


## Determinants Of Women's Entrepreneurship Decisions

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Article Info	ABSTRACT
<b>Keywords:</b> Entrepreneurship, welfare, women's participation, economic sustainability, business economic	<p>This study aims to examine the specific individual characteristics influencing women's entrepreneurial decisions in Indonesia. Age, education, interest in entrepreneurship, and welfare were all factors considered to be individual characteristics. The fifth Indonesian Family Life Survey (IFLS) batch was used for this study's secondary data. Based on the required characteristics, samples were collected using the purposive sampling technique. The sample criteria that should be met in this study were women aged 14 years and over and answering the employment questionnaire. After cleaning the data, there were 15,900 female respondents. The technical data analysis used probit model regression. The findings of this study demonstrated that women's entrepreneurial decisions were significantly and positively influenced by age. Women's entrepreneurial decisions were also significantly and positively influenced by individual welfare. Individual entrepreneurial decisions, however, were not significantly influenced by education level or interest level. Further, the results of this research can provide information to the government and serve as a reference in formulating women's empowerment policies and increasing the quantity and quality of entrepreneurs in Indonesia, especially women. This research demonstrated conformity with Astner H.'s research results regarding the role of women in entrepreneurship. However, differences exist in the supporting factors for women entrepreneurs in Anthopoulou T. H.'s research results. The recommendation from this study is the need to continue to encourage the role of women in developing their potential to increase the level of welfare through entrepreneurship in Indonesia.</p>
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### INTRODUCTION

In contrast to developed countries, where women have several chances for vertical and horizontal mobility in selecting their future choices, the position of women in the family in developing country communities is different. Indonesia, a developing nation, has a diverse culture regarding how women are seen in the home and in society. In most low-income households, a woman's job includes not only taking care of home issues but also joining the workforce and looking for additional work to earn the family's income.

In rural places, women work in farming to prepare the soil and cultivate various food crops. Economic activities outside the home, such as work in the agricultural and plantation sectors, are often carried out while carrying their children so that the duties of being a mother can be carried out while working to increase income for the family. Women who reside in urban regions nevertheless face different working and environmental challenges. Most educated women in urban areas find employment in the formal economy as teachers, staff members, consultants, doctors, engineers, lawyers, contractors, directors, and other occupations that provide a respectable wage. On the other hand, women with secondary education or less typically work in the informal sector as household assistants, vegetable traders, food sellers, shopkeepers, factory workers, and others with relatively lower income levels. The burden on women is consequently increasing. Besides solving domestic problems at home, they also have to leave the house to work to find additional income (Astner, 2020).

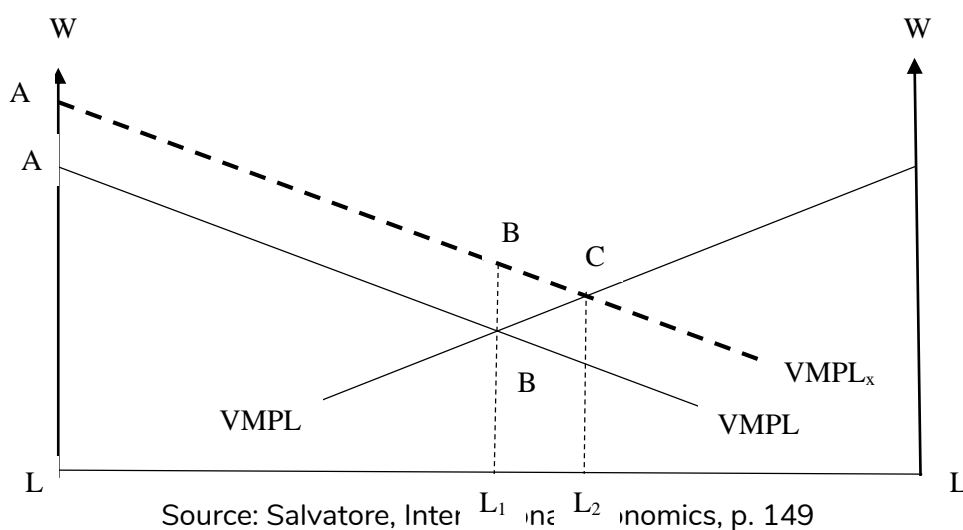
Moreover, the role of women in the family and social spheres is faced with the choice of whether to pursue a formal career in the world of work or to stay at home to act as a housewife. The two choices of women's activities are related to social, economic, cultural, and sometimes religious factors. As a developing country with the fourth largest population in the world, the Indonesian government's policies concerning social security for families are contained in the data available in IFLS-5 (Indonesian Family Life Survey). In this case, the decision of women to become entrepreneurs in developing countries, including Indonesia, is an interesting issue to study since it involves aspects of gender equity in participating in economic activities (Anderson, Johanson, Karlsson, Lodefak, & Poldah, 2018). For this reason, this study analyzes the determinants of women's entrepreneurial decisions in Indonesia by including the age variable. The dependent variable in this study was women's participation in entrepreneurship, divided into entrepreneurship or not entrepreneurship, in a sense, working and not working. Then, education, interest, and welfare were used as independent variables. Further, this research is vital for formulating policies to increase the role of entrepreneurs in Indonesia, especially women.

