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HONJO, Yuji
RIETI

IKEUCHI, Kenta
RIETI

NAKAMURA, Hiroki
Chuo University

RIETI
Research Institute of Economy, Trade & Industry, IAA

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Do entrepreneurs have high life satisfaction? Evidence from Japan*

Yuji HONJO
Research Institute of Economy, Trade and Industry, Chuo University

Kenta IKEUCHI
Research Institute of Economy, Trade and Industry

Hiroki NAKAMURA
Chuo University

Abstract

This study investigates the impact of entrepreneurial experience on life satisfaction. Using a unique survey about entrepreneurial experience, level of wealth, and personal attributes of individuals in Japan, we examine the factors that mediate the association between entrepreneurial experience and subjective well-being. As a result, we do not find any evidence on the total effect of entrepreneurial experience on subjective well-being. However, we find a positive indirect effect of entrepreneurial experience on subjective well-being through wealth, in addition to a negative indirect effect through debt. Our findings suggest that monetary incentives motivate Japanese individuals to become entrepreneurs.

Keywords: Entrepreneur; Mediation; Satisfaction; Well-being
JEL classification: L26; I31; J28

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1. Introduction

Although policymakers often expect the emergence of high-growth start-ups that can stimulate the economy, many entrepreneurs may simply seek their own personal interests, irrespective of economic growth. Not surprisingly, individuals' decisions to become entrepreneurs depend heavily on their own personal interests, which in turn create subjective well-being. From the perspective of subjective well-being, seeking well-being by becoming an entrepreneur—that is, entrepreneurial well-being—may be more important than a growth motivation.[1] In other words, many, if not all, individuals do not want to become entrepreneurs, despite their life satisfaction being much lower. Entrepreneurial well-being allows individuals to create incentives to start businesses, which would lead to sustainable entrepreneurship. To consider the role of entrepreneurship in national and regional economies, we should pay more attention to how individuals acquire subjective well-being by starting businesses. Nevertheless, with this regard, previous studies might have left something to be desired. Entrepreneurial well-being depends on various motives, and the process of achieving subjective well-being in entrepreneurs seems complicated, including the indirect effect of entrepreneurial experience—current or past experience as an entrepreneur—on subjective well-being. There is still an open question of how entrepreneurs acquire subjective well-being. Thus, an investigation of the relationship between entrepreneurial experience and subjective well-being would assist us in having a better understanding of the nature of entrepreneurship. Such investigation on entrepreneurial well-being is useful for promoting entrepreneurship, which may create sustainable economic growth in an entrepreneurial ecosystem.

This study investigates the impact of entrepreneurial experience on life satisfaction. Using a unique survey on entrepreneurial experience, level of wealth, and personal attributes of individuals in Japan, we examine the factors that mediate the association between entrepreneurial experience and subjective well-being. We estimate the impact of entrepreneurial experience on subjective well-being, while considering the mediating effect of the level of wealth, because

[1] According to Wiklund et al. (2019), entrepreneurial well-being is defined as "the experience of satisfaction, positive affect, infrequent negative affect, and psychological functioning in relation to developing, starting, growing, and running an entrepreneurial venture."

entrepreneurial well-being depends on wealth derived from income and assets. By doing so, we identify how subjective well-being is shaped by entrepreneurial experience, which could lead to a better understanding of entrepreneurship in national and regional economies.

As a result, we do not find any evidence on the total effect of entrepreneurial experience on subjective well-being. Rather, the results reveal that individuals with entrepreneurial experience have lower subjective well-being when controlling for the level of wealth, measured by household income and individual assets, in addition to personal attributes. We also find a positive indirect effect of entrepreneurial experience on subjective well-being through wealth, in addition to a negative indirect effect through debt. The results reveal that individuals with higher household income and individual assets are more likely to have higher subjective well-being compared to those with debt burdens. The results indicate that the level of wealth plays a critical role in determining entrepreneurial well-being. In addition, a debt burden becomes an obstacle to increasing entrepreneurial well-being. These findings suggest that monetary incentives motivate Japanese individuals to become entrepreneurs. This study contributes to the relevant literature not only by identifying the indirect effect of entrepreneurial experience on subjective well-being, but also by emphasizing the importance of wealth in entrepreneurial well-being.

The remaining part of this paper is organized as follows. The subsequent section explains the research background of this study. Section 3 discusses the data and method used in this study. Section 4 presents the estimation results. Finally, we provide a conclusion of our findings.

2. Research background

2.1. Entrepreneurial well-being

Start-up firms are viewed as an important engine of economic growth through job creation and innovation worldwide, and they are often expected to contribute to the realization of national and regional economies (Van Praag and Versloot, 2007; Acs and Audretsch, 2010). However, only a small number of firms achieve high growth in a short period of time (Haltiwanger et al., 2013, 2017). Such high-growth start-ups substantially contribute to the major part of economic growth (Shane, 2008; Storey and Greene, 2010). For this reason, some scholars have emphasized the importance of high-growth firms in a short period of time, often referred to as “gazelles” in the

existing literature (Birch, 1981; Acs and Mueller, 2008).

However, an individual's viewpoint may cast doubt on the notion that all start-up firms pursue high growth. What entrepreneurs seek by starting businesses depends on their motives. Even though the emergence of high-growth firms is expected for the promotion of economic growth in a country or region, the majority of entrepreneurs may simply consider the achievement of their own personal interests. Whereas it is desirable that the pursuit of personal interests through a business start-up stimulates economic growth, generally, many entrepreneurs seek well-being, rather than a growth purpose.

To date, numerous scholars have explored the differences in job and life satisfaction between self-employed (i.e., entrepreneurs) and employed individuals as observed in the existing literature (e.g., Blanchflower, 2000; Andersson, 2008; Van der Zwan et al., 2018; Kibler et al., 2019). Some scholars have emphasized the importance of entrepreneurial well-being (e.g., Wiklund et al., 2019). The individuals' decisions to become entrepreneurs have been examined, and some scholars have established that self-employed individuals have higher job satisfaction than employees (e.g., Blanchflower and Oswald, 1998). In contrast, others found a negative correlation between entrepreneurship and happiness (e.g., Tiefenbach and Kohlbacher, 2015). Thus, there is still an open question of whether entrepreneurs, including the self-employed, have higher life satisfaction than employees.

