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**THE MEDIATING EFFECT OF ENTREPRENEURSHIP COMPETENCIES AND
ENTRPRENERUSHIP INTENTION ON THE RELATIONSHIP BETWEEN
ENTREPRENEURSHIP EDUCATION AND FIRM PERFORMANCE: A STUDY ON
MILLENNIAL ENTREPRENEURS**

Master's thesis

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We have written this master's thesis independently. All viewpoints of other authors, literary sources, and data from elsewhere used for writing this paper have been referenced.

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Abbreviations

Particulars	Description
AMOS	Analysis of a Moment Structures
EC	Entrepreneurship competencies
EE	Entrepreneurship education
EI	Entrepreneurship intention
FP	Firm performance
MSME	Ministry of Micro, small and medium enterprises
SME	Small and medium enterprises

Abstract

The main purpose of this study is to investigate the relationship between entrepreneurial competencies, entrepreneurial intentions, entrepreneurship education among millennial entrepreneurs, and their influence on firm performance in Indonesia. The study employed a quantitative research approach and focused on millennial entrepreneurs aged 18 to 35 years in Banjarmasin City and Kota Yogyakarta, who were selected using purposive sampling. The study used survey design with questionnaires and the data was analysed with multiple regression and Spearman correlation to determine the relationships between the variables under study. The results of the study revealed that there is a direct relationship between EE and firm performance, EI and firm performance. In addition to this, There is a full mediation between entrepreneurship education and firm performance through entrepreneurial competencies. The findings suggest that continuous learning and development of new knowledge and skills through formal education is essential for millennial entrepreneurs to enhance their competencies, which in turn can improve firm performance and enable long-term sustainability in the competitive digital landscape.

Keyword: Entrepreneurship competencies, Entrepreneurship intention, Firm performance

1. Introduction

Entrepreneurship education is a curriculum that focuses on educating students in order to sharpen their skills and attitudes. These skills assist them in succeeding in their entrepreneurial ventures (Kanaan-Jebna et al., 2022). The main goal of the education is to help students develop a positive attitude toward entrepreneurship. It will assist them in being successful in their careers in the future (Dharmawati et al., 2020). Entrepreneurship education is not confined only to initiating the skills of starting an enterprise, including human resource management and financial management, but also creating a conducive environment that, as a result, influences the professional expertise of an individual (Minai et al., 2018). As observed from the studies that entrepreneurship education and firm performance influenced positively (Raza et al., 2020) (Hairudinor et al., 2020). Entrepreneurship education is an antecedent of competencies which influence firm performance (Kanaan-Jebna et al., 2022)

Entrepreneurship intention is usually preceded any entrepreneurial behaviour and thus it is the most important predictors of entrepreneurship (Koe, 2016). Simply, it is a desire which exist in the individual to take further action. This assisted the person to take an action through integrating the considerations which are believed and desired (Amaliawati et al., 2018). This is an important indicator for business performance. The higher the intention, the higher in choosing the behaviour of career path as an entrepreneur. Entrepreneurial intentions are influenced by entrepreneurship education (Amaliawati et al., 2018). Entrepreneurship education increases the intentions than who did not have entrepreneurship education (Nabi et al., 2018).

Entrepreneurship competencies is important key to determine the success of the business (Foster, 2018). These competencies are influenced by various competencies such as relationship competencies, opportunity, strategic and personal strength competencies. On contrary to this, leadership and innovation competencies influenced the entrepreneurial competencies in Indonesia (Prakasa, 2021). The literature on entrepreneurial competencies has highlighted several studies in Indonesia (Foster, 2018; Prakasa, 2021; Sumawidjaja et al., 2019; Wirda et al., 2019). Those studies have been highlighted that entrepreneurial competencies and performance appear to be linked and influenced positively (Wirda et al., 2019); (Prakasa, 2021; Sumawidjaja et al., 2019).

Firm performance is a health of SME for a dedicated period. The outcome of SME health is either to achieve success or face failure in the organisation. The characteristics of firm performance is the ability of SME in accepting the outcomes and actions (Eniola et al., 2015)..

In other words, firm performance is organization success. The success represent how SME entrepreneurs or managers focuses on accomplishing the goals of the organization(Herath & Mahmood, 2014).

The literature on entrepreneurial competencies has highlighted that the competencies such as analytical planning, innovation, enforcement/implementation, leadership, teamwork and networking, opportunity and organising, strategic competency, as innovation, networking, leadership, and risk-taking, relationship, innovative, analytical, opportunity, strategic, human, operational, commitment, personal strength and learning and innovative marketing competencies, strategic and personal competencies have considered(Ahmad et al., 2018; Ambinari & Kholid, 2022; Foster, 2018; Mohammed et al., 2021; Prakasa, 2021; Quezon & Vergara, 2022; Riy et al., 2019). All these competencies are supported by resource based view theory and thus these have been considered. The purpose of the theory is to recognise how SMEs are utilising their internal and external resources to achieve the productivity(Hussain et al., 2017). These theory supported to have a long term competitive advantage.

The studies are available with entrepreneurship education and firm performance but relatively minimal (Amaliawati et al., 2018; Emmanuel, 2017; Mahmood et al., 2021). These studies indicate a close association exists between EE and performance. In specific to millennial entrepreneurs, lack of studies are available on how millennial entrepreneurs education influences firm performance.

The studies pinpointing that entrepreneurship competencies mediate the association between EE and firm performance(Kanaan-Jebna et al., 2022). There is no direct studies available on millennial entrepreneurs and their mediation effect between EE and firm performance. This present study seeks to understand the association to encourage researchers to investigate the aspects in a detailed way.

Millennials are the generation of people who born between 1980 and 2000(Setiartiti & Sadik, 2020). They are new generation people who grow up with cultural changes and technological advancement is higher than the previous generations. The characteristics of millennials are interconnected, highly optimistic, authentic, open and ethical and fulfilling careers(Liu et al., 2019)., These generation people are occupying more in leading and managing positions. Despite, the challenges of these generations are changes in lifestyle, variation in thinking and time spending and communication aspects (Horsaengchai & Mamedova, 2011).

As observed from the notable millennial entrepreneurs, most of the people are from western and developed countries(Ambinari & Kholid, 2022; Basuki et al., 2021; Quezon & Vergara, 2022) . However, There is a slow movement of transformation from western to eastern

and northern to southern countries. Thus, the slow movement produces these entrepreneurs in Indonesia (Liu et al., 2019). Globally, Indonesia is the fourth largest population country with 273 million people in which 2% of people are entrepreneurs. According to (statista, 2022), 25.8% of Indonesians are millennials. Generally, a lag of spirit of entrepreneurship is observed among people in the country (Abdurochim et al., 2019). Although the spirit is low, 35.5% of youths aspire to become entrepreneurs in future in the country (World economic, 2019). Millennial entrepreneur talent and temperament is not high (Horsaengchai & Mamedova, 2011) and a low level of entrepreneurial activities observed in these generation (Liu et al., 2019) due to limited financial dependence, delay start of career and work experience. Similarly, Indonesian had a little enthusiasm towards entrepreneurship. The reason for these enthusiasm is young age, delay career and low business exposure (Basuki et al., 2021). Although low, intention of younger generation is high (Setiartiti & Sadik, 2020; Timotius, 2022) due to educational support, relational support and structural support. These support considers as the key factor in increasing to be creative and innovative in establishing the business (Zamrudi & Yulianti, 2020). Educational support increase the competences of entrepreneurs (Hutasuhut & Aditia, 2022) in Indonesia. Although a number of studies have been reported in general on entrepreneurial competencies, EI, entrepreneurial education and its association with firm performance. There is a dire in need of recognizing how the association exists in millennial entrepreneurs. Therefore, the key issue of the study is to find out the relations between entrepreneurship competencies, EI and entrepreneurship education of millennial entrepreneurs and how it influence the firm performance in Indonesia.

The aim of the study is to explore how entrepreneurship competencies, EI and entrepreneurship education influence the firm performance

The objective of the study is

1. To find out how entrepreneurship competencies mediate the relationship between entrepreneurship education and firm performance.
2. To find out how entrepreneurship intention mediates the relationship between entrepreneurship education and firm performance

Research Hypothesis

H₁: Entrepreneurship competencies will mediate the association between entrepreneurship education and firm performance

H₂: EI will mediate the association between entrepreneurship education and firm performance

This thesis consists of five chapters. Chapter 1 is an introduction, which is organised into five subsections. Introduction, aim, objectives, and hypotheses, significance, and summary. Chapter 1 is a review of literature in which entrepreneurial competencies, entrepreneurial education, firm performance, and its association are presented. Chapter 2 is devoted to methodology. The research design, population, samples, sampling techniques, data collection methods, tools, and ethical considerations are presented. Chapter 3 is analysis and interpretation. This chapter analyses the results, summarizes the research findings, and the final chapter discusses the findings in relation to previous studies as well as providing conclusions, managerial implications, limitations and recommendations for future research.

