

The Role of Digital Technology Adoption in Improving the Performance of Women Entrepreneurs

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ABSTRACT

The purpose of writing this paper is to explore issues related to the role of digital technology adoption in improving the performance of women entrepreneurs. The conceptual framework was developed by conducting a review of the relevant literature before developing propositions regarding the effect of digital technology adoption on business performance. The analytical method used is a literature study. This paper anticipates that the adoption of digital technology will support the performance of women entrepreneurs. Future research should be conducted to perform empirical analyses to validate and/or modify the propositions presented in this paper.

Keywords : Digital Technology Adoption, Performance, Women Entrepreneurs.

1. INTRODUCTION

The size of women-owned businesses has shrunk more than that of men-owned businesses since the start of the COVID-19 pandemic in Indonesia (Elhan-Kayalar et al., 2022). First, the employment size of women-owned businesses is systematically smaller than that of men-owned businesses. Second, the overall job size of women-owned businesses has shrunk following the outbreak of the pandemic. From January 2019 to January 2021, the weekly average gross merchandise value (GMV) for women-owned businesses was consistently greater than those owned by men by IDR 626,540. However, there is an overall trend for GMV to decline, especially among women-owned businesses after the pandemic outbreak.

Women entrepreneurs take advantage of crisis opportunities and turn them into a force that helps them survive the pandemic (Cherif et al., 2022). To prevent the further spread of the COVID-19 virus, several governments around the world are imposing strict mobility and activity restrictions, including closing all economic activity. Women entrepreneurs managing businesses responded by leveraging digital technologies that helped them survive crises and lay the foundations for future growth (Sahi et al., 2023). Women get clear benefits from using digital technology. Among the benefits is the practice-oriented attitude of women towards digital technology. In addition, the rise of digital social media and its growing importance in work and business settings can make it easier for women to manage work- and family-related communications. This can improve their welfare at work and help women towards equality in the workplace (Rajahonka & Villman, 2019).

However, technology adoption is not gender neutral, and some research literature confirms the limited participation of women in high-tech organizations and positions (Domecq et al., 2020). Men perceive that the emergence of women entrepreneurs poses a threat to the business world, so women's involvement in entrepreneurial activities is still very limited (S. & Shivappa, 2021). Women are still not advanced enough to start and manage their own businesses, and women make less money with slow business growth (Srividhya & Paramasivam, 2022).

Women entrepreneurs are less likely to adopt digital technology than men (Orser & Riding, 2018). Women entrepreneurs are significantly less likely to adopt remote work technologies; in addition, women entrepreneurs who lead small-sized companies are less likely to adopt e-commerce (Lashitew, 2023). The adoption rate of digital technology is still in its infancy among women entrepreneurs (Bhagat et al., 2021). Increased access to digital technology has a much greater beneficial effect on male entrepreneurs than on female entrepreneurs (Manocha et al., 2021).

In developing Asian countries, women entrepreneurs often have low levels of education (Franzke et al., 2022). Different cultures and religions, for example, Islam and Hinduism, are major sources of constraints for the education of women entrepreneurs in Asia. Family ties play a key role in the leadership style of women entrepreneurs in Asia.

Women's entrepreneurship is synonymous with empowering women (S. & Shivappa, 2021). Parallel to men, women entrepreneurs are quite fast with respect to innovation and job creation and also contribute more than tangible income to the nation's income. In Indonesia, women play an important role in economic development. Table 1 shows data on the increase in women's income every year.

Table 1. Women's Income Contribution in Indonesia Year 2010-2021

Number	Year	Women's Income Contribution (%)
1	2010	33.50
2	2011	34.16
3	2012	34.70
4	2013	35.17
5	2014	35.64
6	2015	36.03
7	2016	36.42
8	2017	36.62
9	2018	36.70
10	2019	37.10
11	2020	37.26
12	2021	37.22

Source: Badan Pusat Statistik, 2022

Women are expected to contribute and play an active role in the digital context because gender norms governing the different roles of men and women begin to melt and change (Discua Cruz et al., 2022). The role of women digital entrepreneurs as active agents of transition who undergo liminal journeys in digital contexts is to acquire creative ways to develop new knowledge, skills, and relationships (Kelly & McAdam, 2022). Digital technology has been proven to empower women (Chatterjee et al., 2020).