A considerable number of scholars have examined the factors affecting entrepreneurial well-being—in other words, what makes entrepreneurs happy has been investigated in the existing literature (e.g., Carree and Verheul, 2012). For instance, Benz and Frey (2008a) provided their results using data from Germany, Great Britain, and Switzerland. They emphasized the importance of procedural utility, which indicates that people value not only outcomes but also the conditions and processes leading to the outcomes. Block and Koellinger (2009) established that independence and creativity, in addition to financial motives, are correlated with entrepreneurs' satisfaction, suggesting that nonpecuniary motives also have a significant impact on entrepreneurial well-being.[2] In contrast, others argued that subjective well-being depends on the

[2] Some scholars pointed out that the average income of entrepreneurs is lower than that of employees (e.g., Hamilton, 2000).

level of wealth (e.g., Cummins, 2000; Clark et al., 2008).

Moreover, it is desirable how policymakers foster entrepreneurship for future economic growth in some countries, including Japan, where entrepreneurial well-being is not high. Benz and Frey (2008b) established that self-employed individuals in Japan have higher job satisfaction than employees. However, Blanchflower et al. (2001) demonstrated that Japan has a lower level of interest in self-employment, although the ratio of self-employed individuals in Japan is higher among some developed countries. This suggests that some entrepreneurs tend to be obliged to choose self-employment. Tiefenbach and Kohlbacher (2015) also examined the level of happiness in Japan using data from the 2011 National Survey on Lifestyle Preference, and they found a negative correlation between entrepreneurship and happiness. Their findings provide supportive evidence that in Japan, individuals prefer stable working status, based on income and employment security, to the risky and unstable path of entrepreneurs, suggesting that career paths and family plans are more rigid and homogenous than in Western societies.

2.2. Impact of monetary motives

Entrepreneurs—even though the majority of them seek well-being—have various reasons for starting their businesses. Certain entrepreneurs expect successful outcomes through starting new businesses, and some of them seek initial public offerings (IPOs) to obtain large capital gains. Other entrepreneurs simply want to become entrepreneurs due to the freedom value derived from independence and creativity. Such entrepreneurs may experience an increase in subjective well-being while enjoying their new businesses. Moreover, a considerable number of individuals are self-employed because they cannot find any suitable jobs in existing firms. In addition, some are obliged to start businesses in accordance with the succession of businesses and technologies developed by their families. There is room for further evidence on how entrepreneurs experience subjective well-being owing to various motives for becoming entrepreneurs.

It is evident that entrepreneurs who are satisfied with their level of living are more likely to have higher subjective well-being. For entrepreneurs who pursue successful outcomes, wealth resulting from their business start-ups creates subjective well-being. Even those who do not pursue such outcomes may also have higher subjective well-being when their start-up firms

achieve better performance. Regardless of the reasons for becoming entrepreneurs, it is conceivable that entrepreneurial well-being depends on business outcomes. On the other hand, potential entrepreneurs cannot perfectly predict business outcomes prior to starting businesses, and after starting their businesses, entrepreneurs often encounter the gap between expected and real outcomes. Even though potential entrepreneurs realize the business risks involved, they may evaluate their decisions based on real business outcomes.

Previous studies using micro-level data provide evidence on a positive correlation between household income and subjective well-being as observed in the existing literature (e.g., Clark et al., 2008). As discussed, business outcomes, which are associated with the level of wealth, may affect entrepreneurial well-being. Thus, it is considered that entrepreneurial well-being is associated with the level of wealth, which can be captured by household income and assets.[3] Meanwhile, according to the 2017 White Paper on Small and Medium Enterprises in Japan, satisfaction with income in the establishment stage after start-up is lower than before start-up, while satisfaction with work (e.g., freedom and discretion, sense of achievement and enthusiasm, and work content) in the establishment stage after start-up is much higher than before start-up.[4] This indicates that the gap between expected and real income, which partially results from low income when starting businesses, discourage entrepreneurs from engaging in entrepreneurial activity. Moreover, some entrepreneurs face an increase in debt because of investments in new businesses. The size of debt, in addition to the level of wealth, becomes a burden to entrepreneurs, which would result in a negative effect on entrepreneurial well-being. Such monetary motives play a critical role in determining entrepreneurial well-being.

2.3. Indirect effect of entrepreneurial experience

Entrepreneurial well-being depends on various motives, and monetary motives, such as wealth, do not seem to be trivial. The process of achieving subjective well-being in entrepreneurs seems

[3] Household income is also used to capture financial constraints on business start-ups in the existing literature (e.g., Hurst and Lusardi, 2004).

[4] For more details, see Small and Medium Enterprise Agency (2017: p. 184). More recently, "hobby entrepreneurs," who start businesses only for their own interests and skills, have been highlighted; however, such entrepreneurs do not necessarily have higher subject well-being compared to others (Small and Medium Enterprise Agency, 2019).

complicated, and entrepreneurial experience has not only a direct effect, but also an indirect effect, on subjective well-being. Thus, it is considered that the indirect effect of entrepreneurial experience plays a pivotal role in determining subjective well-being. More importantly, the mediating role in subjective well-being may be critical for business start-ups. Shir et al. (2019) focused on the mediating effect of three basic psychological needs (autonomy, relatedness, and competence)—specifically, how these psychological needs mediate the association between entrepreneurship and subjective well-being—using a multi-path mediation model. Their results emphasize the importance of the direct and indirect effects of entrepreneurship.

However, Shir et al. (2019) did not examine the mediating effect of monetary motives but only considered psychological needs in their analysis. Meanwhile, Block et al. (2009) found a positive relationship between the level of income and entrepreneurial well-being, and they argued that monetary gains remain a major source of satisfaction, even though individuals seem to care about aspects other than money when they start businesses. Whereas the level of wealth seems to play a critical role in driving entrepreneurial well-being, there is minimal evidence on how entrepreneurial experience is associated with subjective well-being. To the best of our knowledge, the mediating effect of monetary motives, such as the level of wealth, on entrepreneurial well-being has been ignored, as observed in the existing literature. By focusing on such an effect, we can articulate how entrepreneurial experience is associated with subjective well-being.

