

Women Entrepreneurs: A Study of Indonesian Female Evidence and Perception for Becoming Entrepreneurs

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This study delineates the picture of the nature of women entrepreneurs in Indonesia. This study is important for policy makers and scholars because it offers classical and contemporary evidence of women entrepreneurs which contributes significantly to the success of Small and Medium-sized Enterprises (SMEs) in Indonesia. This research sheds light on the issues of women's entrepreneurial activities and perceptions: their willingness to take the risk of entrepreneur, participation in enhancing local economy, self-efficacy, perceived opportunity, role model and fear of failure. Besides providing interesting facts about the perspectives of women entrepreneurs, this study also helps us to gain insight into the potential of women entrepreneurs in Indonesia. The dataset from Global Entrepreneurship Monitoring (GEM) Indonesia has been employed to outline a number of societal issues. Data were collected from 5,620 respondents from each province and also from rural and urban areas in Indonesia. To give a better view of women's entrepreneurial circumstances, the data were explored using the descriptive analysis method equipped with pictures and facts. The results of the study will allow policy makers to understand how the Indonesian women entrepreneurs are functioning. Policy makers at the national and local levels are suggested to notice the situation of women entrepreneurs by making an injunction related to empowering women in small and medium-sized enterprises.

Keywords: women entrepreneurs, small and medium-sized enterprises, global entrepreneurship monitor, risk, local economy.

Przedsiębiorczynie. Badanie danych dotyczących przedsiębiorczości i sposobów jej postrzegania przez kobiety w Indonezji

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W artykule przedstawiono charakterystykę przedsiębiorczyń w Indonezji. Opracowanie ma istotne znaczenie dla decydentów i badaczy, ponieważ prezentuje klasyczne i współczesne dane dotyczące przedsiębiorczyń, które w istotnym stopniu przyczyniają się do sukcesu małych i średnich przedsiębiorstw w Indonezji. Badanie naświetla kwestie związane z działalnością przedsiębiorczą kobiet i ich poglądami

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na: chęć podejmowania ryzyka przedsiębiorczego, udział w rozwoju gospodarki lokalnej, poczucie własnej skuteczności, postrzeganie możliwości, wzory do naśladowania oraz strach przed porażką. Opracowanie, oprócz przedstawienia interesujących faktów dotyczących perspektyw przedsiębiorczyń, pozwala również na przybliżenie ich potencjału w Indonezji. Do ukazania szeregu zagadnień społecznych wykorzystano zestaw danych z badania przedsiębiorczości Global Entrepreneurship Monitor w Indonezji. Dane pozyskano od 5620 respondentów pochodzących z poszczególnych prowincji, a także z indonezyjskich obszarów wiejskich i miejskich. W celu uzyskania lepszego obrazu sytuacji kobiet pod względem przedsiębiorczości analizy danych dokonano za pomocą metody analizy opisowej z wykorzystaniem wykresów i faktów. Wyniki badania umożliwią decydentom zrozumienie, w jaki sposób funkcjonują indonezyjskie przedsiębiorczynie. Decydenci na szczeblu krajowym i lokalnym powinni zwrócić uwagę na sytuację przedsiębiorczyń, czemu powinni dać wyraz poprzez przyjęcie regulacji dotyczących wzmocnienia pozycji kobiet w małych i średnich przedsiębiorstwach.

Słowa kluczowe: przedsiębiorczynie, małe i średnie przedsiębiorstwa, Global Entrepreneurship Monitor, ryzyko, gospodarka lokalna.

JEL: L26

1. Introduction

Small and Medium-sized Enterprises (SMEs) have been growing rapidly in the global economy and the number of SMEs is predicted to grow continuously. Entrepreneurship and SMEs have been acknowledged as a driving force of developed and emerging countries. For Indonesia, the SMEs are an important source of economic development, job creation and poverty alleviation (Gunawan, Wahdan, van den Herik, Kornarius and Van de Walle, 2012). The role of SMEs in Indonesia is very significant because more than 90% of business units in Indonesia are SMEs. The SMEs in Indonesia also contribute 93% of the employment from the total labour force in Indonesia (Cooperative and SMEs Department, 2016). The importance of SMEs role in Indonesia is also highlighted in Table 1.

Firm classification	2010		2011		2012		2013	
	Unit	Employ	Unit	Employ	Unit	Employ	Unit	Employ
Small	99.91	94.56	99.91	94.52	90.00	94.22	90.00	93.63
Medium	0.08	2.71	0.08	2.72	0.09	2.94	0.09	3.36
Large	0.01	2.73	0.01	2.76	0.01	2.84	0.01	3.01

Tab. 1. The percentages of employment and SME business units in Indonesia among all enterprises. Source: Depkop. (2016). Retrieved from: <http://www.depkop.go.id/berita-informasi/data-informasi/data-umkm>.

