerment and women technology entrepreneurship intention ($\beta = 0.267$, $p < 0.001$) underscores its pivotal role in translating economic support into entrepreneurial action. This means that while economic empowerment provides the necessary resources, it is the accompanying psychological empowerment (reflected in self-efficacy) thatenables women to take proactive steps toward entrepreneurship. Investment in mentorship, skill-building initiatives, and networking opportunities can strengthen this pathway, ensuring that economic empowerment translates into tangible entrepreneurial outcomes.

The R-square values indicate the amount of variance explained by the independent variables for each dependent variable (Figure 2). The R-square for self-efficacy is 0.368, meaning that 36.8% of

Table 4. Path coefficients

Paths	Beta	Standard deviation	t-statistics	p-values	Results
Women Economic Empowerment → Self-efficacy	0.607	0.067	9.09	0.00	H1 supported
Women Economic Empowerment → Women Technology Entrepreneurship Intention	0.351	0.087	4.05	0.00	H2 supported
Self-efficacy → Women Technology Entrepreneurship Intention	0.44	0.074	5.923	0.00	H3 supported
Women Economic Empowerment → Self-efficacy → Women Technology Entrepreneurship Intention	0.267	0.056	4.749	0.00	H4 supported

http://dx.doi.org/10.21511/ppm.23(2).2025.31

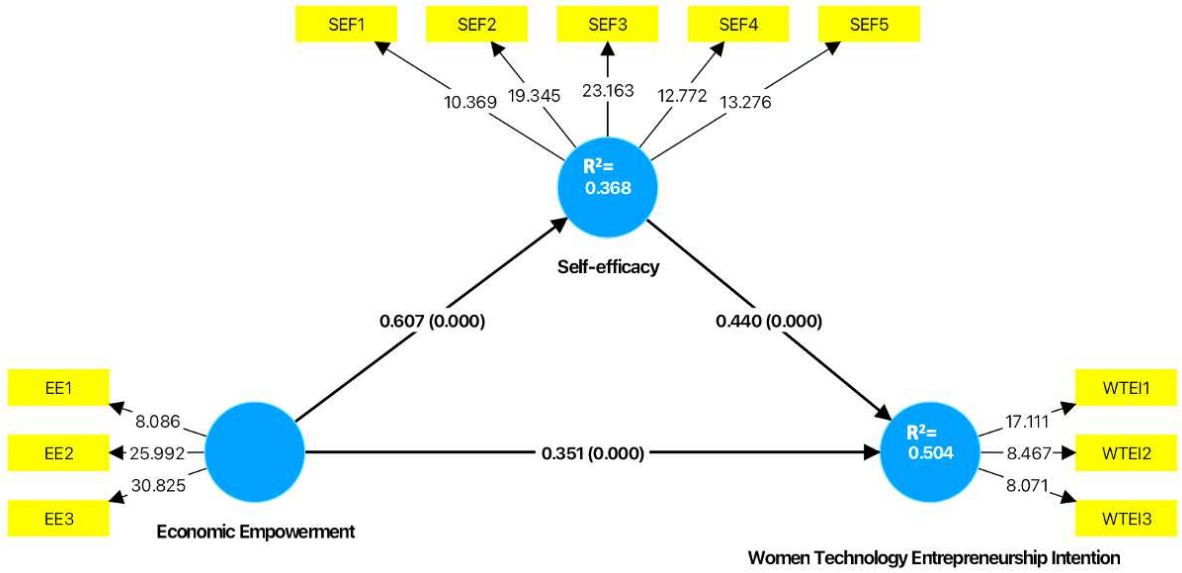

Figure 2. Structural model

the variance in self-efficacy is explained by women economic empowerment. For women technology entrepreneurship intention, the R-square is 0.504, indicating that 50.4% of the variance in women technology entrepreneurship intention is explained by women economic empowerment and self-efficacy.