Furthermore, as noted in Section 2.1, previous studies found both positive and negative relationships between entrepreneurship and subjective well-being (Benz and Frey, 2008b; Tiefenbach and Kohlbacher, 2015). While many entrepreneurs possibly seek their own interests, it is not easy for such entrepreneurs to achieve higher subjective well-being, regardless of the level of income. As discussed, the mediating effect of monetary motives may be critical, and the relationship between entrepreneurship and subjective well-being may depend on the level of wealth. By distinguishing between the direct and indirect effect of entrepreneurial experience, we will be able to identify the impact of entrepreneurial experience on subjective well-being. Such investigation on the mediating role in entrepreneurial well-being assists us in gaining a better understanding of how to promote entrepreneurship in the future economy.

3. Data and method

3.1. Data

The data used in this study are from an online survey, “Internet Survey on the Characteristics and Decision-Making of Potential Entrepreneurs and Angel Investors” of our research project of the Research Institute of Economy, Trade, and Industry (RIETI), Japan. In the survey, we asked individuals their experiences in and attitudes toward business start-ups and investments to identify the proportions of entrepreneurs and angel investors in Japan. We targeted individuals aged 18 to 79, who were assigned according to gender, age, and prefectures in the survey. The Rakuten Insight, Inc. (formerly Rakuten Research, Inc.), subcontracted by the RIETI, conducted this survey in May 2018. The Rakuten Insight contacted 150,144 individuals and obtained 13,449 respondents (response rate: 8.96%). We excluded some respondents due to lack of answers for some questions, leaving us with a final sample size of 10,001 individuals.

To capture life satisfaction, we asked respondents about subjective well-being, and rated their responses using a five-point scale: (1) “not satisfied,” (2) “not very unsatisfied,” (3) “cannot say either,” (4) “somewhat satisfied,” and (5) “satisfied.” We also asked individuals about their experiences in business start-ups and angel investments. Moreover, to construct some controls, we included questions on personal attributes, such as educational background and occupation, in addition to the level of household income (seven classes) and individual assets (seven classes).

Using data on subjective well-being and personal attributes in the sample of individuals, we identify the impact of entrepreneurial experience on life satisfaction. If an individual has entrepreneurial experience, the variable of entrepreneurial experience (*ENTRE*) equals 1. However, many individuals in the sample have no occupation, and their subjective well-being may be independent of work experience. It is more appropriate to compare individuals with entrepreneurial experience to those with other work experience. When examining the impact of entrepreneurial experience, we thus use the subsample of individuals with occupations. As a result, the number of observations in the subsample is 6,092.

3.2. Method

As discussed, the indirect effect of entrepreneurial experience on subjective well-being is not

trivial, while entrepreneurial experience may directly affect subjective well-being. We thus pay more attention to the indirect effect of entrepreneurial experience, in addition to the direct effect, on subjective well-being to identify entrepreneurial well-being. Following the mediation analysis stated by Baron and Kenny (1986), we examine the relationship between entrepreneurial experience and subjective well-being.

Let Y_i^* denote the level of individual i's subjective well-being, which is captured by a latent variable. We measure Y_i instead of Y_i^* using a five-point scale. It is assumed that individual i's entrepreneurial experience, denoted by X_i, affects her or his subjective well-being, Y_i^*. In addition, the mediation effect of entrepreneurial experience on subjective well-being exists in individuals, and the mediation term is denoted by Z_i^*, which is captured by a latent variable in this study. Based on Baron and Kenny's (1986) framework, we estimate the following equations:

$$Y_i^* = \alpha_0 + \alpha_1 X_i + e_{1i}, \quad (1)$$

$$Z_i^* = \beta_0 + \beta_1 X_i + e_{2i}, \quad (2)$$

$$Y_i^* = \gamma_0 + \gamma_1 X_i + \gamma_2 Z_i^* + e_{3i}, \quad (3)$$

where α_0, α_1, β_0, β_1, γ_0, γ_1, and γ_2 are parameters to be estimated, and e_{1i}, e_{2i}, and e_{3i} are error terms. In this case, we obtain the following relationship:

$$\alpha_1 = \gamma_1 + \beta_1 \gamma_2. \quad (4)$$

As shown in Equation (4), α_1 can be divided into two effects: the direct effect, γ_1, and indirect effect, $\beta_1 \gamma_2$. To identify the gap between the direct and indirect effects, we calculate the test statistics for $\beta_1 \gamma_2 / \sigma_{\beta\gamma}$ where $\sigma_{\beta\gamma}$ is the squared root of the covariance of β_1 and γ_2.

As the mediation term is captured by the latent variable (Z_i^*), we identify whether an

indirect effect of entrepreneurial experience on subjective well-being exists in individuals using mediation analysis with generalized structural equation modelling (GSEM), which is applicable when we use structural equation modelling (SEM) with continuous and discrete (e.g., binary and ordinal) variables. There are some advantages of using the SEM in the context of mediation analysis (e.g., Gunzler et al., 2013; MacKinnon, 2017; Hayes, 2018). The SEM framework allows us to evaluate latent variables, and it simplifies the testing of the mediation hypotheses because it is designed, in part, to test more complicated mediation models in a single analysis. In addition, the SEM can also be used when it includes multiple independent variables, mediation terms (mediators), and dependent variables (outcomes). For these reasons, we employ the SEM framework in this study to identify the mediation effect of entrepreneurial experience on subjective well-being. Further, we develop a multi-path mediation model in which wealth and debt mediate the relationship between entrepreneurial experience and subject well-being, partially through a positive effect of wealth.

3.3. Variables

The major dependent variable in the estimation model is based on subjective well-being (*SATISF*), which is measured by a five-point scale. We also define the major independent variable in the estimation model using a binary variable for entrepreneurial experience (*ENTRE*). Using these variables, we estimate the impact of entrepreneurial experience on subjective well-being.