Interestingly, the emergence and growth of women entrepreneurs are acknowledged as a global inclination to bolster economies (see Fig. 1). The participation of women in economy and society contributes to economic

growth and prosperity. The study on women's entrepreneurship is directly connected to Millennium Development Goals – to reduce poverty, to promote gender equality and the empowerment of women. Indonesian SMEs are found to be relatively stronger in facing the economic crisis. Many of these Indonesian SMEs are owned by women. Women's participation in the entrepreneurship around the world has a significant impact on job creation and innovation; if women are not actively engaged as entrepreneurs, job creation of almost half the world population will be lost (Kelley, Brush, Greene and Litovsky, 2013).

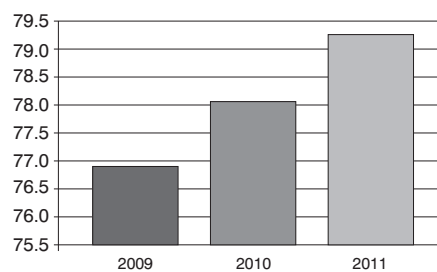


Fig. 1. The population of Indonesian females of productive age (14–65) (in millions). Source: created based on <http://data.worldbank.org/indicator>.

It is estimated that women entrepreneurs operate approximately one third of firms in the formal sector. The huge number of women in Indonesia becomes a very potential source of entrepreneurs that may lead to greater contribution to the Indonesian economy. This phenomenon is relatively similar around the world, the data showed that there are about 30% of women entrepreneurs in Indonesia, 32% in Korea, 34 % in the Philippines, 38% in the United States (APEC, 1999). Different countries may have different levels of women entrepreneurs' involvement, owing to the impact of their different cultures.

Women entrepreneurs contribute significantly to the success of SMEs in Indonesia. However, even before becoming an entrepreneur, women face abundant challenges in some areas, such as culture resistance to accepting them as taking an active role in business. They also face other challenges when starting up a business. Moreover, the scarce availability of reliable and valid data is one of the challenges to understanding women entrepreneurship (Ramadani, 2015). Thus, the exploration of women entrepreneurship is encouraged.

A comprehensive study about attitudes, activities, and aspirations of women entrepreneurs compared to male entrepreneurs in Indonesia will lead to a better understanding of the role of women. We analyse Indonesian

women entrepreneurs by using the GEM dataset that allows us to relate a number of personal characteristics to the success of entrepreneurs: their age, gender, education, perception on self-efficacy, risk of failure, etc. Since the role and potential of women as entrepreneurs are very significant, in this study we want to explore their characteristics, perception and motivation for being an entrepreneur. The Indonesian policy maker should make policy based on this information. Thus, the research question we raise in this study is: *What are the differences in entrepreneurial personal characteristics between Indonesian women entrepreneur groups based on the age category?*

This research will shed light on the issues female entrepreneurs face and provide a basis for policy recommendations through understanding the attitude of women entrepreneurs. We will suggest policies at the national and local levels to improve the situation of these women entrepreneurs. The results of the study provide interesting facts about women entrepreneurs and possible implications for policy.

2. Theoretical Review

For the past two decades, women-owned businesses have grown rapidly. The rate of growth has increased from 24% to 42%. Approximately, one third of the businesses in advanced economies are owned and managed by women (Jalbert, 2000). Certainly, supporting women entrepreneurs will empower women, family, and wider community. In many developed countries, women entrepreneurs get more attention from the government and they have been highlighted as a target group for the specific policy because their number and contribution to economic growth and employment are significantly increasing (Van Dijk, Van der Meer and Van der Borg, 2013). Interestingly, Quisumbing and Maluccio (2003) found that an increase in women's income was in line with a rise in spending on children's education. Thus, we can say that women entrepreneurs bring more benefit to larger society and economy. Studying women entrepreneurs across different inter-related dimensions such as age, education, experience, migratory, network and professional background, and sector of activity and how they relate to firm's growth and survivability is relevant to specify the map, chance, and pattern of success for women entrepreneurs.

2.1. Women Entrepreneurship Education

Even though the majority of women entrepreneurs have formal education, compared to man, woman entrepreneurs come into business with less formal experience and less formal education (Ramadani, 2015). Predominantly, women entrepreneurship in some countries is constrained by a lack of education. The level of education of women entrepreneurs in developing countries is relatively low. The low level of educa-

tion and skills consequently causes limitations for business to survive and grow.

Interestingly, Indarti and Wulandaru (2003) find that, compared to Indonesian women entrepreneurs, career women have a slightly higher education level. This situation is also similar when their parents' education levels are compared. Mostly, women entrepreneurs' parents in Indonesia are farmers but career women's parents are entrepreneurs. Most of women entrepreneurs realize that they need to have more training and education in business management issues such as marketing, financing, human resources and technology.

Fossen and Büttner (2013) found that education plays an essential and decisive role in seizing opportunities, understanding new knowledge and solving problems that arise in business management. With education and training, women entrepreneurs raise their level of business skills, confidence, and perception about themselves. Women self-perceptions, in many societies, are the key factor for fighting the tide of cultural and un-entrepreneurial attitudes. This may also inspire other women to overcome their challenges in order to become entrepreneurs.

