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# DRIVING BUSINESS SUCCESS AMONG INFORMAL WOMEN ENTREPRENEURS: THE POWER OF COMPETENCIES, RISK-TAKING, AND PROACTIVENESS

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**Abstract:**

The informal economy is characterized by economic activities conducted without formal registration with government agencies, thereby evading taxes, labour, and social regulations. The causes of the informal economy are diverse, including a lack of formal employment opportunities, low professional qualifications, limited access to credit, and excessive bureaucracy in formalizing businesses. To manage informal business, understanding the internal factors is the key to success. Accurate analysis can reveal hidden strengths and weaknesses, paving the way to an effective and sustainable strategy. Thus, the purpose of this study is to examine the influence of entrepreneurial competencies on the sustainable business performance of informal women entrepreneurs and to assess the mediating effects of risk-taking and proactiveness on this performance. The method used in this study was a cross-sectional survey of 300 informal women entrepreneurs in Selangor and Kuala Lumpur. A total of 276 respondents were included, and the data were analyzed using multivariate Structural Equation Modeling (SEM). The study findings showed that competencies, risk-taking, and proactiveness had a significant direct influence on the sustainable business performance. Risk-taking and proactiveness were also found to be significant as mediating factors. Business performance is greatly influenced by internal factors that entrepreneurs can control

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and optimize. By understanding and improving these aspects, entrepreneurs can increase their chances of success.

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**Keyword:**

Entrepreneurial Competencies, Proactiveness, Risk Taking, Sustainable Business Performance, Women's Performance



## Introduction

In reality, there are only two ways to receive income and build wealth through halal channels. First, select to work with others. The second path is running a business. To work with others, we have to wake up early every day and go to the office or business premises. Sometimes we have to work late at night or on weekends because of the employer's needs. The complaints and grievances are no matter how much and how hard we put into our employer; there is no guarantee that we will remain working there until we retire, and we can be fired at any time for various reasons. Unlike with entrepreneurs, the business we create is ours (Ratten, 2023). Therefore, entrepreneurship has become a chosen profession among people (Nziku & Henry, 2021; Weking et al., 2023). A person who starts a business can help build the local community and society by stimulating the economy (Huang et al., 2023). For example, a young entrepreneur decides to open a car wash business. As the business grows and more customers send their vehicles for washing, the business owner needs to hire additional workers, thereby creating business opportunities and stimulating economic activity in the area (Rahman et al., 2024; Weking et al., 2023).

The increase in the number of self-employed Malaysians can be seen as a positive for the domestic economy, provided their businesses are sustainable. Maybank Investment Bank Bhd (Maybank IB) noted that the number of self-employed Malaysians has continued to rise since January 2021, from 2.39 million to a new high of 3.16 million in April 2025 (Maybank Investment Bank Bhd, 2025). While this rise supports reducing the unemployment rate, it must be reinforced by skills training, social protection, and access to capital to truly contribute to the sustainable empowerment of the domestic economy (Noor & Omar, 2024a). In the Malaysian context, conferring to the Department of Statistics Malaysia (DOSM), the informal sector encompasses enterprises not registered with the Companies Commission of Malaysia (CCM) or any other professional body, including Local Authorities; all or at least one of the goods or

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services formed is for sale or barter transactions; hires 10 workers or less and the workers are not protected by any social security; and involve in non-agricultural activities (Department of Statistics Malaysia, 2020). Malaysian women continue to be excluded from the formal labor market despite being highly educated, reflecting inflexible policies that hinder their labor force participation and the perception that women are solely responsible for household and family care (Mohd Noor et al., 2024). Noor et al., 2025). Consequently, the informal economy plays a vital role in supporting the livelihoods of millions of individuals, particularly in developing countries (Dell'Anno, 2022). In Malaysia, this sector is a major source of income for many women, particularly those in the B40 group, who are often excluded from the conventional economy (Mohd Noor et al., 2024).

To prosper in business, entrepreneurs are said to be superior, and they possess certain characteristics that aid their efforts to attain success (Macko & Tyszka, 2009; Noor & Zainuddin, 2025; Pratikto et al., 2023). Among the characteristics of entrepreneurship are effort, motivation, the ability to recognize business opportunities, creativity, high self-confidence, and the ability to take risks. These characteristics are also known as entrepreneurial characteristics (Pennetta et al., 2024). Entrepreneurs' experience and knowledge enable them to see, analyze, and seize business opportunities that others miss. Characteristics are important since many people start businesses believing they will gain more freedom and flexibility, but the reality is often different (Pratikto et al., 2023; Van Gelderen, 2023). Entrepreneurs typically work longer hours than employees, juggling multiple responsibilities with little time for rest (Kyndt & Baert, 2015). Instead of the structured 9-to-5 schedule of a traditional job, business owners often find themselves working in the mornings to manage supplier orders, staying up late to resolve customer issues, and sacrificing weekends to manage paperwork, marketing, and operations (Ismail, 2022; Van Gelderen, 2023). The stress of running a business can take a serious toll on mental and physical health, ultimately leading to exhaustion and burnout (Graciano et al., 2023; Mohd Noor et al., 2024).

Therefore, the first objective of the study is to assess the impact of entrepreneurial competencies on business success among informal women entrepreneurs. Entrepreneurial competence is a person's ability to perform entrepreneurial functions successfully (Pennetta et al., 2024). Entrepreneurial competencies are developed through behavioural practices influenced by a person's life values, attitudes, or internal drive to perform tasks outstandingly (Robles & Zárraga-Rodríguez, 2015). The second objective of the study is to assess the mediating effect of risk-taking on the relationship between entrepreneurial competencies and business success among informal women entrepreneurs. In this increasingly powerful business world, risk plays a significant role in entrepreneurs' expansion (Graciano et al., 2023). In theory, the greater the risk, the superior the return. An entrepreneur must assess and consider risks because calculated risks can yield a safe return (Ilevbare et al., 2022). The third objective of the study is to assess the mediating effect of proactiveness on the relationship between entrepreneurial competencies and business success among informal women entrepreneurs. Proactiveness is the effort to anticipate and plan before something happens. Thinking proactively requires the mind to make various forecasts to anticipate things that do not yet exist (Iddris, 2025; Salmony & Kanbach, 2022). A proactive person does not wait for something to happen before their brain starts thinking. This skill requires sharp imagination, sound logic, and accurate information (Salmony & Kanbach, 2022). In a competitive world, whoever sees first and whoever acts first will get the first to plan proactive actions (Zhao & Smallbone, 2019).