To consider the indirect effect of entrepreneurial experience on subjective well-being, we pay attention to wealth, mainly because subjective well-being depends on the level of individual wealth (Cummins, 2000). In this study, we capture wealth (Z) using three variables: (i) household income (*HINC*), (ii) individual cash (*CASH*), and (iii) individual assets other than cash and deposits (*ASSET*).

We control for personal attributes because subjective well-being depends on individual-specific characteristics. In this study, we capitalize on personal attributes using the following variables: age (ln*AGE*), gender (*FEMALE*), marriage status (*MARRIED*), and the number of children (*NCHILD*).

Table 1 indicates the definitions of variables used in this study. Table 2 presents the

descriptive statistics of the variables in the subsample of individuals with occupation. The mean of subjective well-being (*SATISF*) is slightly over 3, and its median is 3. The mean of entrepreneurial experience (*ENTRE*) is 0.10, indicating that approximately 10% of individuals in the sample have entrepreneurial experience. Figure 1 describes differences in subjective well-being between entrepreneurs and others. While the proportion of (1) "not satisfied" for individuals with entrepreneurial experience (*ENTRE* = 1) is slightly higher than that for individuals without such experience (*ENTRE* = 0), the proportion of (5) "satisfied" for individuals with entrepreneurial experience (*ENTRE* = 1) is higher than that for individuals without such experience (*ENTRE* = 0). Figure 2 depicts the level of wealth by entrepreneurial experience: (a) household income, (b) cash and deposits, and (c) assets other than cash and deposits. Figure 3 also depicts the level of debt by entrepreneurial experience. These figures indicate that individuals with entrepreneurial experience are more likely to have higher levels of wealth and debt.

4. Estimation results

4.1. Main results: Generalized structural estimation model

Using the subsample of individuals with occupation, we apply the GSEM to describe the impact of entrepreneurial experience on subjective well-being. Table 3 presents the estimation results of the GSEM. Figure 4 depicts the path diagram of the results presented in Table 3.

In Table 3, we do not find evidence on the positive effect of entrepreneurial experience on subjective well-being, and the result may rather indicate a direct negative relationship between entrepreneurial experience and subjective well-being. While our findings are not consistent with those of Benz and Frey (2008b), they are consistent with the findings on Japanese individuals provided by Tiefenbach and Kohlbacher (2015). The results indicate that on average, individuals with entrepreneurial experience have lower subjective well-being than others, even though it is possible that only a few entrepreneurs have much higher subjective well-being. One reason is that some entrepreneurs recognize true market conditions, including income, through their business practices after starting businesses, since potential entrepreneurs have less information on the conditions before it. These entrepreneurs may have lower subjective well-being due to unexpected income, in addition to increase in debt. Another reason is that while entrepreneurs tend to

encounter unstable income, employees in Japan—especially those of established firms—are more likely to be given favorable conditions, such as long-term employment and employee pension. Even though entrepreneurs are more likely to gain a freedom value, they face pressure in securing not only their own income and pension, but also their employees' employment and pension. Moreover, some individuals are obliged to become self-employed as entrepreneurs, simply because their family members are self-employed, and others become entrepreneurs due to the lack of employment opportunities, especially for older individuals, in accordance with the aging population. Such entrepreneurs may not have higher subjective well-being without a certain level of wealth.

Regarding the indirect effect of entrepreneurial experience on subjective well-being, we examine whether the level of wealth, measured by household income and individual cash and assets, mediates the association between entrepreneurial experience and subjective well-being. In Table 3, the coefficient of entrepreneurial experience is positive and significant for household income, and individual cash and assets. In addition, the coefficients of household income, and individual cash and assets are positive and significant for subjective well-being. We find a positive relationship between entrepreneurial experience and wealth, in addition to a positive relationship between wealth and subjective well-being, which is consistent with Block et al. (2009). We provide supportive evidence on the indirect effect of entrepreneurial experience on subjective well-being through wealth, indicating that individuals with entrepreneurial experience are more likely to have higher subjective well-being when gaining higher income and assets. Our findings suggest that the level of wealth plays a critical role in determining subjective well-being in individuals, including entrepreneurs.

Moreover, we examine whether the level of debt mediates the association between entrepreneurial experience and subjective well-being. In Table 3, debt has a negative and significant effect on subjective well-being, while entrepreneurial experience has a positive and significant effect on debt. We find a negative relationship between debt and subjective well-being. The results reveal that entrepreneurial experience is associated with subjective well-being through debt, as well as wealth, although the relationship is opposite. Our findings suggest that the level of debt also plays a critical role in determining subjective well-being in individuals, including

entrepreneurs.

In Table 4, we estimate the direct, indirect, and total effects of entrepreneurial experience on subjective well-being. We do not find a total effect of entrepreneurial experience on subjective well-being, although its direct effect is negative. More importantly, the indirect effect of entrepreneurial experience through wealth and debt is significant. In particular, the positive effect of entrepreneurial experience on subjective well-being through wealth is found, implying that entrepreneurs cannot achieve higher subjective well-being without a certain level of wealth. Further, the debt burden may cause the reduction of subjective well-being.

4.2. Robustness

It is evident that subjective well-being depends on personal attributes. Therefore, we apply the GSEM, including personal attributes as controls. In this study, we use the variables of age (*AGE*), gender (*FEMALE*), marriage status (*MARRIED*), and the number of children (*NCHILD*). Table 5 presents the estimation results of the GSEM. Further, as indicated, the relationship between entrepreneurial experience and subjective well-being is negative, which is consistent with the finding in Table 3. Moreover, the relationships between wealth and subjective well-being and between entrepreneurial experience and wealth are positive. The relationship between debt and subjective well-being is negative, while the relationship between entrepreneurial experience and debt is positive. We find an indirect effect of entrepreneurial experience on subjective well-being through wealth and debt. These findings are also consistent with those shown in Table 3.

Regarding the impact of personal attributes, the coefficient of ln*AGE* for subjective well-being is negative and significant, while the coefficient of *FEMALE* is insignificant. The results indicate that younger individuals are more likely to have higher subjective well-being. The coefficient of *MARRIED* is positive, indicating that married individuals have higher subjective well-being than non-married ones.