2.2. Women Entrepreneurs' Motivation

The motivations of women to be entrepreneurs are varied (Kelley et al., 2013). Generally, there is no substantial difference between men's motivation and women's motivation to start their business (Walker and Brown, 2004). Block, Sandner and Spiegel (2015) and Walker and Brown (2004) classified motivation as financial (income and wealth creation) and non-financial motives (being one's own boss and having free time, personal values, and objectives). Another classification of entrepreneurial motivation are push and pull motives. Pull motives are related to a strong desire to be self-employed, positive environment, independence, and flexibility. Push motives are connected with losing a job, limited work opportunities, negative environment, and a lack of independence. Ramadani (2015) finds that the common motivations of woman entrepreneurs are independence, flexibility, success, opportunities, status, free time, image, money, and power. However, the most frequently mentioned motives of women entrepreneurs are combining family and business life and the inability to get a job.

For women from developing countries such as Indonesia, economic reasons are the predominant factors in entrepreneurship. Regarding economic reasons, women need to have cash income to support their family needs, for emergency needs, and for possible situations when their husbands are laid off. In Indonesia, supporting family needs is the most common reason for women to enter the business sector. Thus, when women face greater economic pressure, they are more likely to work and open their

own business (Firdausy, 1999). Females from developed countries are motivated by the desire to test out a winning idea and to control their own destiny.

2.3. Promoting Policy and Enabling Environment for Women Entrepreneurs

Women face many challenges to starting their businesses. Most of their challenges concern access to capital, access to information and access to support networks (APEC, 1999). Promoting a specific policy that supports women entrepreneurs in line with their environment is important. Despite their contribution to job creation, innovation, and economic development, women entrepreneurs over the world have a broad array of environment, profiles, challenges, and motivations.

Therefore, women entrepreneurs are expected to devote more time and attention to their families and this often restricts them in expanding their business. Women entrepreneurs are required to be able to maintain their role in business and do households chores. It is difficult for women from developing countries to overcome the male-oriented business culture and the domination of men's business networks.

Women entrepreneurs in emerging countries are also experiencing discriminatory policies and unequal access to resources. Differently, women entrepreneurs in developed countries generally do not suffer from discrimination regarding the opportunities and resources needed to start and develop businesses (Kelley et al., 2013). The results across the region and country show that both attitudes and entrepreneurship rates differ for women over the world and it is obvious that environmental conditions and constrains weigh differently. It perhaps brings about the necessity of targeted policy alignment with business environment. However, the potential of women entrepreneurs in Indonesia has not been optimized and fully recognized by the government and society. This can be seen in the lack of policies and programmes to assist women and even women are still viewed as a second class group in their society.

3. Research Methods

The Global Entrepreneurship Monitoring (GEM) dataset is used. The recent dataset of GEM is not yet published for the public. The recent Indonesia GEM dataset is owned by the Parahyangan Catholic University as the representative of the GEM in Indonesia. The GEM conducts yearly surveys, using the GEM Conceptual Model (see Fig. 2). The model identifies key elements of the relationships between entrepreneurship and economic growth and the way in which these elements interact (Amoros and Bosma, 2014). Based on that model, there are three main components

of the nature of entrepreneurship: entrepreneurial attitude, entrepreneurial activity, and entrepreneurial aspirations.

The Indonesia GEM dataset is collected through the Adult Population Survey (APS). The sample includes 5,620 males and females aged between 18 and 64 years from 23 provinces in Indonesia. The sampling design follows each of these stages:

1. The country is divided into 34 provinces.
2. Each province is then divided into regions (urban and rural) at the city level.
3. Each stratum at the city level is then divided into district levels. The strata (urban/rural) at the sub-district level will be randomly selected by the team.
4. Each district is then divided into RTs (Rukun Tetangga), which are the smallest community groups. The team randomly selects the sample.
5. The final stage is the selection of an appropriate respondent within each household at the RT level.

The majority of respondents are located in the western part of Indonesia, which has the largest population in this country (Fig. 3).