The gap in the literature in this research compared to previous research is in the scope of the research object, i.e., in Indonesia with the socio-economic background characteristics of entrepreneurial women, which vary significantly, both in number and type of activity. For this reason, this research aims to analyze more deeply the determinants influencing the decisions of women entrepreneurs in Indonesia. The theoretical framework developed in this study is a theory about the role of labor production factors in contributing to the economy, which is influenced by the number of workers and labor productivity. The relevance of this research in developing studies on women entrepreneurs will provide a deeper perspective on the determinants of women entrepreneurs in Indonesia, one of the largest developing countries in the world. This study's research method used a survey involving 15,900 female entrepreneurs aged 14 and over in the Indonesia Family Life Survey (IFLS). The IFLS survey results were then analyzed employing multiple linear regression to determine the magnitude of the correlation among the determinants affecting women entrepreneurs in Indonesia. In the final part of this research, conclusions and recommendations were formulated regarding

the determinants of women entrepreneurs in Indonesia, along with research limitations and further perspectives for future research on women entrepreneurs.

Struktur materi dalam artikel ini diawali dengan pendahuluan kemudian dilanjutkan dengan kerangka teoritis untuk mendukung landasan teori dari temuan empiris pada penelitian ini. Bagian berikutnya adalah metodologi penelitian serta dilanjutkan dengan analisis hasil dan pembahasan serta ditutup dengan kesimpulan. Bagian akhir dari artikel ini adalah referensi untuk mengungkapkan artikel yang mendukung konsistensi hasil penelitian ini dengan penelitian sebelumnya.

The choice of women to become entrepreneurs contains two interrelated aspects: economic and psychological. In the economic aspect, it is part of women's efforts to contribute to increasing family income to meet their needs and achieve prosperity. Meanwhile, psychologically, women's choice of entrepreneurship is to achieve subjective well-being, a cognitive and affective evaluation of one's happiness about one's life (Danes & Olson, 2003). In addition, the choice of women to become entrepreneurs is not only motivated by economic motives but also involves aspects of self-esteem and self-actualization. Theoretically, the choice of women entrepreneurs and their contribution to the economy can be explained through the following curve illustration:



Source: Salvatore, *Intermediate Economics*, p. 149

**Figure 1.** Curve depicting the choice of women entrepreneurs and their contribution to the economy

The curve above illustrates how the workforce transitions from one economic sector to another, which assumes that there are two economic sectors: commodity X and commodity Y. The horizontal axis  $LL'$  describes the total number of female residents in a country, and the vertical axis describes the number of wages ( $W$ ). The number of workers working in sector X from left to right is from  $L$  to  $L_1$ , so the number of workers in sector Y from right to left is from  $L'$  to  $L_1$ . Then, the magnitude of labor productivity in sector X is illustrated by the  $VMPL_X$  (value marginal product of labor for X) curve, which has a negative slope following the phenomenon of the law of diminishing marginal product (Brown & Brooks, 1991). Meanwhile,

labor productivity in sector Y is illustrated by the VMPLY curve, which has a negative slope following the phenomenon of the law of diminishing marginal product. In addition, the increase in demand for commodity X is marked by an upward shift in the VMPLX curve, which will increase the demand for labor to produce commodity X. Thus, there is labor migration from producing Y to X, namely from  $L_2$  to  $L_1$ , so that the total workforce working in sector X is as many as from  $L$  to  $L_2$ , and the number of workers working in commodity sector Y is as many as from  $L'$  to  $L_2$ . The total output produced by labor in commodity X before an increase in demand is  $LABL_1$ , and the total output of labor in commodity X after an increase in demand is  $LACL_2$ , so there was an increase in output of  $ABL_1L_2CA'$ . In other words, women's choice of entrepreneurship is driven by the immense potential contribution that can be made to obtain additional output.