4. DISCUSSION

The results presented valuable insights into the relationships among the constructs of women economic empowerment, self-efficacy, and women technology entrepreneurship intention. Firstly, the significant path coefficient from women economic empowerment to self-efficacy ($\beta = 0.607$, $p < 0.001$) indicates a strong positive impact. This suggests that as women become more economically empowered, their self-efficacy increases. This finding aligns with existing literature that underscores the role of economic empowerment in enhancing personal confidence and perceived capabilities (Ghasemi et al., 2019; Tawfik et al., 2020). Secondly, the direct effect of women economic empowerment on women technology entrepreneurship intention ($\beta = 0.351$, $p < 0.001$) is also significant. This result supports the hypothesis that economic empowerment directly influences women's intentions to engage in technology entrepreneurship. It implies that providing women with economic resources and opportunities can significantly boost their aspirations and commitment to entrepreneurial ventures in the technology sector (Tang, 2022). The significant relationship between self-efficacy and women technology entrepreneurship intention ($\beta = 0.44$, $p < 0.001$) further reinforces the importance of self-confidence. Women with greater self-efficacy are more inclined to pursue and maintain ventures in technology entrepreneurship. This finding highlights the crucial role of self-belief in the entrepreneurial process, emphasizing the need for initiatives that bolster self-confidence among aspiring female entrepreneurs (Ali et al., 2021). Additionally, the mediation effect of self-efficacy in the relationship between women economic empowerment and women technology entrepreneurship intention ($\beta = 0.267$, $p < 0.001$) demonstrates that self-efficacy partially mediates this relationship. This suggests that economic empowerment not only directly affects entrepreneurial intentions but also influences these intentions indirectly by enhancing self-efficacy. This mediation effect underscores the complex interplay between economic resources and personal confidence in shaping entrepreneurial aspirations. The findings highlight the significant roles of economic empowerment and self-efficacy in shaping women's technology entrepreneurship intentions. The results underscore the need for policies and programs that enhance economic opportunities for women and build their self-confidence to foster greater participation in technology entrepreneurship (Chatterjee et al., 2020).

The findings of this study have significant implications for policy, practice, and research. For policy and program development, the strong link between women economic empowerment and self-efficacy, as well as women technology entrepreneurship intention, underscores the need for comprehensive policies aimed at enhancing economic opportunities for women. Governments and organizations should implement programs that offer financial support, such as grants and loans, specifically tailored to women entrepreneurs (Naseem & Dhruva, 2017). Additionally, providing resources for business development and structured training programs that cover financial management and strategic planning can further support women in launching and sustaining technology-focused ventures. Effective support structures like mentorship programs and networking opportunities are crucial (Varshney, 2019). Connecting aspiring women entrepreneurs with experienced business leaders can offer valuable guidance and foster a supportive community that enhances business growth. In terms of entrepreneurial training and development, it is essential that training programs not only impart technical skills but also focus on building self-confidence and resilience. Practical workshops, simulations, and psychological support can help women overcome self-doubt and enhance their entrepreneurial aspirations. Research and academia should explore additional mediators and moderators affecting the relationship between economic empowerment and entrepreneurial intentions. Longitudinal studies could provide insights into how these factors influence entrepreneurial success over time, aiding in the refinement of strategies and interventions. Finally, community engagement is vital. Local initiatives should address region-specific challenges and provide tailored support, while awareness campaigns can highlight the importance of economic empowerment and self-efficacy, inspiring broader support and mobilizing stakeholders. Integrating these approaches can create a more supportive environment that fosters greater participation and success in technology entrepreneurship for women.