2. LITERATURE REVIEW

2.1 Digital Technology Adoption

In the 20th century, technology adoption was slow and gradual, almost always preceded by complex requirements analysis validated by business users requiring some functionality enabled by software or communication technology. However, the 21st century saw an acceleration in the pace of technology adoption. New technology adoption best practices are very different from the old model, which was driven by rigid requirements. Many companies pilot new technologies without a strict business case. The company recognizes the role that technology plays in operational effectiveness and profitable competitiveness. In fact, every company will eventually become a technology-driven company.

Chalons & Dufft (2017) claim that the following technical advancements played a significant role in this upheaval: (1) Mobile technology, which enables access to information and allows for interaction or decision-making at any time and from any location; (2) Social media, which significantly alters the possibilities for internal and external company interaction; (3) Analytics and big data, which allow for decision-making and the development of data-based business models; (4) Cloud computing technologies, which ensure highly flexible access to applications and data; and (5) The Internet of Things (IoT), which promises unlimited opportunities for interaction and new business models.

Companies employ technology because they wish to digitally modify their norms, procedures, and business models as well as because they need to save money and are afraid of the competition. The dedication of an organization to digital transformation is the most significant factor in driving technology adoption. The usage of digital artifacts, systems, and symbols within and around businesses has undergone a recent change known as "digital transformation" (Bounfour, 2016). Four facets of a company's business strategy are related to digital transformation: (1) Its reach, which extends beyond a company's traditional boundaries; (2) Its scale, which in the context of data abundance generates significant network effects; (3) Its speed in terms of product launch, decision-making, network building, etc.; and (4) Its sources of value creation and capture (data, network, digital architecture).

Digital transformation refers to changes related to the application of digital technology in all aspects. Figure 1 shows the five steps to a successful digital transformation.

1. Model and simulate

The business models and operational procedures of the company must be formalized using technologies that provide inventive empirical simulations in order to begin the transformation process.

2. Identify high leverage opportunities

Businesses must recognize these leverage points in their operational procedures and business models. Companies must accomplish this through compiling information on the costs and advantages of the current models and processes, as well as by modelling potential enhancements.

3. Prioritize transformational targets

The business must give the transformation project top priority from the list of candidates. Being the first step in overcoming a resource restriction, this stage is challenging. Some possibilities won't be taken advantage of, while others will be held back.

4. Identify digital opportunities

The first phase in this approach is to identify new operational and strategic digital technologies and the potential roles they may play in the transformation. The business simulates future technological capabilities based on the most important transformative functions.

5. Find courageous leaders

Finding courageous leaders can easily be the first step in the path of digital transformation. Finding executives who support serious transformation projects is essential for making the business case for digital transformation and the adoption of new technology.

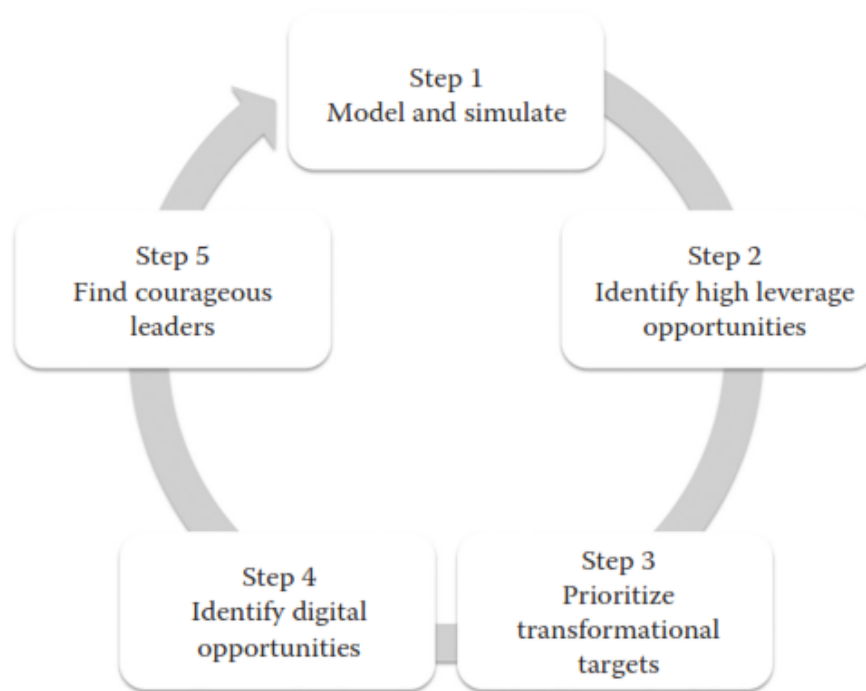


Figure 1. Digital Transformation Process
Source: Andriole et al. (2017)