The literature review on women entrepreneurs has concerned the aspect of happiness as the goal of every activity carried out by a worker, in addition to the financial aspect. The trend of the number of working women in developed and developing countries continues to increase; aside from fulfilling the family's economic needs, it is also a means for self-actualization according to the potential one has (Cater, J. J., & Young, M., 2019). Nonetheless, there are obstacles faced by working women, especially in developing countries, where not all families can accept a woman's decision to work outside the home for reasons of traditional values and other domestic reasons, i.e., to take care of the household (Danes, S.M., & Olson, P.D., 2003). Gender discrimination in the workplace often determines women's decisions to work because women are still deemed complementary to male workers (Fletcher, D., Massis, A. D., & Nordqvist, M., 2016). Apart from that, the age variable is a determining factor in a woman's decision to work as it is related to her role as an agent who plays a role in carrying out reproductive functions (Ghouse, S., McElwee, G., Meaton, J., & Durrah, O., 2017). The choice of type of work for working women is also an essential factor in their decision to become entrepreneurs. Some types of work are prioritized for men due to physical and psychological considerations, such as mining workers, train drivers, truck drivers, and others (Udin, U, 2022).

## METHODS

Research data on the determinants of women's entrepreneurial decisions were taken from the IFLS-5 (Indonesia Family Life Survey). The IFLS-5 data is longitudinal and taken from Indonesian individuals and families, including data on the economy, education, health, migration, and other socio-economic data (Baltagi, 2005; Barrow, 2001). Data samples were taken using a purposive sampling technique. Respondent criteria were women aged 14 years and over. Meanwhile, the independent variables in this study included age, education, interest in entrepreneurship, and individual welfare. The number of samples from the IFLS-5 data that answered the employment questionnaire was 34,016. Then, the selection was carried out by taking only female respondents. Thus, the number of samples obtained from the IFLS-5 data that met the criteria of this study and provided complete information was 15,900 female respondents. From that number, 87 female respondents were entrepreneurs, or 0.55%. Meanwhile, the remaining 99.45%, or 15,813 female respondents, were not entrepreneurs

(Dashper, 2019). Alternatif metodologi penelitian yang dapat diterapkan pada penelitian dengan data longitudinal dengan cakupan jumlah responden yang besar yaitu dengan menggunakan metode analisis data panel sehingga dapat menganalisis pengaruh variabel independent terhadap variabel dependen pada kurun waktu tertentu.

Research on the determinants of women's entrepreneurial decisions in Indonesia used the probit regression model to determine the functional relationship between several independent variables and the dependent variable, where the dependent variable is dichotomous qualitative data with a value of 0 or 1. The probit regression equation model (Gujarati, 1995) of research on the determinants of women's entrepreneurial decisions in Indonesia is as follows:

$$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_{4it} + e_i$$

Where:

Y = Decisions of Women Entrepreneurs (1 = Entrepreneur, 0 = Not Entrepreneur)

X<sub>1</sub> = Age

X<sub>2</sub> = Education

X<sub>3</sub> = Interest

X<sub>4</sub> = Welfare

e<sub>i</sub> = Error terms

At the research stage, a t-test was carried out to analyze the significance of the independent variables individually for the dependent variable. If the probability value  $\alpha < 0.05$ , the independent variable significantly affected women's entrepreneurial decisions. Conversely, if the probability value  $\alpha > 0.05$ , the independent variable has no significant effect on women's entrepreneurial decisions. The following details the questions used to obtain relevant data in this study:

**Table 1.** Employment Category

Work Category	Classification
Not-paid family workers	Not entrepreneur
Entrepreneur	Entrepreneur
Entrepreneur with help/other household members/non-permanent employees	Entrepreneur
Entrepreneur with permanent employees	Entrepreneur
Government workers/employees	Not entrepreneur
Private workers/employees	Not entrepreneur
Freelance in agriculture	Not entrepreneur
Freelance in non-agriculture	Not entrepreneur

Source: Indonesia Family Life Survey (IFLS), processed data

Research on the determinants of women's entrepreneurial decisions in Indonesia is a quantitative study to determine the functional relationship between the independent and dependent variables. This study also describes descriptively the characteristics of the population in Indonesia from socio-economic aspects, namely gender, age, education, and welfare.

## RESULTS AND DISCUSSION

This study aims to analyze the determinants influencing Indonesian women's decisions in entrepreneurship. The following is descriptive statistical data for research respondents with a total of 15,900 people, which relate to aspects of entrepreneurship, age, education, interests, and welfare.