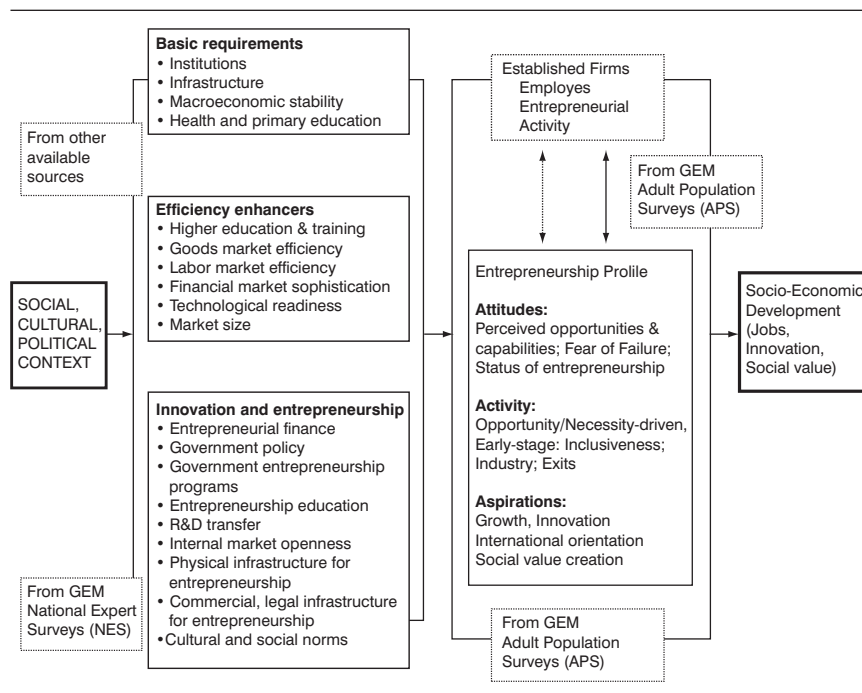


Fig. 2. GEM conceptual model. Source: J.E. Amoros and N. Bosma. (2014). *Global Entrepreneurship Monitor 2013 Global Report*. Global Entrepreneurship Research Association (GERA).

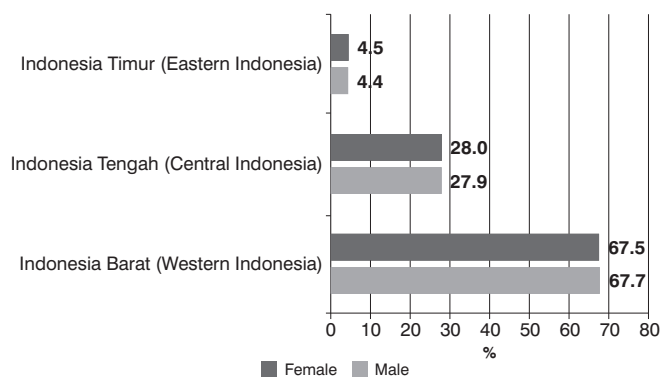


Fig. 3. Area of residence of respondents (in %). Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

Table 2 shows the sample size of each province, also for rural and urban areas.

Province	Survey area	Sample size	Province	Survey area	Sample size	
DI Aceh	Banda Aceh	100	Jawa Timur	Surabaya	200	
	Kabupaten Aceh Besar	50		Malang	100	
Sumatera Utara	Medan	200		Kabupaten Malang	30	
	Kabupaten Deli Serdang	90		Kabupaten Gresik	30	
Sumatera Barat	Padang	150		Kabupaten Sidoarjo	30	
	Kabupaten Padang Pariaman	30		Kabupaten Mojokerto	30	
	Kabupaten Pesisir Selatan	30		Bali	Denpasar	150
	Kabupaten Solok	30			Kabupaten Badung	50
Riau	Pekanbaru	200	Kabupaten Gianyar		50	
	Kabupaten Kampar	30	NTB	Mataram	100	
	Kabupaten Siak	30		Kabupaten Lombok Barat	90	
Sumatera Selatan	Palembang	200	NTT	Kupang	100	
	Kabupaten Banyuasin	30		Kabupaten Kupang	90	
	Kabupaten Ogan Ilir	30	Kalimantan Barat	Pontianak	150	
	Kabupaten Ogan Komering Ilir	30		Kabupaten Pontianak	90	

Tab. 1 cont.

Province	Survey area	Sample size	Province	Survey area	Sample size
Lampung	Bandar Lampung	150	Sulawesi Selatan	Makassar	150
	Kabupaten Lampung Selatan	50		Kabupaten Gowa	30
Banten	Serang	150		Kabupaten Maros	30
	Kota Tangerang	50		Kabupaten Takalar	30
	Kota Tangerang Selatan	50	Kalimantan Timur	Samarinda	150
	Kabupaten Serang	90		Kutai Timur	50
DKI Jakarta	Jakarta	300	Kalimantan Selatan	Banjarmasin	150
Jawa Barat	Kota Depok	50		Kab. Banjar	50
	Kota Bekasi	50	Sulawesi Utara	Manado	100
	Kota Bogor	50		Kab. Minahasa	50
	Bandung	200	Sulawesi Tengah	Palu	100
	Kabupaten Bandung	50		Kab. Donggala	50
	Kabupaten Bogor	50	Maluku	Ambon	100
	Cimahi	100		Kab. Maluku Tengah	50
Jawa Tengah	Semarang dan Surakarta	300	Papua	Jayapura	100
	Kabupaten Demak	30	DI Yogyakarta	Yogyakarta	100
	Kabupaten Semarang	30	TOTAL URBAN		4,050
	Kabupaten Sukoharjo	30	TOTAL RURAL		1,570
	Kabupaten Boyolali	30	TOTAL SAMPLE		5,620

Tab. 2. Sample size of Indonesia APS 2015. Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

4. Discussion

The first part of this section explains the entrepreneurial pipeline, which shows the process of someone being an active entrepreneur (see Fig. 4). There are four stages of the entrepreneurial pipeline: entrepreneurial intention (first phase), nascent entrepreneurs (second phase), new entrepreneurs (third phase), and established entrepreneurs (fourth phase).