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There have been many studies conducted in assessing the business performance of SMEs (e.g., Man et al., 2008; Pratikto et al., 2023), but studies focusing on women entrepreneurs in the informal sector are still limited, especially in Malaysia (Noor & Zainuddin, 2025), while the challenges faced by these entrepreneurs are unique and very challenging because they are not protected by strict laws and are often left behind in receiving any assistance that is channelled. Most informal sector entrepreneurs have low levels of education and lack the strategies and knowledge to face challenging business situations (Mishra, 2022). This is further exacerbated by shrinking purchasing power, rising raw material prices, and the cost of living for Malaysians. In addition, most studies focus on external aspects such as finance, infrastructure, customers, community views, and so on, but internal factors are rarely examined and considered unimportant (Amin & Islam, 2022).

Although appropriate educational qualifications are important, the "brain" of entrepreneurship means more than academic achievement. To be successful, entrepreneurs must have in-depth knowledge of their business (Ismail, 2022). Common sense combined with appropriate experience is the intelligence required. In addition, this study also focuses on the personality aspects of entrepreneurs, namely risk-taking and proactiveness. In the rapidly growing digital era, the field of entrepreneurship demands innovation, competitiveness, and efficiency in leveraging technologies such as e-commerce, digital marketing, and social media to ensure that businesses remain relevant and grow. Therefore, women entrepreneurs need to come forward, dare to try, and take advantage of the opportunities available to them. Women are agents of change in a world that requires more effort, innovation, and collaboration (Mohd Noor et al., 2025). Every successful woman is proof that with support, confidence, and effort, nothing is impossible to achieve.

Therefore, this study provides strong evidence that entrepreneurs' internal factors are as important as external factors in achieving business sustainability. From a practical point of view, the study findings have important implications for the government, entrepreneurship development agencies, and entrepreneur support organizations. Empowering women's entrepreneurship is not only about providing business start-up grant assistance, entrepreneurship training, mentoring, and monitoring for entrepreneurs; implementing skills and self-development programs is also important for women entrepreneurs (Mohd Noor et al., 2026). Therefore, a strategic collaboration with government agencies, training institutions, and the private sector is needed to expand training opportunities for women entrepreneurs. Most studies have been conducted in developed countries. Variances in culture, socioeconomic circumstances, customs, market assemblies, and institutional provision mean that the findings of these studies may not be fully generalizable to the Malaysian context. Consequently, there is a need for empirical evidence more pertinent to the local setting.

## Literature Review

### *Women Entrepreneurs in the Informal Sector*

Malaysia, as a developing country, is no exception, being somewhat dependent on the informal sector. Although its contribution to Gross Domestic Product (GDP) may be small, the importance of this sector in providing employment cannot be denied. In addition, the informal sector provides additional income to many households, especially in urban communities that continue to be squeezed by the cost of living, which is often said to be increasing or, perhaps more accurately, to be small. This means the sector can harmonize the country's socioeconomic situation. What is the informal sector? Formal employment means that its employees are registered, work full-time, and receive a monthly salary. This means that informal employment is quite broad and includes part-time or casual work, gig workers, self-employed, village work or farmers, fishermen, and the like, as well as small-scale traders at night markets or on the side of the road (Rahman et al., 2024).

One thing all these types of informal employment have in common is that they lack formal social protection. They do not contribute to the Employees Provident Fund (EPF) or old-age income protection schemes upon retirement, and they have no protection while working because they are not members of the Social Security Organization (SOCSO) (Hart, 2008). Therefore, they are exposed to the risk of a continuous income guarantee throughout their lives. The COVID-19 pandemic has significantly changed the economic landscape and society's way of life. Many individuals have lost their jobs and had to find alternative ways to earn income. As a result of this situation, many informal entrepreneurs have emerged, determined to make a living using their talents and skills (Huang et al., 2023). They produce various products, such as sewing, cakes, pastries, and chips, from their homes.

For women who have not worked and are dependent on their husbands, of course, many problems arise, especially financial ones. Working in the informal sector is the best alternative because it allows more time with the family (Huang et al., 2023). Some want to help their families' finances without relying solely on their husbands' income, while also sacrificing their careers to become housewives, yet still earning their own income from home. However, managing informal business for women is not easy (Panda, 2018). Among the main challenges is the difficulty of balancing business and household responsibilities (Noor & Omar, 2024a). Lack of capital and training is also an obstacle, as not all informal women entrepreneurs have sufficient financial resources to grow their businesses (Ratten, 2023). Entrepreneurs need to cover expenses such as rent and utilities, equipment, inventory, website development, marketing, and employee salaries if they hire a team, especially in major cities like Kuala Lumpur and Penang (Noor et al., 2024a; Noor et al., 2024b). Many women entrepreneurs in the informal sector rely on personal savings, loans, or even credit cards to fund their businesses, a practice that can be very risky. If the business fails, they may find themselves saddled with huge debts and no steady income (Noor et al., 2025). Without proper financial preparation, starting a business can lead to more financial problems than successes. In addition, stress can arise when managing multiple tasks simultaneously (Noor & Omar, 2024b). The home, once a place of complete relaxation, no longer offers privacy when it also serves as a workplace (Mohd Noor et al., 2024; Noor & Omar, 2024a).

***Resource-Based View (RBV) for Achieving Business Performance***

Previous studies and valuations have found that performance is strong worldwide, and business performance has been evident in various ways (Zarzycka & Krasodomska, 2022). In the business world, it usually refers to gauging the amount of assets businesses use to generate revenue (Rekarti & Doktoralina, 2017). Some studies also define performance as the result of activities carried out in a business or the business's achievements in a certain period. Performance can also be defined as the achievement of a specific business objective measured by known standards. Performance is measured by completing work in a timely, cost-effective manner (Rekarti & Doktoralina, 2017). Businesses can be demarcated in various ways, depending on their performance. In past studies, performance has been measured using objective, subjective, or operational methods; some also propose using the goal method as a

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composite dimension of performance (Zarzycka & Krasodomska, 2022). It is important to present non-financial dimensions alongside financially oriented dimensions to achieve more precise and transparent results. Non-financial dimensions are also known as subjective performance-related measurements (Ittner & Larcker, 2009). The Triple Bottom Line (TBL) business performance framework, or "3P" (Profit, People, Planet), is a model that measures a business's success not only on financial performance but also on social and environmental factors (Nogueira et al., 2025). It goes outside traditional performance assessment by taking into account rounded responsibilities.