**Table 2.** Description of Respondents

Variable	Mean	Std. Dev	Min	Max
Womenpreneur	.0054717	.0737706	0	1
Age	35.90629	14.01162	14	101
Education	9.716352	2.145572	0	18
Interest	.0658491	.2480259	0	1
Welfare	2.628805	.7833897	1	5

Source: Indonesia Family Life Survey (IFLS), processed data

Table 3 explains that the mean age of women in this study was 35.90629 or 36 years, with the youngest age being 14 years and the oldest being 101 years. A mean age of 36 indicates a woman's maturity in her choices. In addition, the mean length of education for women was ten years, equivalent to the third grade of junior high school. The lowest length of education was 0 years, and the highest was 18 years. Then, the mean individual respondent's welfare was 2.628805; the average respondent answered relatively prosperous, with the lowest score of 1, not prosperous, and the highest score of 5, very prosperous (Baltagi, 2005). Data on Indonesian women in 2022 is as follows:

**Table 3.** Indonesian Women Workers by Type of Work in 2022

No.	Type of Work	%
1.	Sales Force	27.55
2.	Farming, Livestock, and Garden Business	26.65
3.	Transportation Equipment Production	19.65
4.	Technical Professionals	9.8
5.	Service Business Workforce	9.22
6.	Executive Officer	6.37
7.	Leadership Power	0.65
8.	Other	0.11

Source: Statistical Yearbook of Indonesia, 2022

The data above indicate that most Indonesian female workers worked as a sales force (27.55%), followed by farming, livestock, and gardening (26.65%). Indonesian women who worked in the production of transportation equipment were 19.65%, technical professionals were 9.8%, and service business workers and implementing officials were 9.22% and 6.37%, respectively. The number of female workers who worked as leadership staff was 0.65%, and other types of work had as many as 0.11%. The data indicate that most women worked in Indonesia in the informal sector, especially in the agricultural and sales service sectors. In this case, women's entrepreneurship is a rational choice to increase the standard of living and



family income. The following table presents the descriptive statistics of the age factor influencing women's entrepreneurial decisions.

The age factor was grouped into ten age groups, with an age range of 10 years for each group, except for 101 years. In addition, the proportion of women and non-women entrepreneurs varied in each age group. The highest number of female entrepreneurs was found in the age range of 61–70 years, with 25 women. Meanwhile, most women who chose not to become entrepreneurs were 31–40. It demonstrates that entrepreneurship is an economic activity that can be carried out by anyone from any age range to old age. It aligns with Parker's (2004) findings in his research, which found that older people have the potential to become entrepreneurs. It is because they have accumulated capital to set up their business, are believed to have more experience, and have the time to build a better network of relationships, indicating entrepreneurial opportunities. Each stick in the graph is a percentage of each independent dummy variable the respondent selects. For example, at the age of 21–30 years, 1 out of a total of 87 female respondents chose entrepreneurship (Barrow, 2001).

**Table 4.** Age Group of Female Respondents

Age	Entrepreneur	Not Entrepreneur	Total
14 – 20	0	2,235	2,235
21 – 30	1	4,144	4,145
31 – 40	7	4,224	4,231
41 – 50	10	2,576	2,586
51 – 60	22	1,690	1,712
61 – 70	25	719	744
71 – 80	19	211	230
81 – 90	3	14	17
91 – 100	0	0	0
101	0	0	0
Total	87	15,813	15,900

Source: Indonesia Family Life Survey (IFLS), processed data

Additionally, the percentage of women who chose entrepreneurship in that age range was as high as 1.15%. Meanwhile, in the same age range, namely 21–30 years, 4,144 out of 15,813 women chose not to be entrepreneurs or work, or 26.20%. Initially, the distribution of women who chose to become entrepreneurs or those who chose not to become entrepreneurs increased, along with an increase in the age range, until it peaked (Martinez Jimenez, 2009). Then, it experienced a slow decline. The difference between the two lies in the fact that women who were not entrepreneurs experienced an increase in the age range of 14–20 years. Meanwhile, women who chose entrepreneurship increased in the age range of 21–30 years. The peak age of women who chose entrepreneurship was 61–70 years old, accounting for 29% of the total female respondents who chose entrepreneurship. On the other hand, the number of women who were not entrepreneurs decreased since the age range of 41–50 years by 16.29% of the total 15,813 respondents who chose not to be entrepreneurs. The highest proportion of women who chose to do entrepreneurship was in

the age range of 81–90 years, even though it only touched 17.64% compared to women who chose not to do business. In the age range that should be retired, there is momentum for women to build their businesses. In addition, education was measured by the level of education attained by female respondents, including formal education, as presented in Table 5.