CERCS Code, S190 Management of Enterprise

2. Literature review

2.1. Entrepreneurship education

Entrepreneurship education (EE) is a curriculum that is keen on offering students the opportunity to enhance the necessary skills and attitude required for an individual to achieve success in their entrepreneurial ventures. The aim of entrepreneurship education is to create awareness of the risks integrated with entrepreneurship, create a high-performing culture, set up effective teams, develop social integration, and create an alternative career path. In addition to this, education offers an enhancement in skills and attitude needed to achieve success in ventures. The main objective of EE is to improve skills, experience, and knowledge of entrepreneurship (Handayati et al., 2020). Entrepreneurship education helps in handling entrepreneurial problems, which in turn enhances confidence in entrepreneurship. The education assists in developing a positive attitude towards entrepreneurship because the education paves the way for entrepreneurs to taste success in their future careers (Dharmawati et al., 2020).

The primary function of entrepreneurship education is entrepreneurship learning activities, or entrepreneurship education through field activities. Entrepreneurship learning activities offer transferable experience information from learning sources to the students. Field education inspires them to be successful in the future (Handayati et al., 2020). EE assist the individuals in acquiring knowledge and information transfer from experienced persons gives an idea in enhancing the engagement with peers (Zeng & Honig, 2016), which enhances the appropriateness of their career path. Through this education, they can enhance skills and attitudes, manage expectations, and use scientific knowledge and creativity to manage risks and eliminate potential setbacks that may precede future ventures. They can also learn how to socialize and integrate with others. These can enhance confidence in entrepreneurship (Kanaan-Jebna et al., 2022). This can help find out potential business partners and role models. As soon as education is acquired from the respective institution, starting a business becomes feasible. This feasibility study developed a positive attitude towards entrepreneurship. In addition to these, it helps in developing a strong sense of self-efficacy, enhancing abilities in starting the business (Handayati et al., 2020), and utilizing the appropriate resources and prospects in developing the business. Further, it guides the entrepreneurs in initiating the business through creativity and innovation. The education gives confidence to the entrepreneurs to make an informed decision, directing them toward improving and developing an innovative idea to grab the prospects available in the market. Having an effective education

helps the entrepreneur receive a higher rate of return on a successful business venture (Hairudinor et al., 2020). Overall, the education enhances the students' ability to motivate, enhance skills, establish social networks, gain experience, and receive higher revenue (Hasan et al., 2017). The description of individual studies on EE and firm performance is presented in the subsequent Table 1.

Table 1

Description of individual studies on EE and firm performance

Particulars	Aim	Methods	Variables	Findings	Limitations	Key gap
(Amaliawati et al., 2018)	To determine the relationship between EE and performance	Descriptive method	Entrepreneurship education	EE had an effect on firm performance.	Limited variables; limited research available by using a questionnaire	Adding more variables can influence performance.
(Mahmood et al., 2021)	To examine the effects of EE on performance	Convenience sampling; survey method; response rate of 68.5%	Entrepreneurship curriculum, university roles, relational factors, society, entrepreneurial values, and performance	EE-influenced performance	The outcome was more generalized for graduates.	Adding teaching methods, co-curriculum areas, and participation in entrepreneurial activities can be taken into account.
(Emmanuel, 2017)	Assessing the relationship between EE and performance	cross-sectional survey research design; simple random sampling	creative, innovative, leadership, negotiation, and goal-setting skills; self-belief, self-reliance, and financial literacy competencies; and acquiring skills in recognizing opportunities.	EE associated with performance		Assessing the variables can give more insights into EE.

Source: Own preparation

As observed from the quantitative studies that entrepreneurship education had an association with firm performance.

2.2. Firm performance

In the modern business world, firm performance is one of the most important variables because it measures the results of evaluating effort (Taouab & Issor, 2019). In the 21st century, firm performance is measured by financial and non-financial indicators that offer information about whether appropriate results have been achieved. Financial measures were profitability, sales growth in terms of return on investment, return on equity, and return on sales, whereas non-financial indicators were quality, new product development, satisfaction, market effectiveness, and satisfaction. The classification of firm performance is objective and subjective. The measurement of objective attributes is quantitative, whereas subjective measurements are based on the subjective assessments of respondents (Zehir et al., 2015). Although objective is unreliable, subjective is used to measure the complex aspects of firm performance.

Firm performance relies on the abilities of entrepreneurs to create value for their customers. The function of firm performance is efficiency and effectiveness. This gives a precise picture of whether the firm has tasted success or failure in the organization. In contrast to this, measuring firm performance is a critical issue for the organization (Mohammed et al., 2017). Although critical, this study measures firm performance in an objective manner.

Table 2

Description of the relationship between entrepreneurial competencies and firm performance

Particulars	Aim	Theory	Firm performance	Methods	Findings	Limitations	Key gap
(Abaho)	Examining the relationship between entrepreneurial competencies and SME performance	RBV: dynamic capabilities	Financial (sales, growth, and profitability) and non-financial (customer acquisition and retention)	Quantitative; cross-sectional research design; stratified random sampling			The gap is looking at other antecedents of SME performance.
(Barazandeh et al., 2015)	Assessing the relationship between EC and performance		Growth, exports, and innovation	Case studies	The positive effect existed between EC and performance.	The sample size of the case was small. The results were generalized across various countries.	The study would be more noticeable if it assessed the aspects qualitatively.
Kanaan et al., 2022)	Assessing the relationship between EC, EE, and firm performance	Resource-based view theory	Financial and non-financial	Quantitative	EC as a mediating variable and EE as the antecedents of competencies There was a relationship between EE and firm performance.	The sample size was small.	There is a requirement for groundwork to measure the relationship between EE and firm performance.
(Minai and Raza, 2018)		Resource-based view theory		Conceptual paper	EC had a relationship with EE and EE and firm performance postively associated		Impact of EC as a mediator between EE and firm performance, especially in

(Riy et al., 2019)	Measuring the relationship between EC and performance	financial; customers; internal business processes; and learning and growth.	Quantitative method	EC influenced the performance in Indonesia.	developing countries, Adding more variables could increase performance.
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Source: Own preparation

As observed from the quantitative studies that entrepreneurship competencies had an association with firm performance.

2.3. Entrepreneurship competencies

Competence is an all-inclusive concept that contains a collection of ideas. These ideas assist the individual who transmits their ideas into reality (Prakasa, 2021). Competencies are coordinated components of knowledge, attitude, and skills (Kyndt & Baert, 2015). Generally, competencies are learnable, changeable, and attainable with the help of experience, training, and coaching. All the components (Barazandeh et al., 2015) of an individual are satisfied when the body and mind of an individual equipped with essential skills and knowledge perform the task in an efficient way. Entrepreneurship is an essential skill for succeeding in business. They need training to know how to carry out the business and expertise in the business. All-inclusive of these skills assist the entrepreneurs to make informed decisions and develop businesses successfully (Kanaan-Jebna et al., 2022). According to Han (2008), "competences" are the abilities to meet complex demands in particular circumstances.

Competencies are classified into natural and unnatural competences (Barazandeh et al., 2015; Mohammed et al., 2017). Natural competence represents the internal characteristics of an entrepreneur. This includes the personality traits, attitude, self-image, and social role of an entrepreneur. Unnatural competence is otherwise known as learned or artificial competencies. These competencies are adventitious because skills are essential to complete the task. The entrepreneur can acquire the skills through practical and theoretical learning. These are knowledge, skills, and experience (*ibid*).

An entrepreneur has psychological and behavioral characteristics, as well as technical and managerial skills. These skills determine the success or failure of an enterprise (Tehseen & Ramayah, 2015). Entrepreneurship is the development of individual entrepreneurial knowledge and skills (Kanaan-Jebna et al., 2022) that are essential to starting and growing a business. Entrepreneurs have competencies and abilities for running a successful business in a holistic manner (Mohammed et al., 2017). Mardikaningsih et al. (2022) highlighted that the competencies essential for entrepreneurs include human relations, finance, technique, marketing, conceptual, decision-making, and time. Among these skills, the most and least mastered were human relations and finance, respectively.

Entrepreneurs are individuals who can create, own, and manage the resources of an enterprise (Pawitan et al., n.d.). The resources are of two types: tangible and intangible. Kamasak (2017) suggested that tangible resources are cash, raised financial capital, financial investments, physical equipment and other physical assets, raw materials, buildings and other

physical structures, and land, including its locations. In contrast, intangible resources are contracts and partnerships (joint ventures, franchising distribution, mergers, and acquisitions), shared values, beliefs, attitudes, and behaviors; the operating and reporting structure of the firm; employee recruitment; compensation; reward; legally protected designs, patents, and copyright; customer service reputation; company, brand name, and product or service reputation; As the literature indicated, a comprehensive understanding of tangible and intangible resources is essential to developing and performing new ventures.