Intention is defined as the percentage of individuals who expect to start a business within the next three years. Nascent entrepreneurs are defined

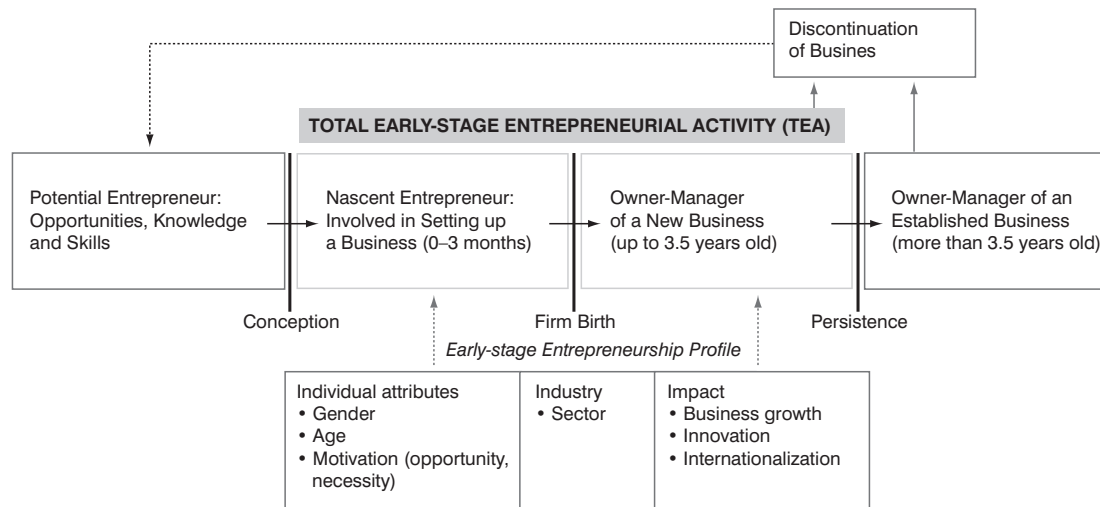


Fig. 4. Entrepreneurial pipeline. Source: S.R. Xavier, U. Guelich, P. Kew, C. Nawangpalupi, and A. Velasco. (2015). *Driving Asean Entrepreneurship: Policy Opportunities For Inclusiveness And Sustainable Entrepreneurial Growth. Asean Regional Report.*

as individuals who are actively involved in setting up a business they will own or co-own, but this business has not paid salaries, wages, or made any other payments to the owners. New entrepreneurs are defined as ones who own and manage a running business that has been paying salaries, wages, or making any other payments to the owners for more than 3 months, but less than 42 months. Finally, established entrepreneurs are defined as ones who own and manage a running business that has been paying salaries, wages, or any making other payments to the owners for more than 42 months.

The survey on people’s perception of entrepreneurial activity finds that 29% of respondents have an intention to start a new business within next three years, 6.25% are in the category of nascent entrepreneurs, 12.31% are new entrepreneurs who have been managing and running their businesses for up to 42 months, and finally 17.51% are established entrepreneurs.

Young females who are between 18 and 44 years old have a stronger intention to start a business than older women (see Fig. 5). Both women and men at young age are more interested in becoming entrepreneurs, compared to older ones. The willingness to take risks related to starting a business is greater among young people compared to the older people. At the retirement age, men are more interested in becoming entrepreneurs, compared to women.

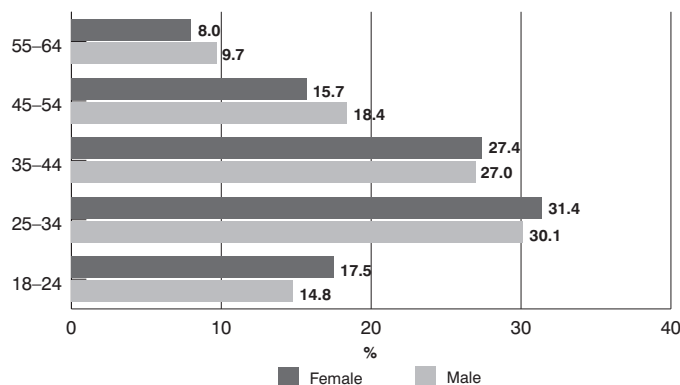


Fig. 5. Entrepreneurial intention (in %). Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

Based on the survey, males are more active in undertaking start-up efforts compared to females, except for the group of 45–54 year-olds (see Fig. 6). There is a “tradition” that in a developing country, such as Indonesia, the man is perceived as having greater responsibility for earning money for his family; therefore, when a man wants to have his own business (or become an entrepreneur), he should start at an early age before it is too late.