**Table 5.** Respondents' Length of Education

Education	Entrepreneur	Not Entrepreneur	Total
0	0	1	1
6	62	5,144	5,206
9	11	3,265	3,276
12	10	5,123	5,133
15	1	678	679
16	3	1,520	1,523
18	0	82	82
Total	87	15,813	15,900

Source: Indonesia Family Life Survey (IFLS), processed data

Table 5 explains the description and distribution of the educational level variables of individual female respondents taken from the IFLS-5 data. Education consisted of groups who did not/had not attended school, elementary school/Islamic elementary school/Package A, junior high school/Islamic junior high school/Package B, senior high school/vocational high school/Islamic high school/Package C, Diploma (D1/D2/D3), and undergraduate and postgraduate (S1/S2). Education level 0 is equivalent to kindergarten or not yet attending school, education level 1–6 is elementary school level, level 7–9 is junior high school equivalent, 10–12 is high school level, 13–15 is equivalent to D1/D2/D3, 13–16 is S1 equivalent, and 17–18 is S2 equivalent. The proportion of women who had only completed six years of education or equivalent to the elementary/equivalent level was the largest, namely 32.74%, or 5,206 female respondents. This large percentage also applied to groups of women who were entrepreneurs and not entrepreneurs. In addition, the proportion of women who were entrepreneurs had a large proportion, reaching 71.26% of the total women who were entrepreneurs, then decreased in the 9-year education group and increased again at the 16-year education level (Cater & Young, 2019). Meanwhile, the most significant number of non-entrepreneurial women were also at the 6-year education level, with a total of 32.74%, then decreased at the 9-year education level and experienced an increase again at the 12-year education level, then decreased again and increased again (Anthopoulou, 2010). Women who chose entrepreneurship were, on average, below 1%. Meanwhile, those who were not entrepreneurs had an average of above 90% and dominated at all levels of education. Moreover, interest factors from individuals, which included being interested in and unrelated to the world of entrepreneurship in the last 12 months from the questionnaire submitted, can be seen in the following Table 6.



**Table 6.** Interests of Women Entrepreneurs

Interest	Entrepreneurs	Not Entrepreneurs	Total
Interested	86	14,767	14,853
Not Interested	1	1,046	1,047
Total	87	15,813	15,900

Source: Indonesia Family Life Survey (IFLS), processed data

In Table 6 above, the respondents' level of interest in entrepreneurship is illustrated, in which 14,853 respondents were dominated by interest, while the remaining 1,047 answered uninterested. In other words, the distribution of women was dominated by interest in entrepreneurship. Likewise, whether entrepreneurs or not, women dominated the choice of being interested in entrepreneurship. For the group of women who were entrepreneurs, 98.85% were interested in entrepreneurship, and the remaining 1.15% were not interested in entrepreneurship (Anderson et al., 2018; Boyer & Smith, 2001). The non-entrepreneurship group apparently also had the most interest in entrepreneurship, amounting to 93.41%, and the rest who were not interested were 6.58%. These results indicate that women interested in entrepreneurship were not necessarily able to do so. Furthermore, welfare was answered on a five-point scale: not satisfied at all, not very satisfied, somewhat satisfied, very satisfied, and completely satisfied with the life being lived (Danes & Olson, 2003). A statistical description of the distribution of women's entrepreneurial decisions by level of welfare can be seen in Table 7.

**Table 7.** Entrepreneurial Satisfaction

Welfare	Entrepreneurs	Not Entrepreneurs	Total
Completely satisfied	3	698	701
Very satisfied	41	6,559	6,600
Somewhat satisfied	33	6,688	6,721
Not very satisfied	10	1,646	1,656
Not satisfied at all	0	222	222
Total	87	15,813	15,900

Source: Indonesia Family Life Survey (IFLS), processed data

Most female respondents answered the third level or somewhat felt satisfied with the life they lived or sometimes felt prosperous, as many as 42.27%. Likewise, women who were not entrepreneurs were primarily at the third level at 42.29%. Meanwhile, the most entrepreneurial women were at the second level, namely, not very satisfied with their lives at 47.2%. It indicates that the more prosperous women are, the more they can decide to become entrepreneurs. The more prosperous a woman's life is, the more she will have enough capital to start entrepreneurship. The comparison of the welfare level between women who were entrepreneurs and those who were not entrepreneurs had a balanced average value, i.e., women who were entrepreneurs were at the level of 0.50% at each level of welfare, except for perfectly prosperous, which had a value of 0%. Meanwhile, non-entrepreneur women dominated with an average value of 99% (Ghouse, McElwee, Meaton, & Durrah, 2017).

Then, probit model analysis was employed to determine the factors influencing women's decisions to become entrepreneurs and how significant the probability of this decision was. The analysis results are presented in Table 8.