Entrepreneurship competencies are individual, unique competencies in terms of their motives, personalities, social roles, knowledge, skills, and self-image. All these competencies pave the way for new ventures and performance. In other words, entrepreneurship competencies are the ability to create and communicate a planned vision in structuring firm systems. These structures are important to gain success in foreign markets (Khalid & Bhatti, 2015). Entrepreneurship competencies include the knowledge and skills of entrepreneurs (Barazandeh et al., 2015). This is the ability of an individual in managing the enterprise from startup to achieving sustainability (Prakasa, 2021). There are six types of entrepreneurship competencies: relationship, opportunity, organizing, conceptual, commitment, and strategy (Barazandeh et al., 2015; Pranowo et al., 2020). In contrast to this, Kanaan-Jebna et al. (2022) claimed that there were seven entrepreneurial competencies. In another study, Prakasa (2021) mentioned that the competencies were relationship, networking, opportunity, commitment, innovative thinking, organizational ability, and execution. Previous research has highlighted that all these competencies are essential to effective performance.

Entrepreneurship competencies are the fundamental characteristics of an individual that are inherent in them as individuals (personality, social roles, traits, attitudes, and self-image), which they enhance through education and training in the work place to accomplish the task that is most beneficial to them personally (Mohammed et al., 2017). This is the most significant aspect required for an entrepreneur (Mamun et al., 2021).

The key competencies that have been required for the informal sector include risk-taking propensity, need for achievement, experiences, and self-efficacy (Mamun et al., 2021). Among these competencies, taking risks is the most significant for an entrepreneur because it opens the door for success, failure, or setbacks. The most important competencies of an entrepreneur are perseverance and insight into the market (Kyndt & Baert, 2015). In developing countries like Indonesia, creativity and innovation (Syam et al., 2018), relationship, opportunity, organizing, conceptual, commitment, and strategic competencies (Pranowo et al., 2020) were the significant entrepreneurial competencies. All these competencies had

influenced the firm's performance in the country. In contrast to this, a qualitative study reported that ideas, prospects, resources, and actions were the most important competencies for an entrepreneur (Gustomo et al., 2019).

2.4. Relationship between entrepreneurship competencies and firm performance

Entrepreneurship competencies is a particular competency which is important for successful running of a business (Abaho, n.d.). Thus, it is essential to measure the entrepreneurship competencies. Previous international studies had measured entrepreneurship competencies such as network competencies (Ahmad et al., 2018), organising, opportunities, communities, networking, relationship, organising (Mohammed et al., 2017), executing, commitment and innovative thinking (Abaho, n.d.; Kisubi et al., 2022). The research on entrepreneurship competencies and firm performance has been carried out in quantitative research methods (Abaho, n.d.; Ahmad et al., 2018; Mohammed et al., 2017). As the studies indicated that competencies associated and positively influenced the firm performance (Abaho, n.d.; Ahmad et al., 2018; Mohammed et al., 2017).

Although international studies have shown the relationship, a recent case study by Sari & Sari (2022) highlighted that there was a direct and indirect effect between entrepreneurship competencies and firm performance. Prakasa (2021) reported that the entrepreneurship competencies of innovation, leadership, networking, and risk-taking had a positive effect on firm performance. In addition to this, the firm's performance in such areas as economic, social, and environmental performance (Prakasa, 2021), financial performance, learning and growth, internal business processes, and customer performance (Riy et al., 2019) had been considered.

Millennial entrepreneurs are active learners and work with freedom (Hindrawati et al., 2022). These generations are quite different from previous generations (Quezon & Vergara, 2022). The literature on millennial entrepreneurs has highlighted that their competencies were risk-taking, networking, and technology usage (Ambinari & Kholid, 2022), computer skills, marketing, planning, problem-solving and decision-making, self-confidence, networking, innovation, financial management, and a risk-taking attitude (Quezon & Vergara, 2022) in Indonesia. The findings of (Ambinari & Kholid, 2022) indicated that entrepreneurship competencies had a positive influence on firm performance. The individual descriptions of all the studies are described in detail.

The Table 2 below presents studies that have established relationship between EC and firm performance.

Table 3

Description of relationship between entrepreneurship competencies and firm performance

Particulars	Aim	Theory	List of competencies	Methods	Findings	Limitations	Key gap
Ahmad et al. (2018)	The main focus of the study was to examine the impact of various entrepreneurial competencies on firm performance.		analytical planning, innovation, enforcement or implementation, leadership, teamwork, and networking	Survey method; 117 sample size	Only enforcement and network competency had a statistical effect on firm performance.	The sample size was small.	This study is applicable only to women entrepreneurs. The results are likely to generalize if it extends to include all genders. This study represents the tendency of women entrepreneurs and their performance in Nigeria only. The target population is micro women entrepreneurs.
Mohammed et al. (2017)	Examined the effects of entrepreneurial competencies on firm performance.		opportunity, organization, and strategic competency	Simple random sampling technique; 20-sample size	All competencies had influenced the firm's performance.	Less sample size; only for micro businesswomen entrepreneurs	The results were applicable to central Java.
Prakasa (2021)	Assessment of entrepreneurial competencies and its effect on performance of MSME	Resource-based view theory	as innovation, networking, leadership, and risk-taking.	Explanatory study; sample: SMEs of Central Java; proportional	All competencies had influenced the firm's performance.	a smaller sample size, which had the bias of being inaccurate in representing the population, only for	

Riy et al. (2019)	effect of EC and performance of SME in Indonesia		opportunity, relationship, organizing, strategic, conceptual, and commitment competencies	Quantitative method; survey questionnaire	random sampling	All competencies had influenced the firm's performance.	micro businesswomen entrepreneurs. Only one variable (entrepreneurship competencies) had influenced firm performance. There are still more variables like innovation capacity, implementation of the co-creation process, SME leadership, and others.	There is no description of how individual competencies influence firm performance.
Foster, (2018)	Effect of EC on performance in Indonesia		Relationships, innovation, analytical opportunity, strategic human operation, commitment, personal strength, and learning	Exploratory research; purposeful sampling method; 119 sample size		All competencies had determined the entrepreneurial competencies.	The assessment of competencies is only applicable for MSME creative industries.	This study gives an insight into assessing the components of entrepreneurial competencies for other industries of MSME.
Ambinari and Kholid (2022)	The main focus of the study was to examine the impact of various entrepreneurial competencies on firm performance.	Resource-based view theory	Entrepreneurial competencies	Quantitative method; purposive sampling; 227 sample size		Entrepreneurial competencies had influenced the firm's performance.	The results represent only female entrepreneurs. Unequal distribution of sexes	Increasing the number of responses offered the outcome in a precise way.

Quezon & Vergara (2022)	The effect of millennial entrepreneurs' competencies on performance	innovative marketing competencies, strategic competencies, and personal competencies	Descriptive correlational type of research design; sample: millennial entrepreneurs; convenience sampling	Entrepreneurial competencies had a positive and weak association with business performance.	The sample opinion was gathered during the pandemic, and hence the responses might be inappropriate.	In this study, the effect was assessed through business performance. There is no generalization on the effect on SME performance.
Ahmad et al. (2018)	The main focus of the study was to examine the impact of various entrepreneurial competencies on firm performance.	analytical planning, innovation, enforcement or implementation, leadership, teamwork, and networking	Survey method; 117 sample size	Only enforcement and network competency had a statistical effect on firm performance.	The sample size was small.	

Source: Own preparation

Ahmad et al., (2018) claims that assessing various types of competencies and firm performance of women entrepreneurs. The outcome indicated that only network competencies had a positive effect on firm performance.

Mohammed et al., (2017) mentions a special attention to women entrepreneurs in Nigeria. Women entrepreneurs were determined on simple random sampling technique. The opinions of 200 had considered. As soon as the sample size were fixed, the variables such as the organising competencies, opportunity competencies and firm performance had considered. Assessment of variables reveal that both competencies influenced the firm performance in Nigeria.

Abaho (n.d.) considers resource-based view theory to measure the relationship between competencies and firm performance of SME in Uganda. The selection of SME was based on the stratified random sampling technique. Assessing the SMEs and their opinions revealed that there was a positive association between competencies and firm performance. These outcomes support the concept of resource-based view theory.

In an explanatory research study, Prakasa (2021) reported that a relationship existed between entrepreneurial competencies and firm performance. EC such as innovation, networking, leadership, and risk-taking were considered. The findings indicated that all of EC had influenced the firm's performance. The highest and least effect was found on leadership and risk-taking competency.

Riy et al., (2019) claim that the effect of EC and performance of SME in Indonesia the measurement of performance includes customer satisfaction, finance, learning and growth, and internal business. Competencies such as opposition, relationship, strategy, organization, commitment, and conceptuality were considered. The results showed that all of EC had influenced the performance.