In Table 6, we also estimate the direct, indirect, and total effects of entrepreneurial experience on subjective well-being. We do not find a total effect of entrepreneurial experience on subjective well-being. More importantly, the indirect effect of entrepreneurial experience on subjective well-being through wealth and debt is significant. These findings are consistent with

those shown in Table 4, indicating that the relationships are robust even when personal attributes are included in the model. Further robustness checks are presented in the Appendix.

5. Conclusions

This study investigated the impact of entrepreneurial experience on life satisfaction. Using a unique survey on entrepreneurial experience, level of wealth, and personal attributes of individuals in Japan, we examined the factors that mediate the association between entrepreneurial experience and subjective well-being. As a result, we did not find any evidence on the total effect of entrepreneurial experience on subjective well-being. We also found a positive indirect effect of entrepreneurial experience on subjective well-being through wealth, in addition to a negative indirect effect through debt. Our findings suggested that monetary incentives motivate Japanese individuals to become entrepreneurs.

This study contributes to the relevant literature by providing novel findings from a unique survey. Although prior research on entrepreneurship has provided evidence on the presence of entrepreneurial well-being, there is still limited knowledge on the mediating effect of monetary motives on entrepreneurial well-being. Our results indicate that entrepreneurial well-being does not simply result from starting a business. Even if individuals become entrepreneurs to seek their own interests, they do not necessarily have higher subjective well-being by starting their businesses. Rather, monetary motives play a critical role in entrepreneurial well-being, probably because a certain level of wealth is required to achieve subjective well-being through a business start-up. In addition, we find that the level of debt reduces subjective well-being. However, this study has limitations, mainly because we cannot identify whether the level of wealth is derived from starting a business, including its causal relationship.[5] Moreover, we cannot identify whether subjective well-being is derived mainly from starting a business in the survey. Further investigation will be warranted to elucidate the impact of business outcomes on entrepreneurial well-being.

[5] While some studies emphasize the impact of financial constraints, measured by inherences, on businesses start-ups (e.g., Holtz-Eakin et al., 1994a, 1994b), Hurst and Lusardi (2004) argued that wealth does not matter in starting a business, and that there is a strong and positive relationship between household wealth and business entry only for households at the very top of the wealth distribution.

The findings of this study provide some policy implications with regards to entrepreneurship. While policymakers have paid attention to the promotion of high-growth start-ups that can stimulate a stagnant economy, the level of entrepreneurship is still low in some countries, including Japan. As shown in this study, entrepreneurs do not necessarily have higher subjective well-being than others, suggesting that some employees have higher subjective well-being in Japan. Meanwhile, our findings suggest that the level of debt prevents individuals from becoming entrepreneurs. This may imply that the reduction of the mental burden associated with debt, including free property under the Bankruptcy Law, is required to promote entrepreneurship in Japan.[6] On average, becoming an entrepreneur may not be a better choice in some countries, including Japan. Such recognition prevents individuals from becoming entrepreneurs, which could result in the low entry rate in the countries. While policymakers often encourage entrepreneurship in regions and countries, it is unclear whether becoming an entrepreneur is a better choice for all individuals. It should be emphasized that policymakers should pay more attention to promoting individuals with a better understanding of the current environment, in addition to required entrepreneurial ability, for business start-ups, rather than simply encouraging individuals to become entrepreneurs.

Appendix

We can apply the GSEM by decomposing wealth into three factors: household income, and individual cash and assets. Table A1 presents the estimation results of the GSEM when we divided wealth into three factors. Table A2 indicates the estimations of the direct, indirect, and total effects of entrepreneurial experience on subjective well-being. Moreover, while individual cash and assets are used to capture wealth, it is possible that these factors include income before individuals' having entrepreneurial experience because they represent stock of wealth. Therefore, we exclude individual cash and assets from wealth, based on the estimation results presented in Table 6. Table A4 also indicates the estimations of the direct, indirect, and total effects of entrepreneurial

[6] According to the Civil Execution Act (Article 131) in Japan, cash in the amount specified by a Cabinet Order based on an average household's necessary living expenses for two months shall not be seized, and according to the Civil Execution Ordinance, the amount of cash is 990 thousand yen.

experience on subjective well-being.

As a result, we obtain similar results to those shown in Tables 3 to 6, and the robustness of our findings is demonstrated.

References

Acs, Z. J., Audretsch, D. B., 2010. Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction. New York: Springer.

Acs, Z. J., Mueller, P., 2008. Employment effects of business dynamics: Mice, Gazelles and Elephants. Small Business Economics 30, 85–100.

Andersson, P., 2008. Happiness and health: Well-being among the self-employed. Journal of Socio Economics 37, 213–236.

Baron, R., Kenny, D., 1986. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology 51, 1173–1182.

Benz, M., Frey, B. S., 2008a. Being independent is a great thing: Subjective evaluations of self-employment and hierarchy. Economica 75, 362–383.

Benz, M., Frey, B. S., 2008b. The value of doing what you like: Evidence from the self-employed in 23 countries. Journal of Economic Behavior and Organization 68, 445–455.

Birch, D. L., 1981. Who creates jobs? Public Interest 65, 3–14.

Blanchflower, D., 2000. Self-employment in OECD countries. Labour Economics 7, 471–505.

Blanchflower, D., Oswald, A., 1998. What makes an entrepreneur? Journal of Labour Economics 16, 26–60.

Blanchflower, D., Oswald, A., Stutzer, A., 2001. Latent entrepreneurship across nations. European Economic Review 45, 680–691.

Block, J., Koellinger, P., 2009. I can't get no satisfaction---necessity entrepreneurship and procedural utility. Kyklos 62, 191–209.

Carree, M. A., Verheul, I., 2012. What makes entrepreneurs happy? Determinants of satisfaction among founders. Journal of Happiness Studies 13, 371–387.

Clark, A. E., Frijters, P., Shields, M. A., 2008. Relative income, happiness, and utility: An

explanation for the Easterlin paradox and other puzzles. Journal of Economic Literature 45, 95–144.

Cummins, R. A., 2000. Personal income and subjective well-being: A review. Journal of Happiness Studies 1, 133–158.