**Table 8.** Probit Regression

Variable	Coefficient	Standard Error
Age	0.0416708	0.0035052
Education	-0.0124691*	0.0154724
Interest	0.3699221*	0.3421518
Welfare	0.1148237	0.0571222
_cons	-5.163325	
Number of obs	15,900	
Log Likelihood	-418.76852	
LR Chi <sup>2</sup> (4)	242.86	
Prob> Chi <sup>2</sup>	0.0000	
Pseudo R <sup>2</sup>	0.2249	

\* Not significant at  $\alpha=5\%$

Most respondents—as many as 15,900 observations in this case—were women. The LR chi-square value for the simultaneous test states that  $H_0$  is accepted if the prob. chi-square value is less than  $\alpha$ , i.e., none of the independent variables has a statistically significant effect on the dependent variable. Conversely, if  $H_1$  is accepted, at least one independent variable statistically significantly affects the dependent variable. With an LR value of 242.86 and a p-value of  $<0.05$ , it denotes that, with a significance level of 5%, there was sufficient evidence to say that there was at least one independent variable with a statistically significant effect on the dependent variable (Fletcher, Massis, & Nordqvist, 2016). In addition, the pseudo-R-square value of 0.2249 signifies that the diversity of independent variable data was 22.49%, while variables outside the model explained the rest. The probit regression in the table above showed that age and welfare variables influenced women's probability of starting a business (Barrow, 2001). Meanwhile, the education and interest variables did not influence women's entrepreneurship. From the estimation above, the following equation model can be formulated:

$$\text{Womenpreneur} = -5.163 + 0.047 \text{ age} - 0.0125 \text{ educ} + 0.369 \text{ interest} + 0.115 \text{ welfares}$$

p-value (0.000) (0.000) (0.420) (0.280) (0.044)

b1 = With a significance level of 5%, age had a significant and positive effect on the probability of women deciding to start a business, with a p-value of 0.000.

b2 = With a significant level of 5%, there was insufficient evidence that education influenced women's decisions to become entrepreneurs.

b3 = With a significance level of 5%, there was insufficient evidence that women's interest in entrepreneurship influenced their decisions to become entrepreneurs.

b4 = With a significance level of 5%, women's welfare had a significant and positive effect on the probability of women deciding to start a business, with a p-value of 0.044.

Meanwhile, the LR statistical test and the F-statistic test, with a  $\text{pro} > \chi^2$  value of 0.0000, illustrated that jointly, the independent variables influenced the probability of women's decisions to become entrepreneurs (Gujarati, 1995). The next step was determining the marginal effect, namely how much the dependent variable's probability changed when the independent variable's value changed. In this case, the marginal effect was used to see the magnitude of the influence of a change in a predictor variable on the response variable, assuming the other variables were constant. In this study, the marginal effect helped interpret how much influence each independent variable had on the probability of a woman's decision to start entrepreneurship (Hosseini & McElwee, 2011). The results of the marginal effect estimation are presented in the following table:

**Table 9.** Marginal Effect of Research on Entrepreneurial Women

Variable	Dy/dx	Standard Error
Age	0.0001546	0.0003
Education	-0.0000463*	0.00006
Interest	0.0008739*	0.0005
Welfare	0.0004261	0.00023

\* Not significant at  $\alpha = 5\%$

Based on the estimation results in Table 9, the probability of women becoming entrepreneurs was significantly influenced by two independent variables: age and welfare. Meanwhile, the other two variables had no significant effect, i.e., education and interest in entrepreneurship. The table above also explains the marginal effect of the probit regression on women's entrepreneurial decisions. Each increase in one unit of the independent variable will affect women's decisions to become entrepreneurs. Then, when the age increases by one year, the probability of women becoming entrepreneurs increases by 0.015%. In addition, when women's welfare increases by one value, the probability of women becoming entrepreneurs will increase by 0.042%. From the probit regression analysis results, age significantly affected women's decision to become entrepreneurs at the 5% confidence level. This influence indicates a positive direction with a probability coefficient value of 0.0416, meaning that if there is an increase in the age of women by one year, with other variables being held constant, the decision to become an entrepreneur will increase by an average of 4.16%. Therefore, the results of this study corroborate the first hypothesis, stating that age influences the decision of women to become entrepreneurs (Krumboltz, Mitchell, & Jones, 1979). Hipotesis yang dirumuskan dalam penelitian ini yaitu adanya hubungan yang positif dan signifikan antara usia dengan keputusan perempuan dalam berwirausaha sebagaimana yang dirumuskan pada penelitian sebelumnya. (Fletcher, D., Massis, A. D., & Nordqvist, M. 2016)

In his research, Parker (2004) also found that age and experience enter into human capital, which are the determining factors in someone's decision to become an entrepreneur. Most people expect older and more experienced people to become entrepreneurs. This assumption may be influenced by several reasons, such as the need for human capital and physical entrepreneurship, which are often unavailable for young workers. It is due to the assumption that older people have accumulated capital, can set up their businesses (Shahab, Putra,

& Udin, 2022; Udin, 2022), and can overcome the problem of borrowing funds at the bank. In addition, it is believed that older people have more experience, and it is considered that older people have more time to build a better network of relationships and can identify entrepreneurial opportunities (Gadi Djou, Udin, Lukiasuti, & Filatrovi, 2020; Hadi & Udin, 2020). Further, mature age is often used to measure one's experience, although age and experience are, in fact, not identical (Brown & Brooks, 1991).