In essence, the Resource-Based View (RBV) theory posits that an organization's ability to achieve performance and competitive advantage depends on possessing valuable, unique, inimitable, and non-substitutable resources (Barney, 1991; Mailani et al., 2024). Barney (1991) positions that unique and hard-to-imitate resources are the key to long-term competitive advantage. Chatterjee and Wernerfelt (1991) clarify that organizational performance also depends on the knowledge and skills of human resources. In the corresponding, Al-Mamary and Alshallaqi (2022), Graciano et al. (2023), Pratikto et al. (2023), and Van Ness et al. (2020) have declared that an entrepreneurial orientation, including innovation, proactivity, and risk-taking, serves as a key driver of business performance through dynamic human capital expansion, in line with the RBV, which highlights internal capabilities as a foundation of competitive advantage. Consequently, among informal entrepreneurs, weaknesses in knowledge, experience, and skills reduce competitiveness in cognitive capabilities, disrupting significant social associations essential to building business sustainability (Neneh, 2019). RBV provides a basis for internal capabilities by recognizing valuable and unique resources (Mailani et al., 2024).

***Entrepreneurial Competencies, Personalities, and Business Performance***

Entrepreneurial competencies refer to a person's ability to carry out entrepreneurial functions effectively (Robles & Zárraga-Rodríguez, 2015). Entrepreneurial competencies are developed through behavioural practices driven by a person's life values, attitudes, or internal pressure to perform tasks excellently (Kyndt & Baert, 2015). With entrepreneurial competencies, a person will be more capable and efficient than others with the same knowledge and qualifications (Noor & Zainuddin, 2025). There are four main skills that an entrepreneur must have, namely: 1) speech using appropriate words is the best way to express something, 2) cognitive is closely related to the way of thinking that will influence in determining attitudes towards an object, situation and person, 3) emotion is more about the way feelings are expressed, tone of voice and intonation, and 4) non-verbal uses behaviour to convey information and attract customers' interest (Pennetta et al., 2024; Pratikto et al., 2023). Having these competencies enable entrepreneurs to advance. At the pre-start stage of a business, an attitude of initiative helps entrepreneurs seek opportunities, take early action to prepare for launch, and explore areas that may not yet have been explored. According to past studies such as Ismail (2022), Robles and Zárraga-Rodríguez (2015), and Van Gelderen (2023), competencies can help to maintain high product quality, build excellent customer relationships and customer care standards, improve performance, productivity and profitability through efficient planning, management and implementation of business goals, establish a reliable financial foundation and maintain sound financial policies, maintain a positive and productive company culture, motivate employees to improve their performance, and create profitable sales and marketing channels.

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Although personality is often considered a relatively stable characteristic, modern psychological studies show that life experiences, learning, and the development of competencies can lead to gradual changes in personality (Al-Mamary & Alshallaqi, 2022; Corrêa et al., 2022; Howard, 2023). For example, emotions are an important aspect in the formation of human personality. Emotional control competencies will influence the formation of a good personality (Pratikto et al., 2023). In today's fast-paced, ever-changing world, the ability to adapt is not just a skill; it is a necessity. This is where psychological flexibility comes into play (Peng et al., 2023). When someone lacks competencies together with the existence of weak personalities, such as indecisive, hesitant, low assertiveness, and lack of self-confidence, they find it harder to understand and correct their reactions, which can affect social awareness, communication skills, and even the ability to make responsible decisions (Corrêa et al., 2022). Competence also helps entrepreneurs to accept risks by identifying key needs, creating solutions, and improving efficiency (Van Gelderen, 2023). Having strong business analyst skills can save a project from failure. Decision-making skills, for instance, promote a proactive personality in which an entrepreneur can attract customers and, at the same time, achieve desired profits (Ismail, 2022). In assumption, competencies improve personality and having the right entrepreneurial qualities can mean the difference between thriving and simply surviving (Hossain et al., 2022). Understanding some of the common traits that good entrepreneurs possess is essential for anyone who wants to make a significant impact. Based on the above discussion, the following hypothesis is posited:

H1: Entrepreneurial competencies significantly influence the sustainable business performance of informal women entrepreneurs.
H2: Entrepreneurial competencies significantly influence risk-taking of informal women entrepreneurs.
H3: Entrepreneurial competencies significantly influence proactiveness of informal women entrepreneurs.

***Parallel Mediation Effects of Risk-Taking and Proactiveness***

Personality is the internal qualities of the self that drive a person's behaviour and character (Hossain et al., 2022). Therefore, it is essential for women entrepreneurs to develop a balanced set of emotional, cognitive, and behavioural patterns to become positive people. Most researchers argue that environmental factors are vital in shaping a person's personality (Van Gelderen, 2023). A person placed in an environment that suits their personality can develop their potential positively. For example, a person with a friendly personality who enjoys connecting with people will be happy to be given responsibility in the public relations unit, while an introverted person is better suited to the accounting field. In business, a good personality is very significant for entrepreneurs, as it is the foundation of brand development, resilience in the face of challenges, and the ability to build trust (Ismail, 2022). Past studies have discovered that the most dominant entrepreneurial characteristics include risk-taking and proactiveness (e.g., Al-Mamary & Alshallaqi, 2022; Graciano et al., 2023; Pratikto et al., 2023; Salmony & Kanbach, 2022; Zhao & Smallbone, 2019).

Risk refers to the possibility of harm or loss to a person who bears it (Al-Mamary & Alshallaqi, 2022; Macko & Tyszka, 2009). In addition, there are several types of risk, such as physical injury, financial loss, and loss of something valuable, such as health, social status, and emotions. In theory, the higher the risk, the greater the return obtained (Corrêa et al., 2022; Stewart Jr et al., 2001). Entrepreneurs need to assess the risks they will face, as this will also provide an opportunity to achieve satisfactory results in the future (Graciano et al., 2023). Most thriving businesses encourage their management to support the creative process with other members to ease pressure on the business and reduce risks (Corrêa et al., 2022). In the dynamic and changing world of business, the courage to take risks is one of the key characteristics that distinguish successful entrepreneurs from those who are not (Ilevbare et al., 2022). Entrepreneurship involves making bold decisions and facing uncertainty with confidence (Corrêa et al., 2022). Taking risks means trying new and innovative ideas, which can lead to revolutionary products or services and to meeting unmet market needs. Facing uncertainty and taking risks can help build self-confidence and confidence in the ability to overcome emerging challenges (Salmony & Kanbach, 2022). Moreover, being open to risk also means expanding the range of possibilities and seeking opportunities outside the comfort zone, which can lead to significant growth and development (Al-Mamary & Alshallaqi, 2022). Measured and considered risk-taking can also help spread risk across projects or investments, reducing potential losses if one effort fails (Corrêa et al., 2022).