Foster, (2018) investigated whether EC influenced entrepreneur performance in Indonesia, such as relationship, innovation, opportunity, analysis, strategy, operation, human commitment, personal strength, and learning competencies had been considered. The samples were from MSMEs in Bandung, and the samples were determined using the purposive sampling method. The samples opinions were gathered through a questionnaire. The findings of the sample's opinions indicated that the competencies of relationship, opportunity, strategy, personal strength, and human relationships had influenced the entrepreneurial competencies.

In a recent study conducted by Ambinari and Kholid (2022), it was reported that certain factors influence the firm performance of millennial entrepreneurs. The factors include risk-taking, networking, and technology usage. With the help of quantitative methodologies, the

evaluation of factors showed that the factors had an effect on entrepreneurship competencies. In addition to this, risk taking and networking of entrepreneurship competencies had an effect on firm performance.

The focus of Quezon & Vergara (2022) was to measure the effect of millennial entrepreneurs' competencies and business performance. The competencies such as computer, organizing, marketing, planning, problem solving and decision making, self-confidence, networking, innovation, financial management, and a risk-taking attitude had been considered. Millennial entrepreneurs should have been born between 1980 and 2000, and their businesses should have been registered and operating for at least three years. These millennial entrepreneurs were determined based on convenience sampling. Next, assessment of opinions gathered through survey methods revealed that entrepreneurship competencies had a positive and weak association with business performance. In addition to this, the highest and lowest competencies were in computer and financial aspects, respectively.

2.5. The mediation effect of entrepreneurship competencies on the relationship between entrepreneurship education and firm performance

Previous research findings into EC, EE, and firm performance have suggested that the application of resource-based view theory revealed that the antecedent of EC was EE, which influenced firm performance, which was mediated by EC (Kanaan et al., 2022; Kanaan-Jebna et al., 2022). According to Minai & Raza (2018), it has been established that the resource-based view theory proposes variables such as entrepreneurship education, competencies, and firm performance. As these studies clearly stated, there is a lack of studies on measuring the EE, EC, and firm performance of millennial entrepreneurs in Malaysia.

The literature on entrepreneurial competencies has highlighted that the competencies such as analytical planning, innovation, enforcement/implementation, leadership, teamwork and networking, opportunity and organising, strategic competency, as innovation, networking, leadership, and risk-taking, relationship, innovative, analytical, opportunity, strategic, human, operational, commitment, personal strength and learning and innovative marketing competencies, strategic and personal competencies have considered (Ahmad et al., 2018; Ambinari & Kholid, 2022; Foster, 2018; Mohammed et al., 2021; Prakasa, 2021; Quezon & Vergara, 2022; Riy et al., 2019). The only theory supporting entrepreneurial competencies is the research-based view theory. Previous studies have explored the relationship between EC and firm performance.

For entrepreneurship education, there is a relatively small body of literature that is concerned with EE and performance. Various studies have found that the EE variables were

the entrepreneurial curriculum, university roles, relational factors, society, entrepreneurial values, creative, innovative, leadership, negotiation, and goal-setting skills; self-belief, self-reliance, and financial literacy competencies; and acquiring skills in recognizing opportunities (Amaliawati et al., 2018; Emmanuel, 2017; Mahmood et al., 2021). EE and performance appear to be closely linked. There is a lack of literature available on assessing millennial entrepreneurs education and how it influences firm performance.

There are relatively few studies available on millennial entrepreneurs. As Quezon and Vergara (2022) indicated, EC had a positive and weak association with performance. There is a lack of literature on investigating the EC, EE and firm performance with millennial entrepreneurs. These studies give insights and encourage the researchers to investigate the aspects in a detailed way.

3. Research method and data

This chapter describes the research methodology employed for this study. The methodology section describes the research design, methods, and procedures utilised to conduct the study. This chapter provides a detailed description of the sample and data collection methodologies, as well as the data analysis techniques used to analyse the collected data. The methodology section is essential for ensuring the validity and dependability of the research findings. It provides a clear and transparent explanation of the research process, enabling the reader to comprehend how the data was collected and analysed and to assess the results' reliability.

3.1. Research Approach

Quantitative research approach are widely recognized as the most preferred method in academic research due to their structured procedures, formal instruments for data collection, and ability to quantify answers. These methods aim to expand knowledge and recognize research by utilizing statistics and numbers. The use of standardized measures and statistical analysis in quantitative research allows for objective data collection and removal of researchers bias, enabling precise measurement of variables and identification and understanding of relationships between them. Additionally, these methods provide clear and detailed procedures for data collection and analysis, allowing other researchers to replicate the study and test the validity of the findings. Quantitative research methods have been shown to corroborate the findings of a great deal of previous work(Ahmad et al., 2018; Foster, 2018; Mohammed et al., 2017; Prakasa, 2021; Quezon & Vergara, 2022).

One major advantage of quantitative research methods is their ability to generalize to the whole population. This is because the analysis can be performed quickly and accurately through the use of statistical software (Rahman, 2016). Despite, there are some limitations to these methods, such as the potential for misrepresentation of the target population, limited resources to collect data, and the absence of deeper understanding of problems (Chetty, 2016). Additionally, the outcomes of quantitative research methods may be restricted due to the complex nature of performing analysis.

3.2. Population and samples

The population of the study is the millennial entrepreneurs in Banjarmasin and Kota Yogyakarta. The reason for taking the city is that these entrepreneurs are devoted entrepreneurs (Basuki et al., 2021). Samples are millennial entrepreneurs who are between the age categories of 19 and 35 years old. The samples are determined on the basis of the purposive sampling

method. The reason for picking out the technique is that sampling offers appropriate information (Campbell et al., 2020), which saves energy, resources, and time for the researchers. Primary inclusion criteria for the respondents are the entrepreneurs who were born between the early 1980s and mid-1990s. The entrepreneurs are within the geographical limits of Banjarmasin City and Kota Yogyakarta. Others are excluded from the study. Data collection is done through primary sources. The importance of primary data is that it is valid and reliable. The merit of using the data is that getting high-quality data can improve the results. The researchers has approached one hundred and fifty millennial entrepreneurs. The opinions collected from these entrepreneurs total 147. Thus, the response rate of these studies is 98%.

3.3. Procedure for data collection

Millennial entrepreneurs information, such as name, address, and email ID, were gathered from the local consultancy in Indonesia. The local service provider offered voluntary participation and millennial entrepreneurial information to the researcher. The researcher contacted the people through their respective mail IDs, stating the purpose of conducted the study. Only a small number of respondents replied to the researcher, stating their voluntary participation in the study. The study was conducted among the respondents over a period of five weeks. The channel used to gather the opinion was through a Web survey. The researchers collected opinions through a research instrument, a questionnaire prepared in Google Form.

There were four variables in the dataset, such as entrepreneurship competencies, entrepreneurship education, entrepreneurship intention, and firm performance. The items of all the variables are mentioned in the measurement unit section. All these variables were measured with summary statistics. The results of the statistics are shown in the subsequent subsection.

3.4. Limitations of dataset

- The study evaluates the data using quantitative methods. The responses were smaller. Some opinions are missing from the dataset. These missing values could affect the study. Thus, the researchers has replaced the missing variables respective means.
- Although the time limit for gathering responses from the samples was limited, the researchers was able to collect the opinions of 147 respondents. The number of responses in this study is limited. Thus, these small populations do not represent the whole population.
- The increment in sample size may generalise the findings.

Questionnaires for data collection

The questionnaire is classified into five sections. The first section of the questionnaire pertained to the demographic profile of millennial entrepreneurs. This includes age, gender,

education, marital status, and years in the current business. The second section was a profile of enterprises, such as firm age, business locations, industry, form of business, nature of enterprise, model of enterprise, and number of employees. The third section contains the items of entrepreneurship competencies from previously established scales. In the entrepreneurial competencies, there are twenty-three items representing the strategic, innovative, marketing, personal, learning, and analytical competencies. Each item of these variables was measured on a 5-point Likert scale. Four items were used to measure learning and analytical competencies. Five items of personal competencies. The scale of strategic competencies and innovative and marketing competencies was also used for nine items, respectively. All these items were adapted from Quezon & Vergara, 2002. The dependent variables of FP are operationalized on a five-point Likert scale. These were proposed by Zehir, t (nd). Entrepreneurship education contains seven items, and these items were used by Kurmet et al. (2014). Finally, the six items were used to measure entrepreneurial intention, as previously described by Esfandiar et al. (2019).

3.5. Reliability

The purpose of reliability is to measure the consistency of items on a five-point Likert scale between each variable through Cronbach's alpha. The threshold limit of these alphas is between 0 and 1. The higher the values, the higher the consistency.

The Cronbach alpha value for entrepreneurship education is 0.937 for seven items. This indicates that the items have excellent internal consistency. Six items are used to measure EI; the alpha value of EI is 0.956, indicating excellent internal consistency. Eight items are used to measure firm performance, and the value of these items is 0.932, indicating excellent internal consistency. The alpha value for entrepreneurship competencies is 0.968 for twenty-three items. All these items have excellent internal consistency.