Gunzler, D., Chen, T., Wu, P., Zhang, H., 2013. Introduction to mediation analysis with structural equation modeling. Shanghai Arch Psychiatry 25, 390–394.

Haltiwanger, J., Jarmin, R., Kulick, R., Miranda, J., 2017. High growth young firms: Contribution to job, output and productivity growth. In: Haltiwanger, J., Hurst, E., Miranda, J. and Schoar, A. (Eds.), Measuring Entrepreneurial Businesses: Current Knowledge and Challenges, Chicago, IL: University of Chicago Press, 11–62.

Haltiwanger, J., Jarmin, R., Miranda, J., 2013. Who creates jobs? Small versus large versus young. Review of Economics and Statistics 95, 347–361.

Hamilton, B., 2000. Does entrepreneurship pay? An empirical analysis of the returns to self-employment. Journal of Political Economy 108, 604–631.

Hayes, A. F., 2018. Introduction to Mediation, Moderation, and Conditional Process Analysis. New York, NY: Guilford Press.

Holtz-Eakin, D., Joulfaian, D., Rosen, H. S., 1994a. Entrepreneurial decisions and liquidity constraints. Rand Journal of Economy 25, 334–47.

Holtz-Eakin, D., Joulfaian, D., Rosen, H. S., 1994b. Sticking it out: Entrepreneurial survival and liquidity constraints. Journal of Political Economy 102, 53–75.

Hurst, E., Lusardi, A., 2004. Liquidity constraints, household wealth, and entrepreneurship. Journal of Political Economy 112, 319–347.

Kibler, E., Wincent, J., Kautonen, T., Cacciotti, G., Obschonka, M., 2019. Can prosocial motivation harm entrepreneurs' subjective well-being? Journal of Business Venturing (forthcoming).

MacKinnon D. P., 2017. Introduction to Statistical Mediation Analysis. New York, NY: Routledge.

Shane, S. A., 2008. The Illusions of Entrepreneurship: The Costly Myths That Entrepreneurs, Investors, and Policy Makers Live by. New Heaven, CT: Yale University Press.

Shir, N., Nikolaev, B. N., Wincent, J., 2019. Entrepreneurship and well-being: The role of

psychological autonomy, competence, and relatedness. Journal of Business Venturing (forthcoming).

Small and Medium Enterprise Agency (ed.), 2017. The 2017 White Paper on Small and Medium Enterprises in Japan. Tokyo: National Association of Trade Promotion for Small and Medium Enterprises.

Small and Medium Enterprise Agency (ed.), 2019. The 2019 White Paper on Small Enterprises in Japan. Tokyo: National Association of Trade Promotion for Small and Medium Enterprises (forthcoming).

Storey, D. J., Greene, F. J., 2010. Small Business and Entrepreneurship. Essex: Pearson Education.

Tiefenbach, T., Kohlbacher, F., 2015. Happiness in Japan in times of upheaval: Empirical evidence from the national survey on lifestyle preferences. Journal of Happiness Studies 16, 333–366.

Van Praag, C. M., Versloot, P. H., 2007. What is the value of entrepreneurship? A review of recent research. Small Business Economics 29, 351–382.

Van der Zwan, P., Hessels, J., Rietveld, C. A., 2018. Self-employment and satisfaction with life, work, and leisure. Journal of Economic Psychology 64, 73–88.

Wiklund, J., Nikolaev, B., Shir, N., Foo, M.-D., Bradley, S., 2019. Entrepreneurship and well-being: Past, present, and future. Journal of Business Venturing (forthcoming).

Table 1: Definitions of variables

Variable	Symbol	Definition
Subjective well-being	*SATISF*	Five-point scale: (1) not satisfied, (2) not very unsatisfied, (3) cannot say either, (4) somewhat satisfied, and (5) satisfied.
Entrepreneurial experience	*ENTRE*	(1) if the individual has entrepreneurial experience, and (0) otherwise.
Household income	*HINC*	Seven-point scale: (1) < 1 million yen, (2) 1−3 million yen, (3) 3−5 million yen, (4) 5−10 million yen, (5) 10−20 million yen, (6) 20−50 million yen, and (7) 50 million yen+.
Cash and deposits	*CASH*	Seven-point scale: (1) < 1 million yen, (2) 1−3 million yen, (3) 3−5 million yen, (4) 5−10 million yen, (5) 10−20 million yen, (6) 20−50 million yen, and (7) 50 million yen+.
Assets other than cash and deposits	*ASSET*	Seven-point scale: (1) < 1 million yen, (2) 1−3 million yen, (3) 3−5 million yen, (4) 5−10 million yen, (5) 10−20 million yen, (6) 20−50 million yen, and (7) 50 million yen+.
Debt	*DEBT*	Seven-point scale: (1) < 1 million yen, (2) 1−3 million yen, (3) 3−5 million yen, (4) 5−10 million yen, (5) 10−20 million yen, (6) 20−50 million yen, and (7) 50 million yen+.
Gender	*FEMALE*	(1) if the individual is female, and (0) if the individual is male.
Age	ln*AGE*	Logarithm of *AGE* (*AGE* is the individual's age).
Married	*MARRIED*	(1) if the individual is married, and (0) otherwise.
Number of children	*NCHILD*	Four-point scale: (0) no children, (1) one child, (2) two children, (3) three children, and (4) four or more children.

Table 2: Descriptive statistics of variables

Variables	*N*	Mean	S.D.	Min.	p25	Median	p75	Max.
SATISF	6,092	3.13	1.12	1.00	2.00	3.00	4.00	5.00
ENTRE	6,092	0.10	0.30	0.00	0.00	0.00	0.00	1.00
HINC	5,220	3.59	1.00	1.00	3.00	4.00	4.00	7.00
CASH	4,789	2.76	1.73	1.00	1.00	2.00	4.00	7.00
ASSET	4,222	2.68	1.90	1.00	1.00	2.00	4.00	7.00
DEBT	5,145	1.85	1.49	1.00	1.00	1.00	2.00	7.00
FEMALE	6,092	0.41	0.49	0.00	0.00	0.00	1.00	1.00
AGE	6,092	45.26	13.32	18.00	35.00	45.00	55.00	79.00
MARRIED	6,092	0.68	0.47	0.00	0.00	1.00	1.00	1.00
NCHID	6,092	1.03	1.11	0.00	0.00	1.00	2.00	4.00

Notes: *N* indicates the number of observations. S.D. indicates standard deviation.