Next, one of the features entrepreneurs should have is proactivity. Proactiveness is defined as being relatively unaffected by the forces of one's situation and still influencing changes in one's environment (Iddris, 2025). People with a high proactive attitude can identify opportunities, take appropriate action to capitalize on them, show initiative, and sustain it until meaningful change occurs (Salmony & Kanbach, 2022). The opposite of proactive is passive or reactive, namely, people who tend to adapt to or compromise with the situation rather than trying to change themselves to have a positive influence on it. Proactive people have an advantage in completing tasks quickly and efficiently (Al-Mamary & Alshallaqi, 2022). They tend to plan and anticipate potential obstacles, thus enabling them to remain focused on the goal (Van Ness et al., 2020). With this ability, they can complete more jobs in less time. A proactive attitude opens new opportunities and expands the network of individual relationships (Neneh, 2019). These individuals tend to feel more satisfied with their work because they have control over the situation and feel valued (Corrêa et al., 2022). A proactive person will make adequate preparations before a matter or event occurs to prevent adverse outcomes (Zhao & Smallbone, 2019). Based on the above argument, the following hypothesis is postulated:

H4: Risk-taking significantly influence the sustainable business performance of informal women entrepreneurs.
H5: Risk-taking mediates the relationship between entrepreneurial competencies and the sustainable business performance of informal women entrepreneurs.
H6: Proactiveness significantly influence the sustainable business performance of informal women entrepreneurs.
H7: Proactiveness mediates the relationship between entrepreneurial competencies and the sustainable business performance of informal women entrepreneurs.

In this study, the analysis of two mediating variables examines how entrepreneurial competencies influence the business performance of informal women entrepreneurs through two parallel mechanisms: risk-taking and proactiveness (see Figure 1).

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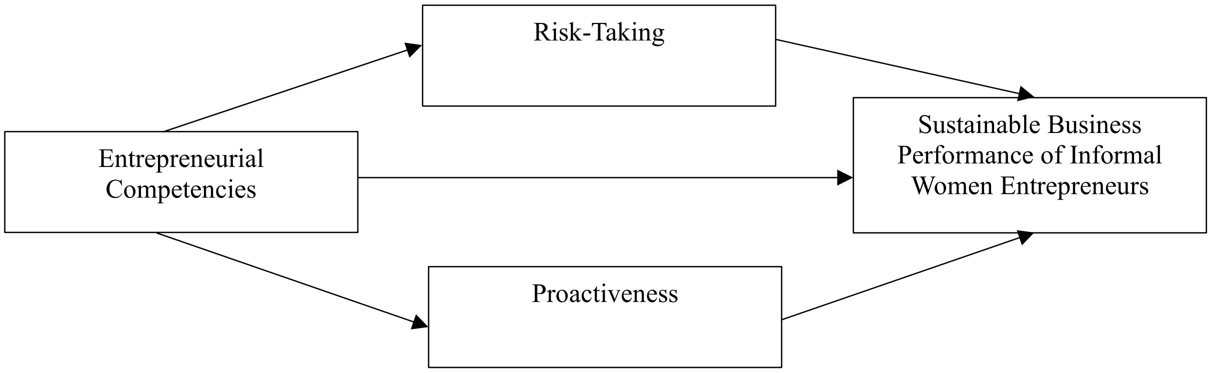


**Figure 1: Research Model**

**Methodology**

This study is descriptive and quantitative. The determination of the number of samples in research conducted by researchers using the rule of thumb, with a total sample of around 30-500 samples (Byrne, 2013), based on the sample taking according to the rule of thumb, the total sample should be 300 individuals. The population of this study comprises informal women entrepreneurs in a selected district in Selangor and in Kuala Lumpur. There is no information about each entrepreneur available from any government agency, at either the state or the central level. Therefore, this study should use a nonprobability sampling technique. The sampling methods used in this study are purposive sampling and snowball sampling. This method was chosen because it was appropriate, given the lack of official data on the number of unregistered informal-sector women entrepreneurs. Therefore, the sampling frame was difficult to construct, and probability sampling was difficult to implement. At the initial stage, purposive sampling was used, a sampling procedure in which a group of subjects with specific characteristics was selected as study respondents based on the researcher's knowledge and the study's specific research objectives. This means that not all other studies in the population were selected by the researcher as respondents.

Using purposive sampling, the study sample comprises 40 women entrepreneurs in the informal sector, aged 18 to 60 years, who have been operating their businesses for more than 1 year and are Malaysian citizens. The B40 (Bottom 40%) category refers to the 40% of households with the lowest income in Malaysia. The current income limit for this group is RM5,859 or below per month. To facilitate the collection of questionnaire data, the researcher referred to several non-governmental organizations such as Women of Will (WOW), *Persatuan Wanita Dan Ibu Tunggal Nur Iman (WITUS), Ibupreneur Malaysia, Persatuan Wanita Bumiputera dalam Perniagaan dan Profesion Malaysia, Persatuan Jaringan Usahawan Wanita Bumiputera Malaysia, Persatuan Wanita Usahawan Bumiputera Malaysia,* and *Kelab Usahawan Wanita Berintegrasi (KUWI).*

Two enumerators were used to collect data via snowball sampling. When the enumerators get a respondent in several districts (i.e., Shah Alam, Petaling Jaya, Lembah Pantai, Hulu Langat, Gombak, Sepang), the enumerators will try to obtain information about other respondents who have the potential to be involved in the study and will then move on to the respondent suggested by the previous respondent and others. The data collection technique used here is field research, which involves distributing questionnaires to recruit respondents. The researchers have taken appropriate steps to comply with ethical standards and have obtained approval from the

Universiti Teknologi MARA (UiTM) Ethics Committee to conduct the study. As part of the data collection process, each researcher is responsible for ensuring that ethical and procedural issues are addressed and reported transparently. In this study, respondents remain anonymous; in other words, the real identity of the respondent cannot be revealed by the researchers, and the data collected is managed in a protected manner and considered confidential. Before the study is conducted, respondents are given a clear explanation of the study, why they are involved, and that their participation must be voluntary.

Entrepreneurial competencies items are adapted from Man et al. (2008). Among the items are "I have the skills to solve problems that arise in business" and "I am able to adapt business strategies according to environmental changes." Next to measure Risk-Taking, items are adapted from the scale by Covin and Slevin (1989). Examples of items are "I dare to make decisions even when the outcome is uncertain" and "I am willing to invest resources in high-potential business opportunities." Proactiveness is measured using items adapted from Lumpkin and Dess (1996). Among the items are "I often take the initiative to improve the products or services offered" and "I always anticipate customer needs in the future." Business performance items are measured using scales adapted from Murphy et al. (1996) and Venkatraman and Ramanujam (1986). Among the measurement items are "My business sales have increased in recent years," "My business profits have increased compared to before," and "My number of customers is increasing." This study instrument uses a five-point Likert-type scale with 1 = strongly disagree, 2 = disagree, 3 = moderately agree, 4 = agree, and 5 = strongly agree. To assess face validity, the researchers translated the original items and then had them reviewed by two experts using the back-translation method.