3.6. Statistical tools

In this study, statistical tools such as frequency distribution, spearman rank correlation, confirmatory factor analysis, and mediation analysis were utilised. First, the application of frequency distribution is for showing the categories of profiles of millennial entrepreneurs and employees. This is important to present, organise, and summarise the data. The results of the analysis are in the form of tables and figures. Second, the spearman rank correlation is a measures of identifying the statistical dependencies between two variables. The results of the analysis are done with SPSS software.

Third, the confirmatory factor analysis is used to test the association between observed measures or indicators. These results are determined with IBM Amos , mediation analysis is

used to evaluate the process by which independent variables influence the dependent variable through a mediator. The examination of mediation analysis is significant in recognising why and how the variables influence other variables. These were tested with IBM AMOS and illustrated with Medgraph.

3.7. Ethical considerations

In academic research, the researchers have to consider the research ethics, which are important. Saunders (2009) claims in their study that ethical issues exist in the research. So, it is the responsibility of the researchers to take ethical issues into account.

When conducting academic research, it is essential for the researchers to maintain privacy, confidentiality, and anonymity of data. To maintain the confidentiality of the data during the data collection process, it is crucial to protect the responses. The researchers should avoid asking personal questions. In this study, the researchers raised the questions of the demographic profile of millennial entrepreneurs, such as age, gender, education qualification, marital status, and years in the current business. There are no questions asking for personal names, and the researchers is more confident and accurate while conducting the survey. The aim of the researchers is to respect the employee's privacy and protect the respondent's personal information. In addition to these, informed consent is included in the questionnaire. The opinions are collected from the respective millennial entrepreneurs. As soon as they click the opinion button, they are requested to fill out their responses in Google Forms.

4. Results and interpretation

This chapter presents the findings of the study on the basis of the collected data. The findings are highlighted by the comprehensive and detailed analysis of the data. The analysis involves frequency distribution, correlation, exploratory factor analysis, and mediation analysis. The results are important to enhance the research study with evidence-based insights that contribute to the advancement of knowledge in the field. A summary of evidence-based insights is also presented.

4.1. Demographic profile of respondents

The profile of respondents, such as age, gender, education qualification, and marital status, was gathered from the millennial entrepreneurs through open-ended and multiple-choice questions. The responses of these entrepreneurs were assessed using a frequency distribution. The results were illustrated with graphs.

Table 4

Frequency distribution for demographic profile of respondents

Particulars		Frequency	Percent
Age	18–25 years	18	12
	26–30 years	66	44
	30–35 years	45	30
	Above 35 years	21	14
Gender	Male	114	76
	Female	36	24
Education qualification	Senior High school	12	8
	Bachelors	57	38
	Masters	78	52
	PhD	3	2
Marital status	Single	84	56
	Married	60	40
	Prefer not to say	6	4
Total		150	100

Source: Own calculation

Age: The age of the millennial entrepreneur has been classified into four groups, such as entrepreneurs aged 18–25 years, 26–30 years, 30–35 years, and above 35 years. The millennial entrepreneurs were high between the age groups of 26 and 30 years (44%). Nearly 30% of entrepreneurs were 30-25 years, 14% of above 35 years and 12% of between 18-25 years. Thus, it was clear that the highest number of millennial entrepreneurs were younger. This is due to the fact that they grew up in the digital age and have access to more resources and information that help them

be entrepreneurs. In addition to these, they were educated and seek careers that offer them freedom and autonomy. Therefore, these are likely to contribute to the highest number of young millennial entrepreneurs.

Gender: Among 150 millennial entrepreneurs, 114 millennial entrepreneurs are male, and the remaining 36 millennial entrepreneurs are female. The reason is that male entrepreneurs are more likely to take risks and pursue careers, which makes them financially rewarding to society. On the contrary, gender biases in the business world make it harder for women to get funding, networking opportunities, and mentorship. Thus, the proportion of male millennial entrepreneurs was higher than that of female entrepreneurs.

Education qualification: In this study, the educational qualifications of millennial entrepreneurs were classified by the researchers into four categories: senior high school, bachelor's degree, master's degree, and PhD. The majority of millennial entrepreneurs possessed a master's degree (52%), followed by 38% with a bachelor's degree, 8% with a senior high school education, and only 2% with a PhD. Those who are masters degree makes them with to possess advance skills and knowledge in their respective studies. While studying for their masters, they are exposed more to entrepreneurship and business management, which helps them start and manage businesses.

Marital status: Out of 150 millennial entrepreneur, a total of 84 (56%) millennial entrepreneur are single. The next 60 (40%) millennial entrepreneurs are married, and the remaining 6 (4%) millennial entrepreneurs prefer not to say. It is then concluded that the highest number of millennial entrepreneurs are single.

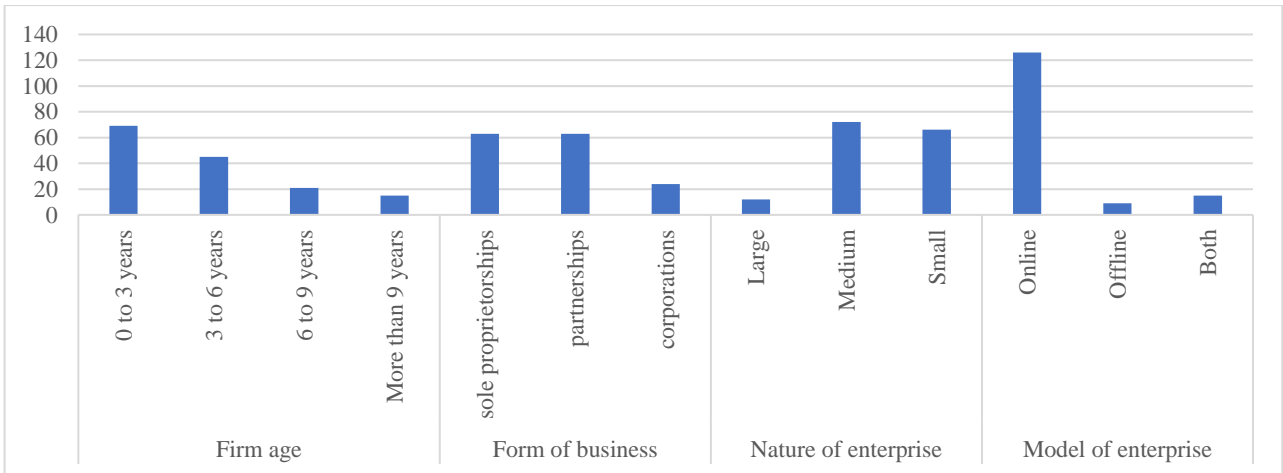


Figure 1. Demographic profile of respondents
Source: Own calculation

4.2. Profile of enterprises

The profile of enterprises were assessed with age of enterprises, its business form, nature and model of enterprises and number of employees. All these were raised with the respondents through open-ended and multiple-choice questions. These were assessed using frequency distribution. The outcomes were illustrated with graphs.

Table 5

Frequency distribution for profile of enterprises

Particulars		Frequency	Percent
Firm age	0 to 3 years	69	46
	3 to 6 years	45	30
	6 to 9 years	21	14
	More than 9 years	15	10
Form of business	sole proprietorships	63	42
	partnerships	63	42
	corporations	24	16
Nature of enterprise	Large	12	8
	Medium	72	48
	Small	66	44
Model of enterprise	Online	126	84
	Offline	9	6
	Both	15	10
Number of employees	Less than 20 employees	84	56
	20 to 100 employees	27	18
	More than 100 employees	39	26
Total		150	100

Source: Own calculation

Firm age: The age of firm can be classified into 0 to 3 years, 3 to 6 years, 6 to 9 years, and more than 9 years. According to the results of the study, the majority of enterprises (46%) were under the age of 0-3 years. The second highest age range of enterprises were 3-6 years accounting for 30%. In addition, 14% of the enterprises fall under the age category of 6 to 9 years, while 10% of the enterprises are more than nine years old.

Form of business: When starting a business, it is important to consider the different forms of business organisation. The most common types of business entities include sole proprietorships, partnerships, and corporations. The survey responses highlighted that 42% of entrepreneurs were sole

proprietorships, while 16% were engaged in partnerships or corporations. Thus, sole proprietorship was the most popular form of business because of its attractive attributes of simplicity, control, tax benefits, and flexibility. Despite, limited capital, difficulty in attracting investors, debts and obligations were some of the challenges existed in these business form.

Nature of enterprise: The nature of enterprises such as large, medium, and small. The investigation of multiple-choice questions on nature of enterprises revealed that the contributions of medium and small enterprises were 48% and 44%, respectively. The utilisation of resources and capabilities of these enterprises were more industry- or sector-specific. In addition to these, such enterprises concentrate on innovation and the application of technology in their enterprises to develop new products and compete more effectively in the market. They also offer effective customer service, which differentiates their services from their competitors. Although an effective resources and capabilities allow them to compete in the market, and the contribution of such large enterprises was minimal (8%).