CONCLUSION

This study aimed to explore the relationships between women economic empowerment, self-efficacy, and women technology entrepreneurship intention among women operating online businesses in Saudi Arabia. The findings indicate that economic empowerment significantly enhances self-efficacy, which, in turn, strengthens women's intentions to engage in technology entrepreneurship. This relationship underscores the critical role of self-efficacy in bridging the gap between economic empowerment and entrepreneurial aspirations. Moreover, self-efficacy functions as a key mediating factor, suggesting that personal confidence and belief in one's abilities are essential drivers of entrepreneurial engagement among women. The study's findings emphasize the need for well-structured policies and intervention programs that go beyond financial support to include psychological and skill-building aspects. Providing mentorship opportunities, facilitating networking, and offering structured training programs focused on both technical skills and personal development can play a vital role in strengthening women's entrepreneurial capabilities. Additionally, promoting digital literacy and access to technology-based resources is crucial for ensuring that women can fully leverage their economic empowerment to develop sustainable entrepreneurial ventures. These insights contribute to the broader discourse on women's entrepreneurship and empowerment by highlighting the interplay between economic resources and personal agency. The study suggests that future research should further investigate additional mediating and moderating factors, such as cultural influences, social support systems, and regulatory frameworks, to provide a more holistic understanding of the determinants of technology entrepreneurship among women. Understanding these dynamics can inform the design of more effective interventions that foster an inclusive and supportive entrepreneurial ecosystem for women in emerging economies.

http://dx.doi.org/10.21511/ppm.23(2).2025.31

AUTHOR CONTRIBUTIONS

Conceptualization: Sultan Alateeg.
Data curation: Sultan Alateeg.
Formal analysis: Sultan Alateeg.
Funding acquisition: Sura Al-Ayed.
Investigation: Sura Al-Ayed.
Methodology: Sura Al-Ayed.
Project administration: Sultan Alateeg.
Resources: Sura Al-Ayed.
Software: Sultan Alateeg.
Supervision: Sultan Alateeg.
Validation: Sultan Alateeg.
Visualization: Sultan Alateeg.
Writing – original draft: Sura Al-Ayed.
Writing – review & editing: Sultan Alateeg.

ACKNOWLEDGMENT

The authors extend their appreciation to the Arab Open University for funding this work through research fund No. (AOUKSA-524008).

REFERENCES

1. Abele, A. E., & Spurk, D. (2009). The longitudinal impact of self-efficacy and career goals on objective and subjective career success. *Journal of Vocational Behavior, 74*(1), 53-62. https://doi.org/10.1016/j.jvb.2008.10.005
2. Al-Qahtani, M. M. Z., Alkhateeb, T. T. Y., Mahmood, H., Abdalla, M. A. Z., & Qaralleh, T. J. O. T. (2020). The role of the academic and political empowerment of women in economic, social and managerial empowerment: The case of Saudi Arabia. *Economies, 8*(2), 45. https://doi.org/10.3390/economies8020045
3. Al-Rashdi, N. A. S., & Abdelwahed, N. A. A. (2022). The empowerment of Saudi Arabian women through a multidimensional approach: the mediating roles of self-efficacy and family support. *Sustainability, 14*(24), 16349. https://doi.org/10.3390/su142416349
4. Alateeg, S. S., & Alhammadi, A. D. (2023). Traditional Retailer's Intention to opt E-commerce for Digital Retail Business in Saudi Arabia. *Migration Letters, 20*(7), 1307-1326. https://doi.org/10.59670/ml.v20i7.5101
5. Alateeg, S., Alhammadi, A., Al-Ayed, S. I., & Helmi, M. A. (2024). Factors Influencing on Behavioral Intention to Adopt Artificial Intelligence for Startup Sustainability. *Kurdish Studies, 12*(1), 2924-2941. Retrieved from https://kurdishstudies.net/menuscript/index.php/KS/article/view/1580
6. Aleidi, A. I., & Chandran, D. (2019). Key drivers for women in technology entrepreneurship: Insights from Saudi Arabia. In *Proceedings of the 23rd Pacific Asia Conference on Information Systems (PACIS), China*. Retrieved from https://aisel.aisnet.org/pacis2019/208/
7. Ali, M., Ali, I., Badghish, S., & Soomro, Y. A. (2021). Determinants of financial empowerment among women in Saudi Arabia. *Frontiers in Psychology, 12,* 747255. https://doi.org/10.3389/fpsyg.2021.747255
8. Altuzarra, A., Gálvez-Gálvez, C., & González-Flores, A. (2021). Is gender inequality a barrier to economic growth? A panel data analysis of developing countries. *Sustainability, 13*(1), 367. https://doi.org/10.3390/su13010367
9. Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*(1), 1-26. https://doi.org/10.1146/annurev.psych.52.1.1
10. Bui, M., & Long, T. Q. (2021). Women's Economic Empowerment in Vietnam: Performance and Constraints of Female-Led Manufacturing SMEs. *Journal of Risk and Financial Management, 14*(6), 255. https://doi.org/10.3390/jrfm14060255
11. Cardella, G. M., Hernández-Sánchez, B. R., & Sánchez-García, J. C. (2020). Women entrepreneurship: A systematic review to outline the boundaries of scientific literature. *Frontiers in Psychology, 11,* 1557. https://doi.org/10.3389/fpsyg.2020.01557
12. Chatterjee, S., Gupta, S. D., & Upadhyay, P. (2020). Technology adoption and entrepre-