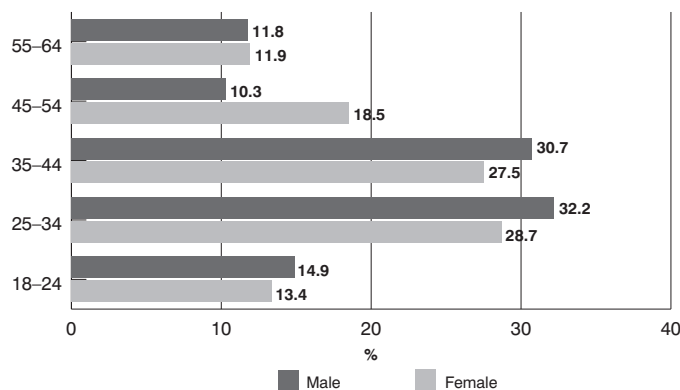


Fig. 6. Nascent entrepreneurs (in %). Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

An interesting finding is shown in Figure 7, where in the eastern part of Indonesia, males are more actively involved in the start-up effort, while the percentage of females in the category of nascent entrepreneurs in this region is low. It could be the lack of support for women in the eastern part of Indonesia to participate in the local economy as entrepreneurs.

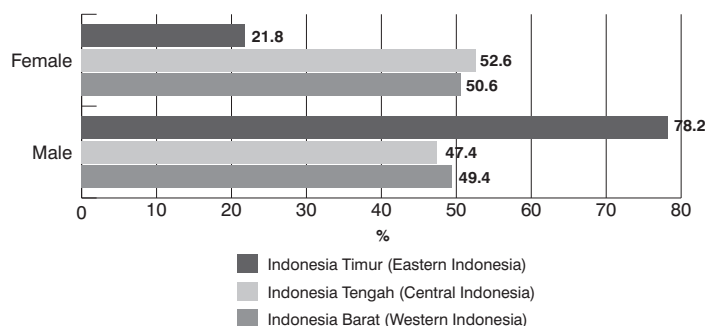


Fig. 7. Nascent entrepreneurs by region (in %). Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

The majority of new entrepreneurs, who have been running their own business for up to 42 months, are women and men at the age of between 25 and 44 years (see Fig. 8). However, the percentage of new young women entrepreneurs (18–24 years old) who have been running their business for no more than 42 months is bigger than that of young men entrepreneurs. Generally women at young ages run businesses related to their hobbies and the market for their products is also represented by people at the same ages.

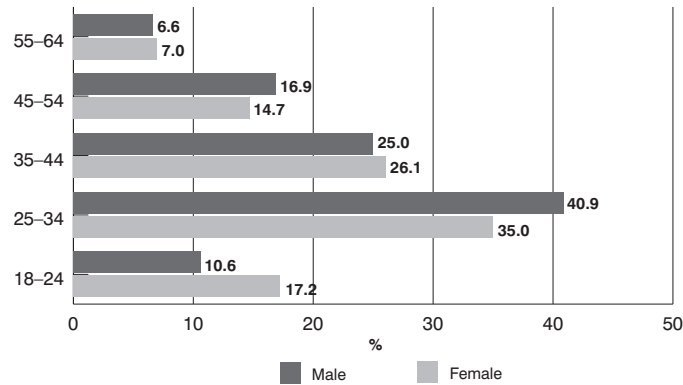


Fig. 8. New entrepreneurs (in %). Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

The survey also studied whether in the research population there were entrepreneurs who were in the category of established entrepreneurs, who manage and own their businesses that are older than 42 months (see Fig. 9). On average, in this category, women entrepreneurs are more established than men entrepreneurs at the age of 25–34 and 55–64 years. Men entrepreneurs are more established at the age of 18–24 and 45–54 years. The group of women entrepreneurs who have managed and owned their business for more than 42 months is dominated by young women at the age of 18–44 years (62.8%), while the same category of men entrepreneurs is dominated by the older generation aged 35–64 (70.6%).

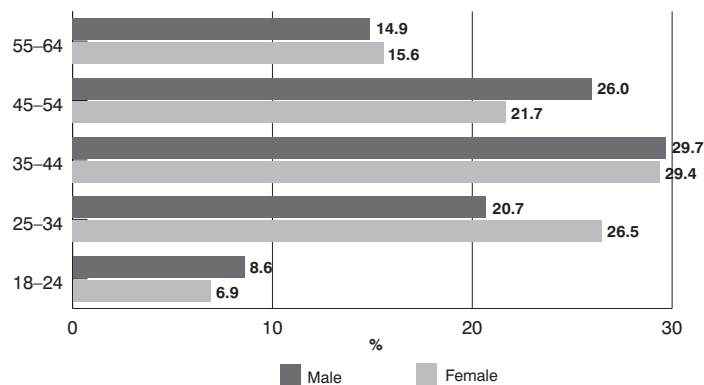


Fig. 9. Established entrepreneurs (in %). Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

4.1. Attributes of Entrepreneurial Attitudes

Based on the GEM model, the psychological factor is one of the attributes of entrepreneurial attitudes that consists of four attributes: self-efficacy or perceived capabilities, perceived opportunity, knowing entrepreneurs or a role model, and fear of failure. Self-efficacy is represented by those who believe they have required skills, knowledge and experience to start a new business. 65% of Indonesian adults between 18 and 64 years old believe that they have knowledge and skills to start business.