Model of enterprise: As observed from the enterprise model, it was either online, offline, or both. The frequency distribution revealed that the online kind of model was used by 84% of enterprises, followed by 10% of enterprises using both models, and only 6% of enterprises using the offline kind of model. These results highlighted that entrepreneurs were using online business models due to an increase in the use of technology and the internet by consumers, an increase in e-commerce platforms, digital marketing, and social media. All these made it easy for the business to reach a huge audience and operate on a large scale. On the contrary, a smaller number of enterprises were engaged in an offline business model, and it is quite surprising to pinpoint that because they offered in-person services to their customers. Some businesses were using both models to cater to the needs of different segments of customers and diversify their revenue streams.

Number of employees: The number of employees working in an enterprise is classified as none, less than 20 employees, 20 to 100 employees, and more than 100 employees. The result shows that 56% of the enterprise having less than 20 number of employees, 26% of the enterprise having more than 100 number of employees, and the remaining 18% of the enterprise having 20 to 100 number of employees. Hence, it is found that the most of the enterprise having less than 20 number of employees.

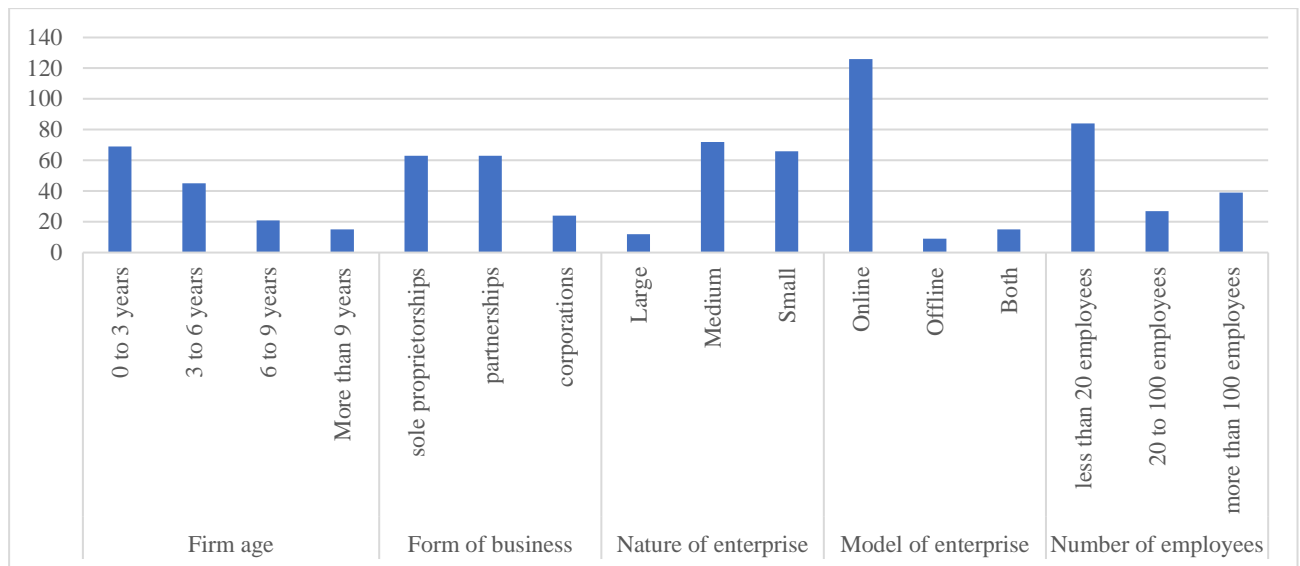


Figure 2. Profile of enterprises
Source: Own calculation

4.3. Association between the entrepreneurship competencies, education, and intention and firm performance

In this section, the study aimed in examining the association between EC, EE, EI and firm performance. The examination is through spearman rank correlation. The detailed description of analysis showed in the subsequent table.

Table 6
Association between EC, EE, EI and firm performance

Particulars	Mean	SD	Age	Gender	Education	EC	EE	EI
Age	0.42	0.49	1					
Gender	0.23	0.42	0.092	1				
Education	0.92	0.28	.254**	-.189*	1			
EC	4.03	0.81	-.201*	-0.091	-0.086	1		
EE	3.81	0.99	-.193*	-0.053	0.008	.833**	1	
EI	4.04	0.65	-.280**	-.189*	-0.041	.396**	.476**	1
OP	4.09	0.85	-0.135	-.194*	-0.084	.634**	.554**	.657**

Source: Own calculation

Notes: EC = Entrepreneurship Competencies; EE = Entrepreneurship Education EI = Entrepreneurship Intention; and OP = Organizational Performance. *p<0.05, **p<0.01, age: ≥ 30 (1) and <30 (0), gender: Female (1) and Male (0), Education: Undergraduates (1) and graduates (0).

The table 3 shows that the female entrepreneurs who will be educated have lower entrepreneurial competencies ($p = -0.091$; $p > 0.05$) and entrepreneurial education (0.0526) than male entrepreneurs. Although female entrepreneurs have less entrepreneurial intention ($p = -0.189$; $p < 0.05$), they are likely to achieve lower performance ($p = -0.194$; $p < 0.05$).

Entrepreneurs who will have more than 30 years of experience have a higher education ($p = 0.254$; $p < 0.05$) but have lesser competencies ($p = -0.201$; $p < 0.05$), education ($p = -0.201$; $p < 0.05$), and intention ($p = -0.280$; $p < 0.05$). Entrepreneurship competencies were associated with entrepreneurship education (0.0833; $p < 0.05$), entrepreneurship intention ($p = 0.396$; $p < 0.05$), and firm performance ($p = 0.634$; $p < 0.05$), indicating that the hypothesis were supported. Entrepreneurship education was associated with entrepreneurial intention ($p = 0.476$; $p < 0.05$) and firm performance ($p = 0.554$; $p < 0.05$), indicating the hypothesis were supported. Finally, entrepreneurship intention and firm performance were associated and significant ($p = 0.657$; $p < 0.005$).

Next, is to check whether the variables have any existence of multicollinearity problems. The problems were evaluated with the collinearity tests of VIF and tolerance. The values of VIF for EC, EE, and EI were 3.268, 3.564, and 1.293, respectively. The tolerance values of the variables EC (0.306), EE (0.281), and EI (0.773). All these values were higher than the corresponding values of VIF and tolerance. Thus, the variables were free from multicollinearity issues and well suited for developing a model.

4.4. Confirmatory factor analysis

Conducting CFA using AMOS version 25 showed the results that the entrepreneurship competencies were fit for the data. $\chi^2/df = 2.467$, RMSEA=0.003, CFI=0.971, TLI=0.971, IFI=0.971, NFI=0.99. The benchmarks for χ^2/df should be less than or equal to 3, RMSEA should be less than or equal to 0.006, TLI, NFI and CFI should be greater than or equal to 0.95.

Table 7

Confirmatory factor analysis

Particulars	Value
Chi-square	2.467
RMSEA	0.003
CFI	0.971
TLI	0.971

IFI	0.971
NFI	0.990

Source: Own calculation

4.5. Mediation analysis

According to the comprehensive literature studies, the mediating variables of the study were EE and EI. As soon as the variables were determined, mediation analysis was done with AMOS, and the results were interpreted in the subsequent section.

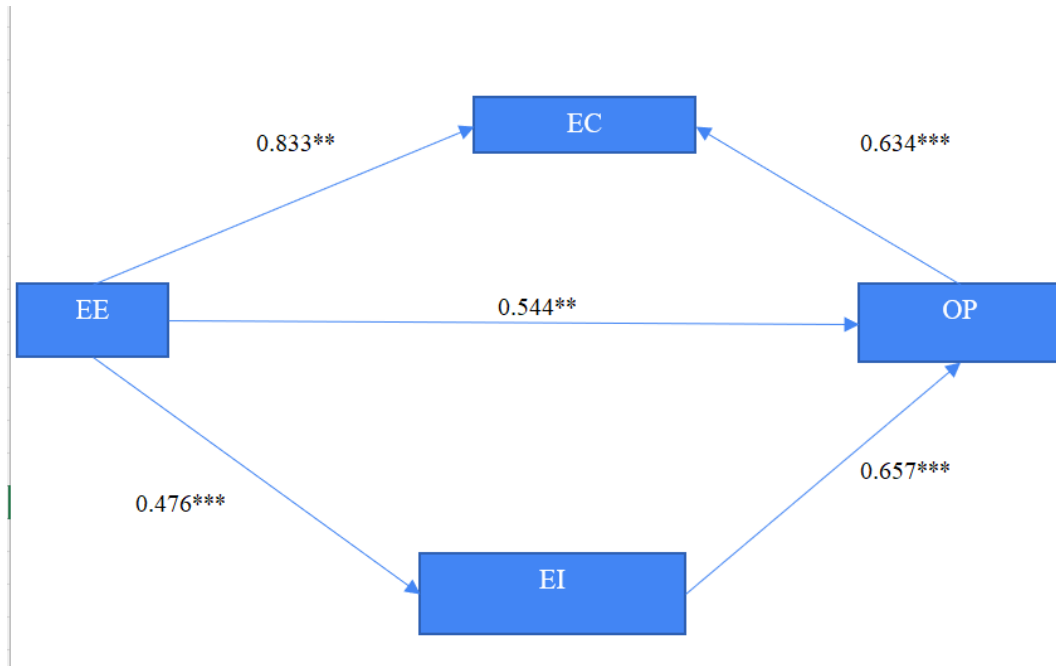


Figure 3. Mediation analysis

H₁: Entrepreneurship competencies will mediate the association between entrepreneurship education and firm performance