Table 3: Estimation results of the GSEM: Main results

Variable	*SATISF*	*WEALTH*$^{\#}$	*DEBT*$^{\#}$	*HINC*	*CASH*	*ASSET*	*DEBT*
ENTRE	−0.115**	0.283***	0.278***				
	(0.048)	(0.032)	(0.076)				
WEALTH$^{\#}$	0.528***			1	2.882***	2.815***	
	(0.035)			Const.	(0.198)	(0.176)	
DEBT$^{\#}$	−0.068**						1
	(0.026)						Const.
cut1	−1.378***			−0.764***	−0.196***	−2.408***	0.662***
	(0.024)			(0.047)	(0.037)	(0.051)	(0.027)
cut2	−0.511***			0.310***	0.518***	−1.198***	1.110***
	(0.018)			(0.038)	(0.044)	(0.026)	(0.029)
cut3	0.088***			1.004***	1.038***	−0.191***	1.570***
	(0.018)			(0.054)	(0.057)	(0.020)	(0.032)
cut4	1.583***			1.834***	1.656***	1.244***	1.835***
	(0.027)			(0.083)	(0.077)	(0.026)	(0.035)
cut5				2.639***	2.365***	2.496***	2.314***
				(0.114)	(0.102)	(0.052)	(0.042)
cut6				4.020***	3.542***	3.206***	3.622***
				(0.177)	(0.151)	(0.093)	(0.094)
Var(error)		0.345***	1				
		(0.025)	Const.				
Cov(error)		−0.022					
		(0.018)					
N	6,092						
LL	−35417.6						

Notes: Standard errors in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. *N* indicates the number of observations. *LL* indicates the log-likelihood. Variables with superscript # are latent variables.

Table 4: Decomposition of the total effect of entrepreneurship experience on subjective well-being: Main results

	Coef.	S.E.	|z|	p
Direct effect	−0.115	0.048	2.390	0.017
Indirect effect	0.131	0.021	6.310	0.000
via *WEALTH*#	0.149	0.019	8.000	0.000
via *DEBT*#	−0.019	0.009	2.100	0.035
Total effects	0.016	0.047	0.330	0.741

Notes: S.E. indicates standard error. The number of observations is 6,092. Variables with superscript # are latent variables.

Table 5: Estimation results of the GSEM: Results with personal attributes

	SATISF	*WEALTH*$^{\#}$	*DEBT*$^{\#}$	*HINC*	*CASH*	*ASSET*	*DEBT*
ENTRE	−0.083*	0.177***	0.216***				
	(0.049)	(0.029)	(0.078)				
FEMALE	0.063*	−0.184***	−0.851***				
	(0.038)	(0.019)	(0.053)				
ln*AGE*	−0.461***	0.551***	−0.701***				
	(0.058)	(0.035)	(0.089)				
MARRIED	0.399***	0.135***	0.452***				
	(0.048)	(0.029)	(0.081)				
NCILD (=0)	Omitted	Omitted	Omitted				
NCHILD (=1)	−0.005	−0.034	0.292***				
	(0.053)	(0.032)	(0.089)				
NCHILD (=2)	0.096**	−0.019	0.367***				
	(0.048)	(0.029)	(0.081)				
NCHILD (=3)	0.146**	−0.098***	0.569***				
	(0.062)	(0.037)	(0.100)				
NCHILD (=4)	0.177	−0.216***	0.477**				
	(0.133)	(0.081)	(0.215)				
WEALTH$^{\#}$	0.557***			1	2.699***	3.202***	
	(0.040)			Const.	(0.153)	(0.216)	
DEBT$^{\#}$	−0.103***						1
	(0.027)						Const.
cut1	−1.400***			−0.334**	4.810***	6.350***	−1.775***
	(0.189)			(0.130)	(0.375)	(0.513)	(0.321)
cut2	−0.516***			0.864***	5.812***	7.123***	−1.295***
	(0.188)			(0.127)	(0.393)	(0.535)	(0.321)
cut3	0.095			1.864***	6.466***	7.689***	−0.793**
	(0.188)			(0.128)	(0.405)	(0.552)	(0.321)
cut4	1.613***			3.289***	7.250***	8.365***	−0.502
	(0.189)			(0.134)	(0.421)	(0.574)	(0.321)
cut5				4.529***	8.013***	9.142***	0.019
				(0.144)	(0.439)	(0.600)	(0.321)
cut6				5.225***	9.306***	10.42***	1.391***
				(0.165)	(0.472)	(0.644)	(0.331)
Var(error)		0.278***	1				
		(0.021)	Const.				
N	6,092						

Notes: Standard errors in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. *N* indicates the number of observations. Variables with subscript # are latent variables.

Table 6: Decomposition of the total effect of entrepreneurship experience on subjective well-being: Results with personal attributes

	Coef.	S.E.	|z|	p
Direct effect	−0.083	0.049	1.710	0.088
Indirect effect	0.069	0.020	3.430	0.001
via *WEALTH*#	0.096	0.017	5.600	0.000
via *DEBT*#	−0.027	0.011	2.480	0.013
Total effects	−0.014	0.048	−0.290	0.773

Notes: S.E. indicates standard error. The number of observations is 6,092. Variables with superscript # are latent variables.