From those 65% and based on the age classification, those who are in the age group of 25–34 years perceived that they had higher capabilities than the other groups (see Fig. 10). Although there is no significant difference between males and females, younger females perceive that they have bigger capabilities to start business than males, but for those who are in the age group of 45–54, more males believe that they have more capabilities than females.

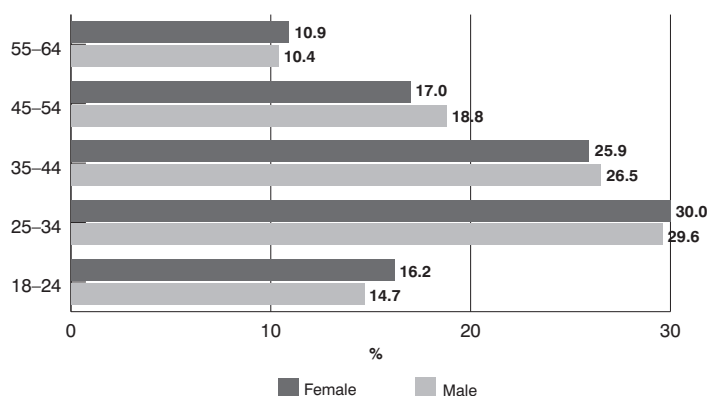


Fig. 10. Self-efficacy of Indonesian females and males (in %). Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

The second attribute of the psychological factor is the role model, which is represented by the percentage of adult Indonesians between 18 and 64 years old who know someone who have become an entrepreneur within the last 2 years. 68.3% of males and females know their role model, with 52.21% of males and 47.79% of females knowing entrepreneurs.

Based on the age classification shown in Figure 11, the age group of 25–34 years records the highest percentage of knowing their role model, followed by the group of 35–44 year-olds. The survey shows similar trends for males and females.

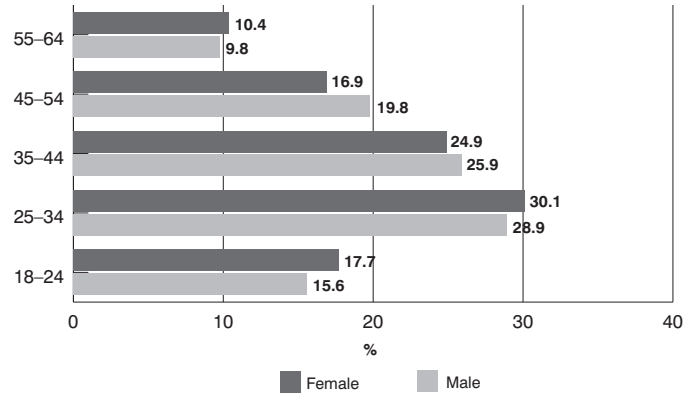


Fig. 11. Role model among Indonesian males and females (in %). Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

The ability to find opportunities is important for someone to become an entrepreneur. Perceived opportunities are measured by the percentage of adults between 18 and 64 years old who see good opportunities to start a business in the area where they live. Based on the survey, the ability of Indonesians to see good opportunities to become an entrepreneur is quite high (43.90%), with a similar percentage among males (32.45%) and females (31.70).

Younger females (18–24 years old) perceive the opportunity better than males in the same age group. Those who are between 25 and 34 years old

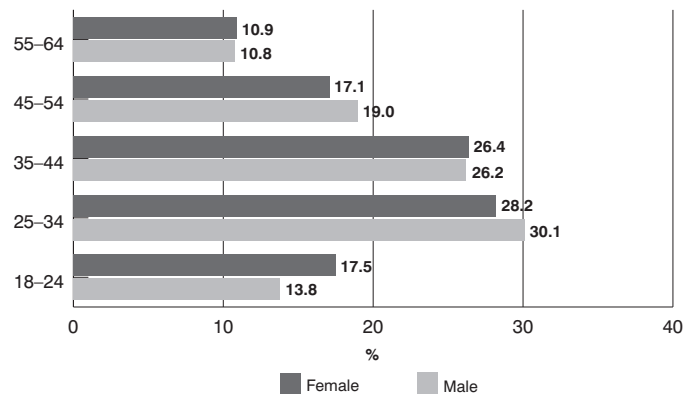


Fig. 12. Perceived opportunities among Indonesian males and females (in %). Source: GEM Survey. (2015). Global Entrepreneurship Monitor of Indonesia Project. Bandung: Parahyangan Catholic University.

represent the highest percentage of women who are able to see opportunities, but males score higher than females. The older group (45–64 years old) shows that when people get older, they do not see opportunities as often as when they were young.

The last attribute of the psychological factor is fear of failure. 52.44% of Indonesian adults between 18 and 64 years old fear failure, with the percentage of females (39.55%) being higher than that of males (37.08%). There is no significant difference between males and females as regards fear of failure (Fig. 13). Younger people are more afraid of failure than older ones.