The data analysis in this study used descriptive statistics in IBM SPSS Statistics 29. Inferential statistics used multivariate analysis via Structural Equation Modeling (SEM) in Amos 29. SEM data analysis is a complex, widely used, advanced statistical technique currently employed in social science research (Hair et al., 2010). Before the SEM analysis, data screening was conducted to ensure data quality and suitability. In the process of cleaning data for missing values, this is done when there is no response to the survey form. Apart from that, if many of the questionnaires given to respondents are not returned, the study sample will be dropped. The data of this study were obtained from a single source, from the same respondents at the same time. Therefore, the issue of common method bias (CMB) was addressed by using procedural or statistical approaches (MacKenzie & Podsakoff, 2012). To test CMB using a statistical approach, Harman's single-factor test was used, and the results showed that 40.06% of the total variance was explained. Therefore, no CMB issue arose in this study.

## Findings

### *Demographic Profile*

A total of 276 questionnaires were returned from the 300 distributed. Babbie (2016) proposes that a response rate of around 50% is adequate for a survey study. Thus, the 92% response rate is sufficient. Table 1 shows the demographic distribution of the respondents. Most respondents were in the 31–35-year age group (87, 31.5%). This followed with 26–30 years (n=55, 19.9%), >35 years (n=113, 40.9%), 21–25 years (n=18, 6.5%), and 18–20 years (n=3, 1.1%). In terms of academic qualifications, most respondents (200, 72.5%) have obtained *Sijil Pelajaran Malaysia (SPM)*. This followed with Diploma (n=28, 10.1%), Bachelor's Degree (n=20, 7.2%), Postgraduate (n=10, 3.6%), Foundation (n=8, 2.9%), *Sijil Tinggi Pelajaran Malaysia (STPM)*

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(n=5, 1.8%), and Others (n=5, 1.8%). Most respondents are living in an urban area (n=217, 78.6%). This followed with Semi-Urban (n=48, 17.4%) and Rural (n=11, 4.0%). Then, most respondents are from B4 (RM4,840–RM5,859), accounting for 77.5% (214 respondents). This followed with B3 (RM3,810–RM4,839) (n=57, 20.7%), and B2 (RM2,890–RM3,809) (n=5, 1.8%). Finally, in terms of business category, most of the respondents manage food and beverage businesses (n=167, 60.5%). This followed with retail and trading (n=57, 20.7%), others (n=30, 10.9%), manufacturing/handicrafts (n=12, 4.3%), and services (n=10, 3.6%).

**Table 1: Demographic Profiles (n = 276)**

| Profile | Frequency (n) | Percentage (%) |
|---|---|---|
| **Age** | | |
| 18-20 years old | 3 | 1.1 |
| 21-25 years old | 18 | 6.5 |
| 26-30 years old | 55 | 19.9 |
| 31-35 years old | 87 | 31.5 |
| More than 35 years old | 113 | 40.9 |
| **Academic Qualifications** | | |
| *Peperiksaan Menengah Rendah (PMR)* | 0 | 0 |
| *Sijil Pelajaran Malaysia (SPM)* | 200 | 72.5 |
| *Sijil Tinggi Pelajaran Malaysia (STPM)* | 5 | 1.8 |
| Foundation | 8 | 2.9 |
| Diploma | 28 | 10.1 |
| Bachelor’s degree | 20 | 7.2 |
| Post-graduate | 10 | 3.6 |
| Others | 5 | 1.8 |
| **Residence Status** | | |
| Urban | 217 | 78.6 |
| Semi-Urban | 48 | 17.4 |
| Rural | 11 | 4.0 |
| **B40 Category** | | |
| B1: Below RM 2,890 | 0 | 0.0 |
| B2: RM 2,890 – RM 3,809 | 5 | 1.8 |
| B3: RM 3,810 – RM 4,839 | 57 | 20.7 |
| B4: RM 4,840 – RM 5,859 | 214 | 77.5 |
| **Business Category** | | |
| Retail and Trading (e.g., Clothing, groceries, cosmetics, online reselling) | 57 | 20.7 |
| Food and Beverage(e.g., Catering, food stalls, homemade foods) | 167 | 60.5 |
| Services(e.g., Beauty, childcare, tailoring, cleaning) | 10 | 3.6 |
| Manufacturing/Handicrafts(e.g., Crafts, garment making, handmade products) | 12 | 4.3 |
| Others | 30 | 10.9 |

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***Assessment of Measurement Model***

The Goodness-of-fit (GOF) measure is used in both structural and measurement models to assess model fit. Researchers have developed GOF as a measure of the model's ability to present data. Therefore, various measures have been developed, each with its own characteristics. A model is considered fit when it meets the normed chi-square values between 1 and 5, the comparative fit index (CFI) and Tucker-Lewis's index (TLI) values exceed 0.90, while the root mean square error of approximation (RMSEA) values do not exceed 0.08 (Hair et al., 2010). The result of the goodness-of-fit index meets the accepted value of $\chi 2/df$ (2.718), RMSEA (0.064), CFI (0.965), and TLI (0.955). Consequently, the test results for the measurement model meet the model fit criteria.