These results can be a reference for policymakers to make policy directions that motivate young people, especially women, to become entrepreneurs. After all, young women are future agents who will take control of the nation. In addition, it is essential to involve the academic community and the public in developing young people's experiences in entrepreneurship and life experiences so that they do not have to wait until old age to have much experience. Based on the calculation of the probit model and the marginal effect, education did not have a significant and negative effect on women's entrepreneurial decisions because it had a p-value above 5%. The negative but significant effect with a coefficient value of -0.0124 in probit regression probability indicates that if there is a 1-year increase in education, women's entrepreneurial decisions will decrease by 1.24%. It is inconsistent with the research hypothesis based on the assumption that education significantly and positively affects women's entrepreneurial decisions (Boyer & Smith, 2001).

Nevertheless, these results align with Thung and Odiase's (2020) research, showing that those with higher formal education, namely completing university-level education, are less likely to choose a profession as an entrepreneur. It can be used as a reference for the government and educational institutions. They still must increase entrepreneurship in formal education and empower women entrepreneurs in the educational environment. Thus, education can contribute to the success of women entrepreneurs. With high knowledge, entrepreneurs are more strategic and mature. The regression results in this study also revealed that women's interest in entrepreneurship had no significant effect on women's entrepreneurship decisions at a confidence level of 5%. In other words, a woman interested in entrepreneurship did not necessarily decide to become an entrepreneur. It can be influenced by other variables, such as limited capital, access, and knowledge, so women interested in entrepreneurship are still hesitant to start a business (Barrow, 2001). Temuan empiris ini tidak selaras dengan rumusan hipotesis sebagaimana penelitian sebelumnya bahwa ada hubungan positif dan signifikan antara tingkat pendidikan formal dengan keputusan perempuan untuk berwirausaha. (Hadi, N., & Udin, U. 2020).

Testing the probit regression model and marginal effect also verified that individual welfare significantly and positively affected women's entrepreneurial decisions. The coefficient value of 0.114 denotes that woman with better welfare had an 11.4% higher probability of entrepreneurship than those with lower welfare levels. Individual women's welfare, in this case, was measured by meeting basic household needs, being able to pay for various needs, and others. Thus, they were considered to have enough capital to finally decide on entrepreneurship. It corroborates several previous studies used as references in this study, including research from the World Bank (2014), which concluded that the factors with a positive effect on the probability of a household entering entrepreneurship include the ability to access credit

and the level of welfare. For this reason, the government and stakeholders must increase business capital to empower women entrepreneurs and as a step to support women starting entrepreneurship.

## CONCLUSION

This research was conducted to analyze the determinants influencing women's decisions to become entrepreneurs using IFLS-5 data. From the research results, it can be concluded as follows. The primary findings from the results of this research concern the determinants of women's entrepreneurial decisions in Indonesia, influenced by age and welfare factors, while education and interest factors had no influence when considering aspects of job type classification. In the probit model analysis and marginal effect calculations using women's entrepreneurship decisions as the dependent variable and four independent variables, i.e., age, education level, interest in the world of entrepreneurship, and individual welfare, age had a significant and positive effect on women's entrepreneurship decisions; individual welfare had a significant and positive effect on women's entrepreneurial decisions; however, the level of education and individual interest in the world of entrepreneurship had no significant effect on individual entrepreneurship decisions. With a significance level of 5%, the age factor positively affected the probability of a woman's decision to become an entrepreneur. It denotes that the older the individual, the more likely it is for individual women to become entrepreneurs. The education level factor had no significant or negative effect on the probability of a woman's decision to become an entrepreneur. It indicates that the level of education had a significant effect. In other words, the higher the level of individual women's education, the lower the possibility of women becoming entrepreneurs. It also signifies that individual with low education dominated female entrepreneurs, and education did not contribute to empowering women entrepreneurs. Women's interest in entrepreneurship did not affect women's entrepreneurial decisions. It demonstrates that interested individuals were not sure whether to start entrepreneurship. At a significance level of 5%, individual welfare significantly and positively affects entrepreneurial decisions. It means that the more affluent or satisfied women are with their lives, the more they build their businesses. It can be influenced by the availability of capital and support from the family and environment, which ultimately makes it easier for individual women to set up their businesses. The implication of the results of this research is the need to continue to encourage the capacity, capability, and opportunities for women to actualize themselves through entrepreneurship. The limitation of the results of this study is that it only included the variables of age, education, welfare, and interest as aspects determining the decisions of women entrepreneurs while ignoring other aspects of social psychology. This research provides further perspectives for subsequent research by reviewing literature on women's social, religious, and psychological considerations in determining entrepreneurial choices.