Significance of Mediation		Significant
Sobel z-value	4.677617	$p = 3.0E-6$
95% Symmetrical Confidence Interval		
Lower	.23472	
Upper	.57329	
Unstandardized indirect effect		
a*b	.40401	
se	.08637	
Effect size Measures		
	<u>Standardized Coefficients</u>	<u>R² Measures (Variance)</u>
Total:	.554	.295
Direct:	.073	.002
Indirect:	.470	.292
Indirect to Total Ratio:	.848	.993

Figure 4. Impact of entrepreneurship competencies, education, and intention on firm performance

Source: Own calculation

The sobel test value was 4.677 and the p-value was 3.06E-6, which was lower than 0.05. This indicates that the indirect effect of EE on FP through EC was statistically significant. The results of the mediation analysis showed that the total effect of EE on firm performance through EC was significant ($\beta = 0.554$, $p < 0.05$, 95% CI [0.258, 0.679]). In addition to this, the direct effect of EE on firm performance through EC was non-significant ($\beta = 0.073$, $p > 0.05$, 95% CI [-0.080, 2.93]). The indirect effect of EE on firm performance through EC was significant ($\beta = 0.470$, $p < 0.05$, 95% CI [0.137, 0.712]). The indirect effect of the model was 0.40. Thus, alternate hypothesis is accepted and concluded that entrepreneurship competencies have a fully mediate the association between entrepreneurship education and firm performance. So, the results obtained support the proposed hypothesis.

Significance of Mediation		Significant
Sobel z-value	4.934308	$p = < 0.000001$
95% Symmetrical Confidence Interval		
Lower	.12560	
Upper	.29114	
Unstandardized indirect effect		
a*b	.20837	
se	.04223	
Effect size Measures		
	<u>Standardized Coefficients</u>	<u>R² Measures (Variance)</u>
Total:	.554	.261
Direct:	.269	.075
Indirect:	.242	.186
Indirect to Total Ratio:	.437	.711

Figure 5. Impact of entrepreneurship competencies, education, and intention on firm performance

Source: Own calculation

H₂: Entrepreneurship intention will mediate the association between entrepreneurship education and firm performance

The sobel test value was 4.934 and the p-value was 0.000001, which was lower than 0.05. This indicates that the indirect effect of EE on FP through EI was statistically significant. The results of the mediation analysis showed that the total effect of EE on firm performance through EC was significant ($\beta = 0.554$, $p < 0.05$, 95% CI [0.346, 0.708]). In addition to this, the direct effect of EE on firm performance through EC was significant ($\beta = 0.269$, $p < 0.05$, 95% CI [0.108, 0.466]). The indirect effect of EE on firm performance through EI was significant ($\beta = 0.242$, $p < 0.05$, 95% CI [0.158, 0.373]). Thus, alternate hypothesis is accepted and found that entrepreneurship intention

partly mediate the association between EE and firm performance. The findings obtained support the proposed hypothesis.

5. Discussion and managerial implications

5.1. Discussion

The aim of the study is to explore how entrepreneurship competencies, EI, and entrepreneurship education influence firm performance. As mentioned in the literature review, the competencies of entrepreneurs were: analytical planning, innovation, enforcement, teamwork, leadership, networking (Ahmad et al., 2018), opportunity, organisation, and strategic competencies (Mohammed et al., 2017), risk taking (Prakasa, 2021), relationship, conceptual, commitment competencies (Riy et al., 2019), analytical, strategic, human operations, personal strength, learning (Foster, 2018), entrepreneurial competencies (Ambinari & Kholid, 2022), innovative, strategic, and personal competencies (Quezon & Vergara, 2022) This study confirms that the millennial entrepreneurs competencies were proposed by Quezon and Vergara (2002). The assessment of variables was done with quantitative research methods that corroborated the findings of a great deal of previous work (Ahmad et al., 2018; Foster, 2018; Mohammed et al., 2017; Prakasa, 2021; Quezon & Vergara, 2022).

The spearman rank correlation analysis in the study also found that EE was associated with firm performance. The finding is also supported by Amaliawati et al. (2018) and Emmanuel (2017).

There was a direct association between EC and firm performance. The finding is also supported by (Abaho, n.d.; Ambinari & Kholid, 2022; Barazandeh et al., 2015; Mohammed et al., 2017; Prakasa, 2021; Riy et al., 2019). However, a study by Quezon & Vergara (2022) obtained contrary findings, indicating that EC had a weak association with performance. The inconsistencies in results could stem from the samples that were collected at the time of the pandemic, while the data came from Indonesia. Also, their study sample size was larger than the current study, which explains why their results are contrary to the current study. However, the similar studies that obtained the same results also underscore the fact that, indeed, EC has a positive influence on firm performance.

Also, EI was directly associated with firm performance. This finding was also reported by Cubin (2019; Radipere & Ladzani, 2014; Tajpour & Hosseini, 2021). Next, the mediation results were elaborated with the respective hypotheses.

H₁: EC will mediate the association between entrepreneurship education and firm performance.

The results obtained showed that EC fully mediates the association between EE and firm performance. This finding is consistent with that of Kanaan et al. (2022); Kanaan-Jebna et al. (2022); Minai and Raza (2018), who indicate EC is a very key component of firm performance and therefore, firms must invest in building such attributes in their firm. However, the findings of the current study

do not support the previous research (Abaho, n.d.; Ambinari & Kholid, 2022; Barazandeh et al., 2015; Mohammed et al., 2017; Prakasa, 2021; Riy et al., 2019). This inconsistency in results could be due to an inaccuracy in representing the population with a minimal sample size.

H₂: EI will mediate the relationship between EE and firm performance

Another finding shows that EI partially mediates the relationship between EE and FP. This finding is contrary to that of Amaliawati et al. (2018), Mahmood et al. (2021), and Emmanuel (2017), who found that there was a direct effect between the variables. However, no evidence of EI mediating the association between EE and firm performance was detected.

These findings suggest that acquiring new skills and knowledge to equip themselves with changing market conditions and emerging technologies gives millennial entrepreneurs a competitive advantage. The important issue of EE and FP through EI is not studied thoroughly. Future studies on these issues are therefore recommended. Further work is needed to gain a better understanding of the aspects such as EE, EC, EI, and FP through qualitative research methods.

5.2. Managerial implication

The section offers suggestions for firms to enhance their performance. First, EC fully mediate the relationship between EE and firm performance. These findings suggest that EE is important to equip necessary competencies, such as opportunity identification, networking, and risk-taking propensity, to succeed in the businesses formed by millennial entrepreneurs. Thus, millennial entrepreneurs should consider investing in their formal education programme and training to acquire the competencies required for entrepreneurship and enhance firm performance. These entrepreneurs have to identify the competencies such as problem solving, creativity, leadership, practical experience, mentorship, and networking opportunities that are essential to enhance firm performance. In addition to these, they have to gain practical experience through internships, apprenticeships, and mentorship prospects to develop their skills in entrepreneurship. Though the development of EC is a continuous process, the entrepreneurs have to develop a growth mindset and have a transparent approach to learning new skills and knowledge essential for their careers. Millennial entrepreneurs have to build strong networks of advisors, peers, and mentors to offer guidance, support, and enrich connections in society. They have to calculate risks to enhance firm performance.

Second, the partial mediation results between EE and FP through EI suggest that entrepreneurs have to focus on intention, seek out the role of models and mentors, consider the effect of personal and societal factors, set up a conducive work environment, develop a business plan, and continuously

engage in learning and adapting to as per the changes in the external environment, which helps improve firm performance.

5.3. Recommendation for future work

The important issue of EE and FP through EI is not studied thoroughly. Future studies on these issues are therefore recommended. Further work is needed to gain a better understanding of aspects such as EE, EC, EI, and FP through qualitative research.

5.4. Limitations of the study

The limitations of the study are that the lesser the small size, the higher may be the bias. This bias may reduce the accuracy of the results.