Pergelova et al. (2019) operationalize digital technology through three distinct steps: (1) Front-end digital infrastructure usage, which is measured as a formative index that is calculated as the sum of dichotomous variables such as website ownership, online order options, online payment options, and electronic signature usage; (2) use of information management systems, as measured as a formative index of customer relationship management, supply chain management, and use of enterprise resource planning systems; (3) the frequency of using the internet for work purposes, refers to the use and value created.

2.2 Performance of Women Entrepreneurs

Since performance is so important, it frequently comes up in discussions about management in general. But one of the trickiest issues facing academic research is probably how to deal with performance in a research setting.

According to Aldas-Manzano et al. (2012), performance should be evaluated at three separate levels. First, financial performance, which is concerned with the use of straightforward results-based financial indicators that are presumptively reflective of the achievement of the company's economic goals, such as sales growth, growth in the number of employees, profitability, and so forth. The second type of performance is operational performance, which gauges output using metrics like market share, new product launch, product quality, marketing effectiveness, manufacturing value added, and other technological efficiency indicators in the field of business performance. Finally, stakeholders have a variety of interests and goals, and people with various aims form enterprises. Performance must also take into account if these goals were accomplished. Thus, in its broadest sense, performance refers to the diverse and sometimes competing character of organizational goals. Prior research highlighted gender differences in performance, concentrating on financial and operational factors.

Zerwas (2019) developed a "5M" framework that serves as the main conceptual basis for a review of the literature on women's entrepreneurship (see Figure 2). The five components are: (1) Management, which is the involvement of entrepreneurs who have the skills and abilities; (2) Money, which is access to financial capital to invest in their business; (3) Market, which is access to the market for their company's products; (4) Motherhood, which is a metaphor that represents the context of the household or family; (5) Macro/Meso Environment, including community expectations and cultural norms (macro) as well as intermediate structures and institutions (meso).

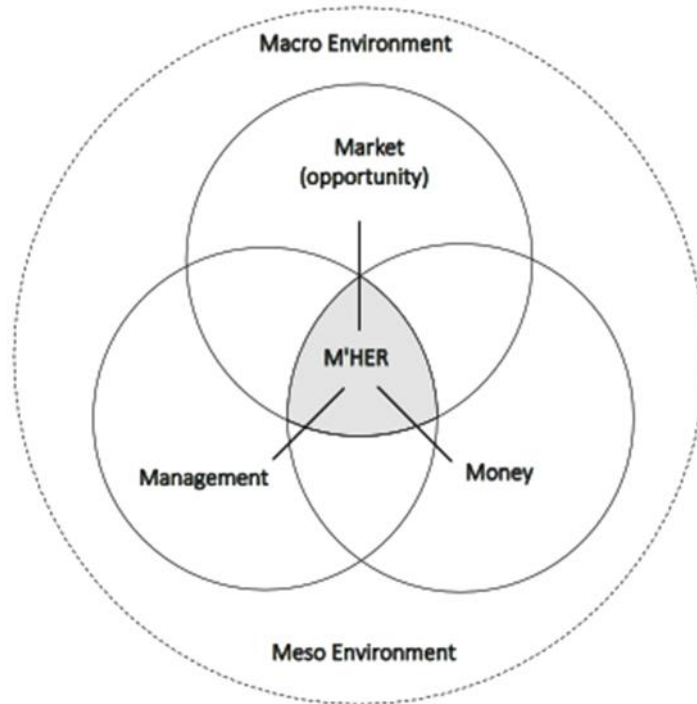


Figure 2. The “5M” Framework for Women's Entrepreneurship
Source: Zerwas (2019)

Some studies show no gender difference in entrepreneurial business performance, while some other researchers state that organizational performance is based on gender (Aldas-Manzano et al., 2012). Businesses owned by women are less successful than those owned by men.