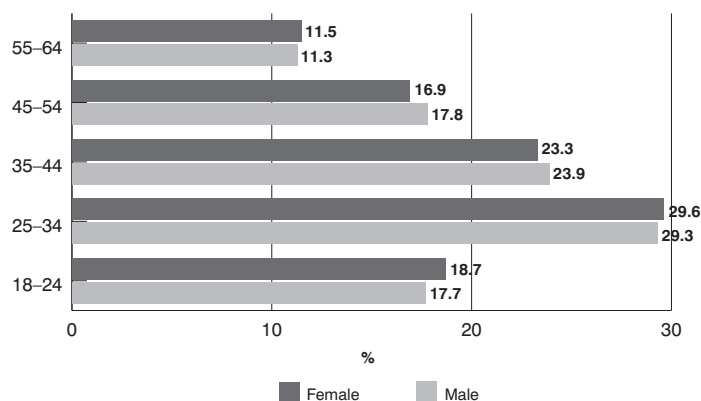


Fig. 13. Fear of failure among Indonesian males and females (in %). Source: GEM Survey. (2015). *Global Entrepreneurship Monitor of Indonesia Project*. Bandung: Parahyangan Catholic University.

5. Conclusion

Based on the APS survey analysed in this study, the ability of Indonesians to see good opportunities to become an entrepreneur is quite high (43.90%). This study is about the entrepreneurial personal characteristics of women entrepreneurs in Indonesia, with a special emphasis on their willingness to take risks, self-efficacy, perceived opportunities, role model, and fear of failure.

We found females of productive ages have a stronger intention to start a business than older ones. In line with that result, younger females with higher self-efficacy believe that having required skills, knowledge and experience will increase their readiness to start a new business.

In Indonesia, economic reasons are among predominant factors for women to get involved in businesses. Supporting their family needs, emergency needs and anticipation of a decline in family income are the most

common reasons for women to start their business. In Indonesia, younger females are also perceived as having greater capabilities of starting business than young males but older males believe that they have more business capabilities than women. Furthermore, males' ability to see good opportunities to become an entrepreneur is higher than among females but there is no significant difference between males and females as regards fear of failure. However, older groups do not see the opportunity as often as young ones.

The percentage of females in East Indonesia is low. It could be the lack of support for women in the eastern part of Indonesia to participate in the local economy as entrepreneurs. Different cultures and levels of infrastructure development between western and eastern Indonesia are also a major factor.

We also found that most of males and females have their own role models, implying that a role model is an important figure to inspire entrepreneurs to reach their goals. The examples of successful entrepreneurs have generally triggered people to follow their ways.

After analysing the GEM data, there are two groups that should be supported by policy makers differently. The first group is females aged 18–44 years. The second group is females between 45 and 54 years old.

The first group, females aged 18–44 years, has a stronger intention to start a business than older women. Younger females perceive that they have more capabilities to start business (self-efficacy) than younger males.

The second group, females in the 45–54 age group, is more active in the start-up effort compared to males. Females in the age group of 45–54 perceive that they have less skills, knowledge and experience to start a new business (self-efficacy) than males. Furthermore, younger females know more role models than older ones as younger females have better education and better access to information than older women. When people get older, they do not see opportunities as frequently as when they were young. So, this group needs more support for increasing the entrepreneurial spirit.

6. Recommendations for Indonesian Policy Makers

The findings from the study have several implications for policy makers.

As regards the first group, females aged 18–44 years have a stronger intention to start a business, feel high self-efficacy, are willing to take risks, strongly perceive opportunities, have a good role model. They need financial support because investors and bankers are often reluctant to give it to them. Thus, providing a variety of financial instruments and soft regulation will assist women in running their business. Cooperation with governments, suppliers, financial institutions, NGOs, families and workers will help women entrepreneurs to cope with business constraints and upgrade the effectiveness of the value chain (Gunawan, Jacob and Duysters, 2016).

These strategic partnerships are needed to help women entrepreneurs to reduce the vulnerability of women's enterprises relating to their access to market, premises, education and training, regulatory and legal issues, credit and financial services, and information.

The second group, comprising females aged 45–54 years, needs support in improving their self-efficacy. Females in this age category did not receive good education when they were young. Since self-efficacy is needed for being courageous to become entrepreneurs, policy makers should support these women in improving their business skills, knowledge and experience. Women should get adequate knowledge and training related to their own business because higher self-efficacy will help them to be more confident to take risk and start their business. These women also need access to more successful women entrepreneurs who can become their role models. Unlike younger women, these Indonesian females usually have limited capability of using technology for accessing abundant information. Training support related to how to know more about successful women entrepreneurs by using technology is needed.

For future study, we suggest that scholars should explore the mapping of female entrepreneurs in terms of their education, gender, location, social economy class, area, education, and innovative activity. Besides that, investigating the development of women entrepreneurs' over time in the ASEAN and European countries will be an interesting and important study.

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