## REFERENCE

- Anderson, F. W., Johanson, D., Karlsson, J., Lodefak, M., & Poldah, A. (2018). Female Top Management in Family Firms and Non-Family Firms. *International Journal Entrepreneurship and Small Business*, 35(3), 303-326.
- Anthopoulou, T. H. (2010). Rural Women in Local Agrofood Production between Entrepreneurial Initiatives and Family Strategies: A Case Study in Greece. *Journal of Rural Studies*, 26(4), 349-403.
- Astner, H. (2020). The Marionette Embeddedness in a Community of Family Controlled Firms. *Journal of Enterprising Communities People and Places in the Global Economy*, 6(2).
- Baltagi, B. (2005). *Econometrics Analysis of Panel Data*. John Wiley and Sons.
- Barrow, M. (2001). *Statistics of Economics, Accounting and Business Studies (3rd edition)*. Upper Saddle River: Printice-Hall.
- Boyer, G. R., & Smith, R. S. (2001). The Development of the Neoclassical Tradition in Labor Economics. *ILR Review*, 54(2), 199-223. doi: 10.1177/001979390105400201
- Brown, D., & Brooks, L. (1991). *Career counseling techniques*. Allyn & Bacon.
- Cater, J. J., & Young, M. (2019). New Directions for Brothers and Sisters in Successor Teams in Family Firms. In E. Memili & C. Dibrell (Eds.), *The Palgrave Handbook of Heterogeneity among Family Firms* (pp. 229-262). Cham: Springer International Publishing.
- Danes, S. M., & Olson, P. D. (2003). Women's Role Involvement in Family Businesses, Business Tensions, and Business Success. *Family Business Review*, 16(1), 53-68. doi: <https://doi.org/10.1111/j.1741-6248.2003.00053.x>
- Dashper, K. (2019). Challenging the gendered rhetoric of success? The limitations of women-only mentoring for tackling gender inequality in the workplace. *Gender, Work & Organization*, 26(4), 541-557. doi: <https://doi.org/10.1111/gwao.12262>
- Fletcher, D., Massis, A. D., & Nordqvist, M. (2016). Qualitative research practices and family business scholarship: A review and future research agenda. *Journal of Family Business Strategy*, 7(1), 8-25. doi: <https://doi.org/10.1016/j.jfbs.2015.08.001>
- Gadi Djou, L., Udin, U., Lukiastuti, F., & Filatrovi, E. W. (2020). The contingency approach of digitalization and entrepreneurial orientation on SMES performance in metal and machinery industry. *International Journal of Criminology and Sociology*, 9, 2235-2249.
- Ghouse, S., McElwee, G., Meaton, J., & Durrah, O. (2017). Barriers to rural women entrepreneurs in Oman. *International Journal of Entrepreneurial Behavior & Research*, 23(6), 998-1016. doi: 10.1108/IJEBR-02-2017-0070
- Gujarati, D. (1995). *Basic econometrics*. Singapore: McGraw-Hill.
- Hadi, N., & Udin, U. (2020). Testing the effectiveness of CSR dimensions for small business entrepreneurs. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 6.
- Hosseini, S., & McElwee, G. (2011). Improving the entrepreneurial potential of rural women entrepreneurs in Northern Iran. *International Journal of Entrepreneurship and Small Business*, 12(1), 15-27. doi: 10.1504/ijesb.2011.037337



- Krumboltz, J. D., Mitchell, A. M., & Jones, G. B. (1979). *Social learning and career decision making*. Carroll Press.
- Martinez Jimenez, R. (2009). Research on Women in Family Firms: Current Status and Future Directions. *Family Business Review*, 22(1), 53-64. doi: 10.1177/0894486508328813
- Parker, S. C. (2004). *The economics of self-employment and entrepreneurship*. Cambridge University Press.
- Shahab, M. A., Putra, M. A., & Udin, U. (2022). Strengthening Social Capital to Increasing Farmers' Entrepreneurial Ability. *Quality – Access to Success*, 23(187), 200-208.
- Thung, Y. X., & Odiase, M. (2020). The Financial Infrastructure for Entrepreneurship in Tanzania, *CDI Working Paper Series*.
- Udin, U. (2022). Knowledge Sharing and Innovative Work Behavior: Testing the Role of Entrepreneurial Passion in Distribution Channel. *Journal of Distribution Science*, 20(2), 79-89.