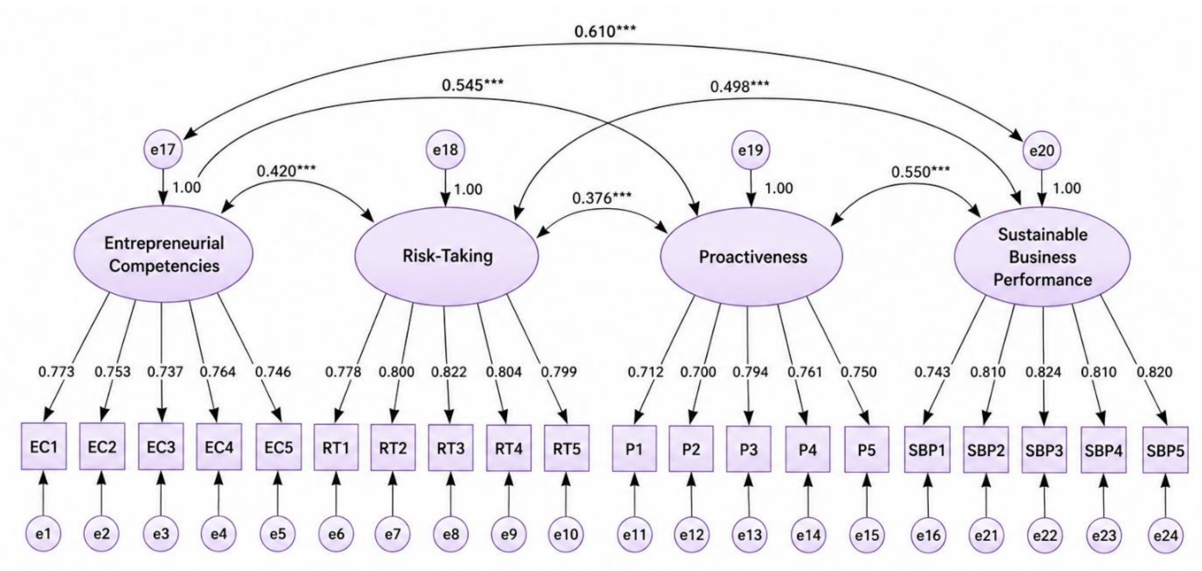


**Figure 2: Pooled CFA Model**

Before conducting the actual analysis, at the univariate normality level, the normal values for skewness and kurtosis should be between ±2.0 for skewness and ±7.0 for kurtosis (Hair et al., 2022). The results of the univariate normality test indicate that the skewness and kurtosis values for all variables fall within the required range, supporting the conclusion that the item data are normally distributed (see Table 2). Hair et al. (2010) emphasized two main aspects: convergent validity and internal reliability. Convergent validity evaluates the extent to which indicators of one construct mutually explain shared variance. Two frequently used matrices are factor loading and Average Variance Extracted (AVE). Hair et al. (2010) found that the outer loading indicator should be > 0.70, with a minimum acceptable value of> 0.50. A minimum AVE value of 0.50 indicates that more than half of the indicator variance is explained by the latent construct. In this CFA, all indicators show outer loadings exceeding the minimum of 0.50, and most exceed 0.70. Furthermore, the AVE for each construct is above 0.50, indicating that each construct captures most of the variance in its indicators and that convergent validity is strongly supported. Internal reliability assesses the consistency among indicator contributors in their contribution to the latent construct. Composite Reliability (CR) is also recommended above 0.70. In this CFA, all CR values exceed the minimum threshold, indicating that the constructs are measured consistently and reliably. All measurements meet the required values, as shown in Table 2.

**Table 2: Loading of Items, Normality, AVE, and CR**

| Variable | Items | Item Loadings | Skewness | Kurtosis | AVE | CR |
|---|---|---|---|---|---|---|
| Entrepreneurial Competencies | EC1 | 0.773 | -0.672 | 0.443 | 0.570 | 0.869 |
| | EC2 | 0.753 | -0.541 | 0.357 | | |
| | EC3 | 0.737 | -0.734 | 0.661 | | |
| | EC4 | 0.764 | -0.356 | -0.210 | | |
| | EC5 | 0.746 | -0.626 | 0.536 | | |
| Risk-Taking | RT1 | 0.778 | -0.457 | -0.218 | 0.641 | 0.899 |
| | RT2 | 0.800 | -0.568 | 0.478 | | |
| | RT3 | 0.822 | -0.684 | 0.757 | | |
| | RT4 | 0.804 | -0.524 | 0.525 | | |
| | RT5 | 0.799 | -0.600 | 0.617 | | |
| Proactiveness | P1 | 0.712 | -0.251 | -0.544 | 0.554 | 0.861 |
| | P2 | 0.700 | -0.342 | -0.425 | | |
| | P3 | 0.794 | -0.658 | 0.847 | | |
| | P4 | 0.761 | -0.561 | 0.417 | | |
| | P5 | 0.750 | -0.477 | 0.327 | | |
| Sustainable Business Performance of Informal Women Entrepreneurs | SBP1 | 0.743 | -0.564 | 0.559 | 0.629 | 0.835 |
| | SBP2 | 0.810 | -0.668 | 0.935 | | |
| | SBP3 | 0.824 | -0.734 | 1.155 | | |
| | SBP4 | 0.810 | -0.656 | 0.687 | | |
| | SBP5 | 0.820 | -0.672 | 1.076 | | |

**Source:** Authors' calculations

**Discriminant Validity Assessment**

Discriminant validity is a measurement of a construct that is different from other constructs. The test method is to compare the AVE with the square of the construct's correlation (Fornell & Larcker, 1981). Based on Table 3, all latent variables have AVEs that exceed their squared correlations with other constructs. This shows that discrimination validity is achieved.

**Table 3: Discriminant Validity Results**

| No. | Variable | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| 1 | Entrepreneurial Competencies | **0.755** | | | |
| 2 | Risk-Taking | 0.420*** | **0.801** | | |
| 3 | Proactiveness | 0.545*** | 0.376*** | **0.744** | |
| 4 | Sustainable Business Performance of Informal Women Entrepreneurs | 0.610*** | 0.498*** | 0.550*** | **0.793** |

**Note:** Values in the diagonal show the square root of AVE
***Source:** Authors' calculations*

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***Hypothesized Model Assessment***

The result of the goodness-of-fit index for the structural model meets the accepted value of χ2/df (2.893), RMSEA (0.072), CFI (0.945), and TLI (0.930). The coefficient of determination ($R^2$) measures how well the model explains endogenous variation. The entrepreneurial competencies, risk-taking, and proactiveness collectively explicated 55.4% of the variance in sustainable business performance ($R^2 = 0.554$). This finding indicates that the proposed model provides substantial explanatory power for predicting sustainable business performance among informal women entrepreneurs. The analysis of the hypothesis in this research uses the Critical Ratio (t) for value comparisons and the probability of a causal relationship. If the CR value is less than 1.96, the hypothesis is rejected; otherwise, it is accepted. When the p-value exceeds 0.05, the hypothesis is also rejected. As shown in Table 4, in the non-mediated model, entrepreneurial competencies show a significant positive effect on sustainable business performance ($\beta = 0.429$, SE = 0.032, $t = 13.41$, $p < 0.001$). Similarly, risk-taking ($\beta = 0.433$, SE = 0.040, $t = 10.83$, $p < 0.001$) and proactiveness ($\beta = 0.512$, SE = 0.035, $t = 14.63$, $p < 0.001$) also exhibit strong and significant positive relationships with sustainable business performance. In the mediated model, the direct effects remain significant but are slightly reduced.