neurial orientation for rural women: Evidence from India. *Technological Forecasting and Social Change, 160,* 120236. Retrieved from https://ideas.repec.org/a/eee/tefoso/v160y2020ics0040162520310623.html

13. Cuberes, D., & Teignier, M. (2014). Gender inequality and economic growth: A critical review. *Journal of International Development, 26*(2), 260-276. https://doi.org/10.1002/jid.2983
14. Dahlum, S., Knutsen, C. H., & Mechkova, V. (2022). Women's political empowerment and economic growth. *World Development, 156,* 105822. https://doi.org/10.1016/j.worlddev.2022.105822
15. Ghasemi, M., Badsar, M., Falahati, L., & Karamidehkordi, E. (2019). Investigating the mediating role of self-esteem and self-efficacy in the analysis of the socio-cultural factors influencing rural women's empowerment. *Women's Studies in Social Psychology, 17,* 151-186. https://doi.org/10.22051/jwsps.2019.24257.1919
16. Gielnik, M. M., Bledow, R., & Stark, M. S. (2020). A dynamic account of self-efficacy in entrepreneurship. *Journal of Applied Psychology, 105*(5), 487. https://doi.org/10.1037/apl0000451
17. Hassan, O. H., Sobaih, A. E. E., & Elshaer, I. A. (2022). The impact of women's empowerment on their entrepreneurship intention in the Saudi food industry. *Journal of Risk and Financial Management, 15*(12), 571. https://doi.org/10.3390/jrfm15120571
18. Jakhar, R., & Krishna, C. (2020). Women Entrepreneurship: Opportunities and challenges (a literature review). *Anwesh, 5*(2), 38. Retrieved from http://publishingindia.com/downloads/6179.pdf
19. Laszlo, S., Grantham, K., Oskay, E., & Zhang, T. (2020). Grappling with the challenges of measuring women's economic empowerment in intrahousehold settings. *World Development, 132,* 104959. https://doi.org/10.1016/j.worlddev.2020.104959
20. Lee, S. Y., Florida, R., & Acs, Z. (2004). Creativity and entrepreneurship: A regional analysis of new firm formation. *Regional Studies, 38*(8), 879-891. https://doi.org/10.1080/0034340042000280910
21. Manzoor, S., Manzoor, A., & Qureshi, M. B. (2018). Analyzing Economic Empowerment of Women Entrepreneurs in Informal Sector. *Pakistan Journal of Applied Social Sciences, 8*(1), 73-89. https://doi.org/10.46568/pjass.v8i1.323
22. Mivehchi, L. (2019). The role of information technology in women entrepreneurship (the case of e-retailing in Iran). *Procedia Computer Science, 158,* 508-512. https://doi.org/10.1016/j.procs.2019.09.082
23. Naseem, S., & Dhruva, K. (2017). Issues and challenges of the Saudi female labor force and the role of Vision 2030. *International Journal of Economics and Financial Issues, 7,* 23-27. Retrieved from https://ideas.repec.org/a/eco/journ1/2017-04-04.html
24. Paoloni, P., Secundo, G., Ndou, V., & Modaffari, G. (2019). Women entrepreneurship and digital technologies: Towards a research agenda. In *Advances in Gender and Cultural Research in Business and Economics: 4th IPAZIA Workshop on Gender Issues 2018, Rome, Italy 4* (pp. 181-194). Springer International Publishing. http://dx.doi.org/10.1007/978-3-030-00335-7_12
25. Pinem, R. J. (2019). The role of technology in increasing motivation of millennial women entrepreneurs starting a business in the digital era. *International Journal of Entrepreneurship, 23*(2), 1-7. Retrieved from https://www.abacademies.org/articles/the-role-of-technology-in-increasing-motivation-of-millennial-women-entrepreneurs-starting-a-business-in-the-digital-era-8357.html
26. Santos Silva, M., & Klasen, S. (2021). Gender inequality as a barrier to economic growth: a review of the theoretical literature. *Review of Economics of the Household, 19*(3), 581-614. Retrieved from https://link.springer.com/article/10.1007/s11150-020-09535-6
27. Sarfaraz, L., Faghih, N., & Majd, A. A. (2014). The relationship between women entrepreneurship and gender equality. *Journal of Global Entrepreneurship Research, 4,* 1-11. Retrieved from https://link.springer.com/article/10.1186/2251-7316-2-6
28. Scheyvens, R. (1999). Ecotourism and the empowerment of local communities. *Tourism Management, 20*(2), 245-249. https://doi.org/10.1016/S0261-5177(98)00069-7
29. Setiawan, J. L. (2014). Examining entrepreneurial self-efficacy among students. *Procedia-Social and Behavioral Sciences, 115,* 235-242. https://doi.org/10.1016/j.sbspro.2014.02.431
30. Shrivastava, M. (2021). *Women tech entrepreneurship in India. Women's Entrepreneurship in STEM Disciplines: Issues and Perspectives.* http://dx.doi.org/10.1007/978-3-030-83792-1
31. Tang, C. S. (2022). Innovative technology and operations for alleviating poverty through women's economic empowerment. *Production and Operations Management, 31*(1), 32-45. https://doi.org/10.1111/poms.13349
32. Tawfik, T., Alkhateeb, Y., Abdalla, M., Abdalla, Z., Abdo, S., Elsayed, M., & Mawad, E. (2020). The economic empowerment of Saudi women in the light of Saudi Vision 2030. *Asian Economic and Financial Review, 10,* 1269-1279. https://doi.org/10.18488/journal.aefr.2020.1011.1269.1279
33. Varshney, D. (2019). The strides of the Saudi female workforce: Overcoming constraints and contradictions in transition. *Journal of International Women's Studies, 20,* 359-372. Retrieved from https://vc.bridgew.edu/jiws/vol20/iss2/24/