6. Conclusions

In a developing country like Indonesia, education support is offered to enhance the entrepreneurial competencies of people. This support improves the enthusiasm for entrepreneurship in the country. Some of the previous studies have highlighted that millennial entrepreneurs have more enthusiasm for entrepreneurship. Although passion remains in this generation, whether the acquired education, competencies, and intention of millennial entrepreneurs induce firm performance. Assessing the issues gives insight into the fact that millennial entrepreneurs are gaining knowledge, skills, and exposure to internal practises, strategies, and practises through education. This enhances the individual's ability to recognise the business dynamics, develop strong intention and motivation to pursue entrepreneurial endeavours, enhance self-efficacy in creating and managing a venture. All these abilities enhances the entrepreneurial intention of millennials in Indonesia.

Entrepreneurial intention is influencing the firm's performance. The higher the EI, the higher the initiation of entrepreneurial activities such as starting your own venture and investing time, effort, and resources to develop and grow your business. These proactive behaviours influence firm performance indicators such as skills, abilities, work performance, individual success, market success, and competitive advantage.

Millennial generations foster EI through entrepreneurship education. They are developing proactiveness and innovativeness, recognising market opportunities, and taking calculated risks. The intentions that existed in millennial generations are acting as a bridge between education and mindset, as individuals with higher EI are more likely to apply their skills and knowledge effectively in practise. The applications of skills and knowledge are likely to improve the time, effort, and resources needed to develop and grow ventures, allocate resources strategically, look for opportunities in terms of innovation, investment, and growth, enhance innovation and creativity, and enhance the firm's performance. As the results indicate, EE can indirectly influence firm performance through its influence on entrepreneurial intention.

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Appendices
Questionnaire

I have read the information sheet provided and I am happy to participate. I understand that by completing and returning this questionnaire I am consenting to be part of the research study and for my data to be used as described.

Section 1: Demographic profile of respondents

1. Age
2. Gender
 - a. Male
 - b. Female
3. Education qualification
 - a. Junior high school
 - b. Senior high school
 - c. Bachelor
 - d. Masters
4. Marital status
5. Years in the current business

Section 2: Profile of enterprise

6. Firm age
 - a. 0-3 years
 - b. 3-6 years
 - c. 6-9 years
 - d. More than 9 years
7. Business location
8. Industry
 - a. Manufacturing
 - b. Services
9. Forms of business
 - a. Sole proprietorship
 - b. Partnership
 - c. Corporation
10. Nature of enterprise
 - a. Small

- b. Medium
11. Model of enterprise
 - a. Online
 - b. Offline
 - c. Both
 12. Number of employees

Section 3: Entrepreneurship competencies

13. Indicate your level of agreement or disagreement for the following statements of entrepreneurship competencies (5-Strongly agree to 1-Strongly disagree)

Particulars	5	4	3	2	1
I seek opportunities for my business from relevant information					
I improve my products or services based on consumer needs					
I execute strategies that promote my products or services					
I have a good cordial relationship with others(customers, suppliers and employees)					
I am able to give specific directions to efficiently deliver the necessary services to customers and clients.					
I develop strategies in consultation with others to make things happen the way I perceived it to be.					
Understand that access to external resources helps to achieve my venture's goals.					
I build professional relationships					
I generate, evaluate, and implement solutions to difficult problems					
I resolve issues that arise from unavoidable situations.					
I assume responsibilities for the actions and decisions I made.					
I plan and prioritize work to ensure time is managed effectively.					
I work methodologically and effectively allocate time and resources.					
I conceptualize the foundation of my business plan.					
I set the targets of my business to formulate a budget plan.					
I anticipate future problems that may arise in the business venture.					
I assess risk, estimate costs, and determine the potential for profit and loss before executing business actions.					

I have a competitive advantage as a business owner because I have the skills needed to sustain my venture

I am not easily rattled by problems and uncertainties with regard to my business.

I trust my capabilities and resources to develop new things for my business venture

I create and maintain business records through efficient computer file management.

I manage the funds and assets of my business enterprise

I know how to assess the financing needs of my business enterprise.

Section 4: Entrepreneurship education

14. Indicate your level of agreement or disagreement for the following statements of entrepreneurship education (5-Strongly agree to 1-Strongly disagree)

Particulars	5	4	3	2	1
EE increased my understanding of the attitudes, values and motivations					
EE increased my understanding of the actions someone has to take in order to start a business					
EE enhanced my practical management skills in order to start a business					
EE enhanced my ability to develop network					
EE enhanced my ability to identify an opportunity					
There is a favourable climate and premises for becoming an entrepreneur at my University					
At my University I found many entrepreneurial-minded classmates					

Section 4: Entrepreneurial intention

15. Indicate your level of agreement or disagreement for the following statements of entrepreneurial intention (5-Strongly agree to 1-Strongly disagree)

Particulars	5	4	3	2	1
One of my career aspirations is to establish myself as an entrepreneur					
I am fully committed to exerting all necessary efforts towards launching and managing my own enterprise or co-founded venture with utmost professionalism.					

My future professional plans entail establishing an enterprise of my own or in partnership with others.

My career objective is to secure employment with an established organization, as opposed to pursuing self-employment.

My resolute ambition is to establish an enterprise of my own, or in collaboration with others, in the imminent future.

I have given considerable contemplation to the prospect of initiating an enterprise.

Section 5: Firm performance

16. Indicate your level of agreement or disagreement for the following statements of financial performance (5-Strongly agree to 1-Strongly disagree)

Particulars	5	4	3	2	1
Our organization uses the full skills and abilities of its workers					
Our organization offers good developmental opportunities					
Our organization is forward-looking					
Our organization deals with improving work performances					
Our organization is successful					
Our organization successfully withstands competition in the future					

Resümee

Ettevõtlusesise ettevõtte toimimise eellugu

AHMAD TUFAIL & ZAKIR ALI

Selles magistritöös uuriti Indoneesia sajandivahetusel sündinud ettevõtjate vahelist seost ettevõtlusalaste pädevuste, ettevõtliku intelligentsuse, ettevõtlushariduse ja ettevõtte tegevuse vahel. Uuringus leiti, et ettevõtlusõppel on otsene mõju ettevõtte tulemustele, kusjuures ettevõtluspädevused on seda suhet vahendavad. Uuring toob esile pideva õppimise ja formaalse hariduse kaudu uute oskuste omandamise tähtsust sajandivahetusel sündinud ettevõtjate jaoks oma pädevuste tõstmiseks. Seda tehes saavad nad parandada ettevõtte tulemuslikkust ja tagada pikaajalise jätkusuutlikkuse konkurentsivõimelisel digitaalsel maastikul.

Sajandivahetusel sündinud ettevõtjad on eesmärgile orienteeritud, pühendunud inimesed, loovad ja optimistlikud. Edu alusteks on julgus ja sisemine kontroll. Nad ei karda uusi ettevõtmisi (Basuki et al., 2021). Sajandivahetuse ettevõtjatele on iseloomulikud töö- ja eraelu tasakaalu väärtustamine, head hüvitised, motiveeriv töötasu, sotsiaalne vastutustunne, mõtestatud ja täisväärtuslik karjäär (Liu et al., 2019). Aastatuhandete ettevõtjate põhikompetentsus on valvelolekus, veebipõhistes digiplatvormides, eelteadmistes, tunnetuses ja sobivates isiksuseomadused (Hami, 2020).

Ettevõtluspädevus on ettevõtte edukuse võti (Foster, 2018). Neid pädevusi mõjutavad erinevad kompetentsid, milleks võib olla suhtepädevus, võimalus, strateegiline ja isiklik tugevus. Vastupidiselt sellele mõjutasid juhtimis- ja innovatsioonipädevused Indoneesia ettevõtluspädevusi (Prakasa, 2021). Ettevõtluspädevusi käsitlevas kirjanduses on esile tõstetud mitmeid Indoneesias tehtud uuringuid (Foster, 2018; Prakasa, 2021; Sumawidjaja et al., 2019; Wirda jt, 2019).

Uuringu eesmärk on teada saada, kuidas ettevõtluspädevused ja ettevõtlusõppe ettevõtte tulemuslikkust mõjutavad. Uuringu on läbi viidud sajandivahetusel sündinud ettevõtjate vahel Banjarmasini linnast ja Kota Yogyakarta. Linnad osutusid valituks suure hulga pühendunud ettevõtjate tõttu (Basuki et al., 2021). Valimiteks on sajandivahetusel sündinud ettevõtjad, kelle vanusekategooria on 18-35 aastat. Uuring viidi läbi detsembrist 2022 kuni veebruarini 2023.

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Uuringu eesmärk oli välja selgitada ettevõtluspädevuste, EI, ettevõtlusõppe ja ettevõtte tulemuslikkuse omavahelised seosed. Nagu vahendusanalüüsist täheldati, toimus EE ja FP vahelise suhte täielik vahendamine EC kaudu. Sarnastest leidudest teatasid ka Kanaan jt. (2022; Kanaan-Jebna jt, 2022). Kuigi sarnasustest on teatatud, ei ole neid uuringuid sajandivahetusel sündinud ettevõtjatega seoses varem kirjeldatud. Lõpuks toimus EE ja FP vahelise suhte osaline vahendamine EI kaudu.

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18/05/2023