Entrepreneurial competencies continue to positively influence sustainable business performance ($\beta = 0.374$, SE = 0.057, $t = 6.56$, $p < 0.001$), while risk-taking ($\beta = 0.400$, SE = 0.046, $t = 8.70$, $p < 0.001$) and proactiveness ($\beta = 0.509$, SE = 0.039, $t = 13.05$, $p < 0.001$) maintain strong positive effects. Furthermore, entrepreneurial competencies significantly predict the mediating variables. It has a significant positive effect on risk-taking ($\beta = 0.296$, SE = 0.058, $t = 5.10$, $p < 0.001$) and proactiveness ($\beta = 0.324$, SE = 0.073, $t = 4.44$, $p < 0.001$), indicating that higher entrepreneurial competencies enhance both psychological and behavioural entrepreneurial tendencies. The mediation analysis confirms that both indirect pathways are significant. Entrepreneurial competencies influence sustainable business performance through risk-taking ($\beta = 0.118$, SE = 0.046, 95% CI [0.042, 0.137]) and proactiveness ($\beta = 0.164$, SE = 0.067, 95% CI [0.025, 0.165]). Since this study uses mediating factors, the method recommended by MacKinnon (2008) is used to strengthen the findings of this mediation study, with support from bootstrapping. In this case, the Lower Bounds (LB) and the Upper Bounds (UB) cannot contain zero value (Hair et al., 2010). Subsequently, the confidence intervals do not include zero; both mediating effects are statistically significant, suggesting partial mediation in the model. Figure 3 shows the final research model of the study.

**Table 4: Direct, Indirect, and Total Effects in the Structural Model**

| **Path**<br>**DV: Sustainable Business Performance of Informal Women Entrepreneurs** | ***β*** | **S.E** | ***t*** | ***Summary*** |
|---|---|---|---|---|
| **Non-Mediated Model** | | | | |
| Entrepreneurial Competencies | 0.429*** | 0.032 | 13.41 | |
| Risk-Taking | 0.433*** | 0.040 | 10.83 | |
| Proactiveness | 0.512*** | 0.035 | 14.63 | |
| **Mediated Model** | | | | |

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| | | | | |
|---|---|---|---|---|
| Entrepreneurial Competencies | 0.374*** | 0.057 | 6.56 | H1 accepted |
| Risk-Taking | 0.400*** | 0.046 | 8.70 | H4 accepted |
| Proactiveness | 0.509*** | 0.039 | 13.05 | H6 accepted |
| **DV: Risk-Taking** | | | | |
| Entrepreneurial Competencies | 0.296*** | 0.058 | 5.10 | H2 accepted |
| **DV: Proactiveness** | | | | |
| Entrepreneurial Competencies | 0.324*** | 0.073 | 4.44 | H3 accepted |
| **Mediating Path** | ***β*** | **S.E** | **95% CI** | |
| Entrepreneurial Competencies → Risk-Taking → Sustainable Business Performance of Informal Women Entrepreneurs | 0.118** | 0.046 | [0.042, 0.137] | H5 accepted |
| Entrepreneurial Competencies → Proactiveness → Sustainable Business Performance of Informal Women Entrepreneurs | 0.164** | 0.067 | [0.025, 0.165] | H7 accepted |

***Note:*** *Significance level: ***p < 0.001, **p<0.01.*
***Source:*** *Authors' calculations*

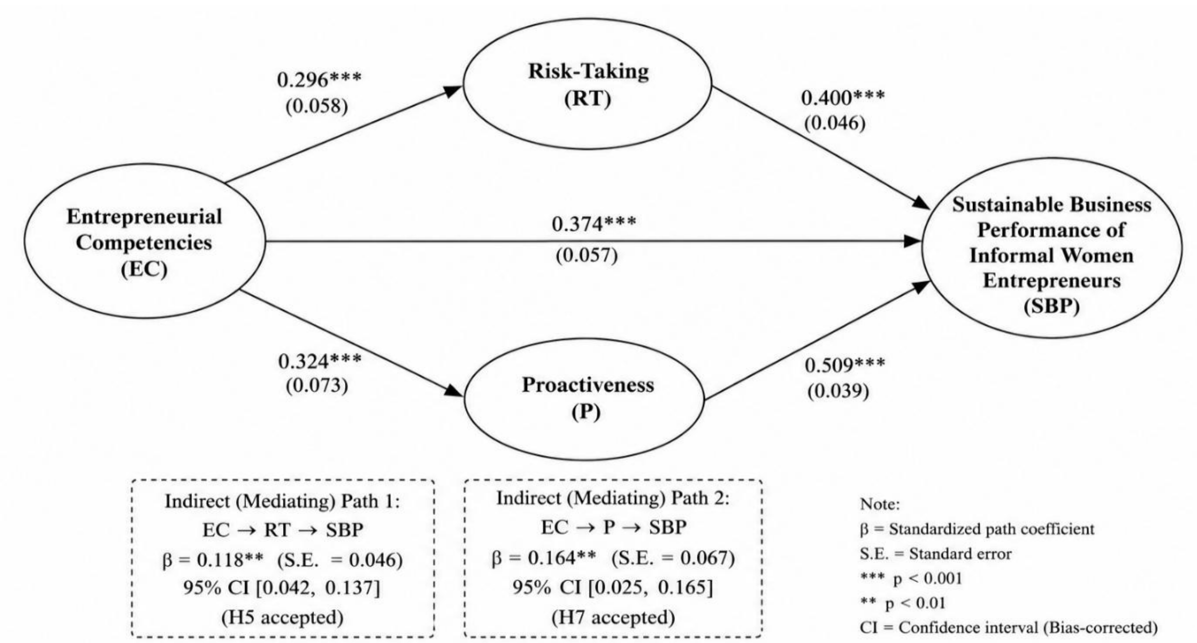


**Figure 3: Final Research Model**

## Discussion

The study findings showed that competencies, risk-taking, and proactiveness had a significant direct influence on sustainable business performance. Past studies have found that entrepreneurial competencies are a very important factor, as more competent and efficient entrepreneurs can compete more effectively with others who have the same knowledge (Pennetta et al., 2024; Pratikto et al., 2023; Van Gelderen, 2023). Although the findings of the study are consistent with previous studies, previous studies have focused on formal organizations. From the perspective of informal businesses, it is important because most of these entrepreneurs have low levels of education and did not continue their studies after the Malaysian Certificate of Education (SPM). But they chose the field of business to pioneer. The pressures of life they go through make them creative, innovative, and smart individuals in finding opportunities (Salmony & Kanbach, 2022; Zhao & Smallbone, 2019). As a successful entrepreneur, having good qualities is a basic skill in the field (Al-Mamary & Alshallaqi, 2022; Graciano et al., 2023; Pratikto et al., 2023).