http://dx.doi.org/10.21511/ppm.23(2).2025.31

34. Yadav, V., & Unni, J. (2016). Women entrepreneurship: research review and future directions. *Journal of Global Entrepreneurship Research, 6,* 1-18. http://dx.doi.org/10.1186/s40497-016-0055-x

35. Yoopetch, C. (2021). Women empowerment, attitude toward risk-taking and entrepreneurial intention in the hospitality industry. *International Journal of Culture, Tourism and Hospitality Research, 15*(1), 59-76. https://doi.org/10.1108/IJCTHR-01-2020-0016

36. Yudiastuti, A., Pratikto, H., & Sopiah, S. (2021). Social Capital, Joint Responsibility Systems, and Empowerment of Women in Msmes: a Conceptual Framework. *International Journal of Science, Technology & Management, 2*(6), 2239-2246. http://dx.doi.org/10.46729/ijstm.v2i6.397

37. Zapata-Huamaní, G. A., Fernández-López, S., Rodríguez-Gulías, M. J., & Rodeiro-Pazos, D. (2019). Technology entrepreneurship and gender in emerging countries. In *Sustainable Entrepreneurship: The Role of Collaboration in the Global Economy* (pp. 47-62). Retrieved from https://link.springer.com/chapter/10.1007/978-3-030-12342-0_4