Women's participation in entrepreneurship is no longer an isolated economic, social, or gender phenomenon (Lepeley, 2020). But despite the consensus that parity is an important factor for sustainable development, women face persistent constraints. In practice, women need comprehensive support and adequate conditions to bridge the gender gap and increase their level of welfare.

Women business owners have expectations and reasons for achieving their goals, according to Public Policy Associates (2014). Flexibility, independence, and a healthy work-family balance are what most motivate women. This drive needs to be taken into account as a potential factor in business growth strategy. Growth wasn't initially the major priority, but as the firm owner gained more expertise, it came to receive more attention. Entrepreneurs consider their professional and personal success to be a reflection of their business success.

Taylor & Newcomer (2005) revealed several personality characteristics of female entrepreneurs. Personality traits such as self-discipline, persistence, and a strong desire to succeed impact the success of women-owned businesses, as does family support. Other success factors associated with managerial practice include inclination and the ability to plan. Planning is very important because it helps in setting goals, meeting deadlines, and predicting future growth.

3. RESEARCH METHODS

This paper is a literature study (library research) that aims to determine the relationship between digital technology adoption variables and business performance, especially the performance of women entrepreneurs, based on theoretical and empirical reviews. The following describes the variable relationship model conceptually:

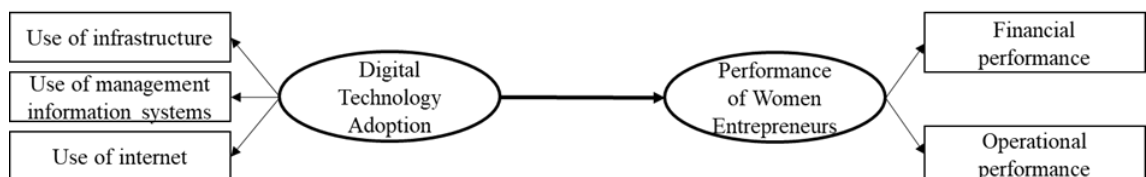


Figure 3. Conceptual Framework Model

4. DISCUSSION

There is a relationship between digitalization capabilities and company performance (Li et al., 2022). Digitization capability refers to the degree to which the company's management system enables the integration of data and processes with the help of different digital technologies. Companies with high levels of digitalization capabilities usually have higher company performance.

According to Ramírez-Solis et al., (2022), technology orientation is favorably correlated with SME performance. A competitive advantage and the creation of new business prospects both depend on technology. Companies that tend to be aggressive, R&D-focused, and future-oriented while learning new technologies are among the dimensions of technology orientation. In addition, the business hires as many technological specialists as it can to produce cutting-edge products.

Bhagat et al. (2021) found that there is a positive relationship between the adoption rate of digital marketing and sales, thus impacting the company's business performance. The digital marketing strategy adopted by women entrepreneurs is identified by their patterns of digital media usage.

Digital transformation has a positive effect on high-performance organizations (Songkajorn et al., 2022). Digital transformation combines information technology, computing, communication, and connectivity. Organizations use digital technology to create value, positively influence competition, and gain superior performance.

Technological capacity influences organizational ambidexterity, with the relationship being stronger when it is mediated by organizational dynamic capabilities (Yunita et al., 2023). Security risks will also increase if a company increases its technological capacity in a highly dynamic environment.

Adopting digital technology can provide many new opportunities and benefits. Digitization technology and industry 4.0 can improve product quality, process reliability, flexibility, and productivity (Chirumalla, 2021). Digital instruments contribute to business model innovation, create new distribution channels, and create new ways to create and deliver value to customer segments (Matarazzo et al., 2021). Similar results were also conveyed by Hwang & Kim (2022), who found that adopting new technology increases the productivity of SMEs.

5. CONCLUSION

In this paper, we talk about how women entrepreneurs can perform better by utilizing digital technologies. Adoption of digital technology gives female business owners the chance to use digital applications to reach a wider audience of customers and sell their goods. These can all aid in reducing the gender disparity in online commerce. Future research is necessary in order to better understand how women entrepreneurs may employ digital technologies to their advantage and that of the economy as a whole.

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