Next, risk-taking and proactiveness were also found to be significant as mediating factors. The courage to take risks is an important quality that can bring significant changes in a person's life (Graciano et al., 2023). This attitude involves a willingness to try new things, take initiative, and face uncertainty, even in the possibility of failure (Ilevbare et al., 2022). People who take risks tend to be more innovative and creative (Stewart Jr. et al., 2001). They are not afraid to explore new ideas and find solutions that are different from what is usually applied. The courage to step out of the comfort zone allows a person to find new ways to solve problems and create new things, which can bring great benefits in both personal and professional life (Corrêa et al., 2022). Taking risks opens up opportunities to learn and develop new skills (Macko & Tyszka, 2009). When someone tries something new, they face challenges that require different thinking and approaches (Al-Mamary & Alshallaqi, 2022). This process not only expands insight but also improves adaptability and critical thinking skills, which are very valuable in dealing with dynamic situations. However, an entrepreneur must assess risks, as calculated risk will guarantee safe returns. A risk management plan can help the company be more prepared, save costs in the long run, and increase customer confidence. Moreover, proactive people exhibit certain characteristics, such as taking initiative, being responsible for actions and decisions, focusing on solutions and opportunities, anticipating problems and preventing them, and having a long-term vision and planning for action (Iddris, 2025; Van Ness et al., 2020). Proactiveness can also be understood to mean that they will not be influenced by the power dynamics around them, even when those dynamics drive changes in their environment. Entrepreneurs with proactive characteristics can identify opportunities and take effective action to leverage them (Zhao & Smallbone, 2019).

This study supports the Resource-Based View (RBV), which holds that internal organizational resources are the primary determinants of competitive advantage and business performance. For informal-sector women entrepreneurs, entrepreneurial competencies emerge as intangible assets that can sustainably improve business performance. This study has proven that in business, a skilled entrepreneur is an invaluable asset and contributes to increased productivity and efficiency. Business skills are essential for building excellent customer relationships and customer care standards, improving performance, productivity, and profitability through efficient planning, management, and implementation of business goals, and establishing a reliable financial foundation and maintaining sound financial policies (Ismail, 2022; Van Gelderen, 2023). Studies by Pennetta et al. (2024) and Pratikto et al. (2023) also found that it maintains a positive and productive culture and creates profitable sales and marketing channels. This study also confirms that the two main dimensions, namely risk-taking and proactivity, play a significant role in improving business performance. Most previous studies have only measured the direct relationship between entrepreneurial competencies and business performance. This study examines theoretical considerations by demonstrating that entrepreneurial competencies improve performance by fostering entrepreneurial behavior. Most entrepreneurship theories are based on formal enterprises. This benefits by filling the knowledge gap regarding the factors that impact the performance of entrepreneurs in the informal economy.

As practical suggestions, to develop the capabilities and competencies of entrepreneurs, business assistance, including training and financing facilities specifically for low-income groups and women, as well as various micro-financing schemes, needs to continue to be provided (Noor & Omar, 2024b). The government needs to be committed to increasing the role of its target group, specifically women, so that they can align with national development. Among the focuses are improving skills, education, leadership, self-improvement, and income generation, as well as ensuring that women remain at the forefront of technological developments (Pratikto et al., 2023). It is hoped that these initiatives can help women improve their self-efficacy, mind transformation, and self-management, fostering inspired women and increasing their self-confidence and resilience in decision-making (Ismail, 2022). In addition, it is hoped that women entrepreneurs will propose creative innovations to enhance self-skills and help ensure that self-management, time, and family are managed effectively, with an emphasis on noble values to foster a positive mindset (Noor & Omar, 2024b).

Furthermore, to an entrepreneur, business partners and existing networks are very valuable assets (Noor et al., 2025). Mentorship could support the development of women entrepreneurs by sharing knowledge and experiences, offering practical advice, and providing business perspectives (Huang et al., 2023). Celebrating successes and overcoming challenges collectively can also foster a positive mindset and motivate entrepreneurs for long-term business success (Rahman et al., 2024). For example, providing awards to honor extraordinary women who have made significant contributions to entrepreneurship. Women's entrepreneurship was not only about earning an income but also about empowering women to become agents of change in society (Noor et al., 2025). By providing a supportive ecosystem, more women will be able to generate sustainable income and contribute to the country's economic growth (Noor & Omar, 2024a). With various initiatives formulated, the government could continue to be a leader in empowering women towards more sustainable economic progress and social well-being (Mohd Noor et al., 2026; Ratten, 2023).

## Conclusion

Overall, empowering B40 women entrepreneurs supports the achievement of the Sustainable Development Goals (SDGs), particularly SDG 1: No Poverty, SDG 5: Gender Equality, and SDG 10: Reduce Inequalities. The main discussion in this study is to review the determinants of B40 women entrepreneurs in the informal sector. This field has become a phenomenon attracting much attention, especially among women, and has the potential to provide economic opportunities that can generate lucrative income. However, women's participation in economic development remains low and lags behind men's (Noor & Omar, 2024a). This problem is associated with gender issues that are difficult to eradicate from society's thinking (Rahman et al., 2024). Women are also seen as less interested in conventional entrepreneurship because it gives them high risks and commitments (Nziku & Henry, 2021). The results of the study show that competencies, risk-taking, and proactiveness had a significant direct influence on sustainable business performance. Risk-taking and proactiveness were also found to be significant as mediating factors. Therefore, individual empowerment and development must always be given attention and nurtured to improve the economic performance of B40 women (Van Gelderen, 2023). Given the study's limitations, several recommendations for future research can be made. Studies with larger sample sizes and involving diverse groups of respondents can provide a more holistic picture. In addition, the use of mixed methods can help strengthen qualitative and quantitative data for a more comprehensive analysis. Moreover, this study examines only three constructs that influence business performance. Future studies could broaden the current research model by incorporating additional moderating or mediating variables. For this quantitative design, the appropriate method for researchers is the cross-sectional survey. However, this method does not examine the development or change of an issue over a long period. Thus, future studies are encouraged to employ longitudinal research, in which researchers can observe changes and developments in the sample research over a certain period of time.

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**Ethics Statement:** This study was conducted in accordance with ethical research standards. All procedures involving human participants were reviewed and approved by the UiTM Research Ethics Committee, approval number [REC/04/2025 (ST/MR/58)]. Informed consent was obtained from all participants prior to data collection. Participation was voluntary, and respondents were assured of confidentiality and anonymity. The data collected was used solely for academic purposes.

**Author Contribution Statement:** All authors contributed significantly to the development of this manuscript. Nurul Hidayana Mohd Noor was responsible for the conceptualization, methodology, and overall supervision of the study. Syeliya Md Zaini handled data collection, analysis, and interpretation of results. Azizan Zainuddin contributed to the literature review, drafting, and critical revision of the manuscript. All authors read and approved the final version of the manuscript prior to submission.

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