Table A1: Estimation results of the GSEM: Results divided into three wealth factors

	SATISF	*HINC*#	*CASH*#	*ASSET*#	*DEBT*#	*HINC*	*CASH*	*ASSET*	*DEBT*
ENTRE	−0.222***	0.255***	0.498***	0.766***	0.278***				
	(0.054)	(0.068)	(0.071)	(0.074)	(0.076)				
HINC#	0.245***					1			
	(0.026)					Const.			
CASH#	0.170***						1		
	(0.033)						Const.		
ASSET#	0.157***							1	
	(0.035)							Const.	
DEBT#	−0.106***								1
	(0.028)								Const.
cut1	−1.410***					−2.966***	−0.584***	−0.156***	0.661***
	(0.026)					(0.060)	(0.027)	(0.029)	(0.027)
cut2	−0.524***					−1.479***	0.195***	0.369***	1.108***
	(0.019)					(0.031)	(0.027)	(0.029)	(0.029)
cut3	0.090***					−0.241***	0.711***	0.752***	1.569***
	(0.018)					(0.026)	(0.028)	(0.030)	(0.032)
cut4	1.619***					1.504***	1.326***	1.218***	1.835***
	(0.029)					(0.031)	(0.031)	(0.032)	(0.035)
cut5						3.003***	1.908***	1.761***	2.315***
						(0.060)	(0.037)	(0.037)	(0.042)
cut6						3.834***	2.844***	2.618***	3.627***
						(0.109)	(0.056)	(0.052)	(0.094)
Var(error)		1	1	1	1				
		Const.	Const.	Const.	Const.				
N	6,092								

Notes: Standard errors in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. *N* indicates the number of observations.

Variables with superscript # are latent variables.

Table A2: Decomposition of the total effect of entrepreneurship experience on subjective well-being: Results divided into three wealth factors

	Coef.	S.E.	|z|	p
Direct effect	−0.222	0.054	4.100	0.000
Indirect effect	0.238	0.033	7.210	0.000
via *HINC*#	0.062	0.018	3.490	0.000
via *CASH*#	0.085	0.020	4.170	0.000
via *ASSET*#	0.120	0.029	4.110	0.000
via *DEBT*#	−0.029	0.011	2.640	0.008
Total effects	0.016	0.048	0.330	0.738

Notes: S.E. indicates standard error. The number of observations is 6,092. Variables with superscript # are latent variables.

Table A3: Estimation results of the GSEM: Results with personal attributes and without individual cash and assets

	SATISF	*HINC*#	*DEBT*#	*HINC*	*DEBT*
ENTRE	−0.023	0.180***	0.213***		
	(0.052)	(0.069)	(0.078)		
FEMALE	0.018	−0.436***	−0.855***		
	(0.039)	(0.043)	(0.053)		
ln*AGE*	−0.118**	−0.337***	−0.703***		
	(0.059)	(0.075)	(0.089)		
MARRIED	0.281***	0.733***	0.457***		
	(0.053)	(0.067)	(0.081)		
NCHILD (=0)	Omitted	Omitted	Omitted		
NCHILD (=1)	0.0497	−0.135*	0.282***		
	(0.057)	(0.076)	(0.089)		
NCHILD (=2)	0.0625	0.177***	0.359***		
	(0.052)	(0.069)	(0.080)		
NCHILD (=3)	0.112*	0.115	0.566***		
	(0.066)	(0.087)	(0.099)		
NCHILD (=4)	0.112	−0.028	0.471**		
	(0.142)	(0.190)	(0.215)		
HINC#	0.335***			1	
	(0.028)			Const.	
DEBT#	−0.207***				1
	(0.031)				Const.
cut1	−1.421***			−4.003***	−1.788***
	(0.191)			(0.278)	(0.321)
cut2	−0.529***			−2.452***	−1.310***
	(0.190)			(0.272)	(0.321)
cut3	0.0886			−1.146***	−0.803**
	(0.190)			(0.270)	(0.321)
cut4	1.621***			0.667**	−0.507
	(0.191)			(0.271)	(0.321)
cut5				2.188***	0.0217
				(0.276)	(0.321)
cut6				3.016***	1.420***
				(0.289)	(0.331)
Var(error)		1	1		
		Const.	Const.		
Cov(error)		0.232***			
		(0.037)			
N	6,092				
LL	−21322.5				

Notes: Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. *N* indicates the number of observations. *LL* indicates the log-likelihood. Variables with superscript # are latent variables.

Table A4: Decomposition of the total effect of entrepreneurship experience on subjective well-being: Results with personal attributes and without individual cash and assets

	Coef.	S.E.	|z|	p
Direct effect	−0.022	0.052	−0.430	0.664
Indirect effect	0.016	0.028	0.580	0.562
via $HINC^{\#}$	0.060	0.024	2.550	0.011
via $DEBT^{\#}$	−0.044	0.017	−2.540	0.011
Total effects	−0.006	0.049	−0.130	0.895

Notes: S.E. indicates standard error. The number of observations is 6,092. Variables with superscript # are latent variables.

Figure 1: Subjective well-being by entrepreneurial experience

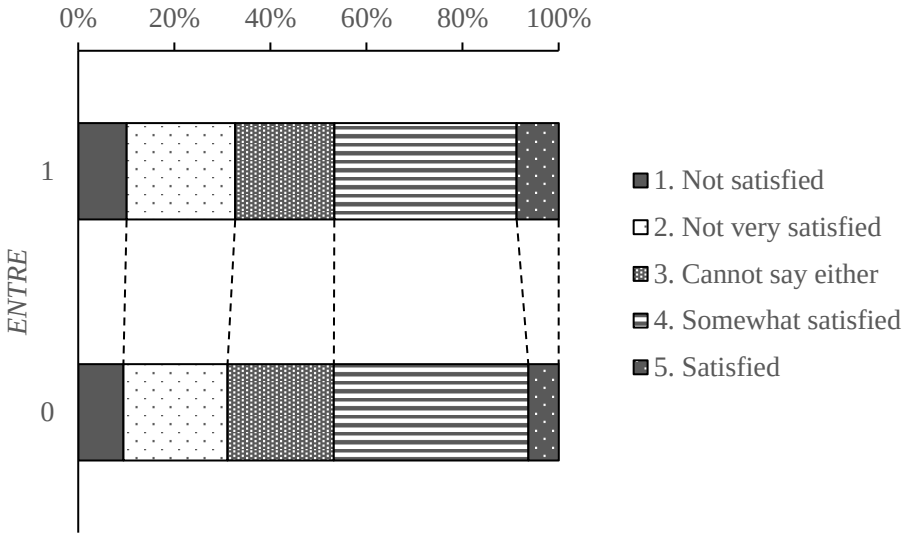
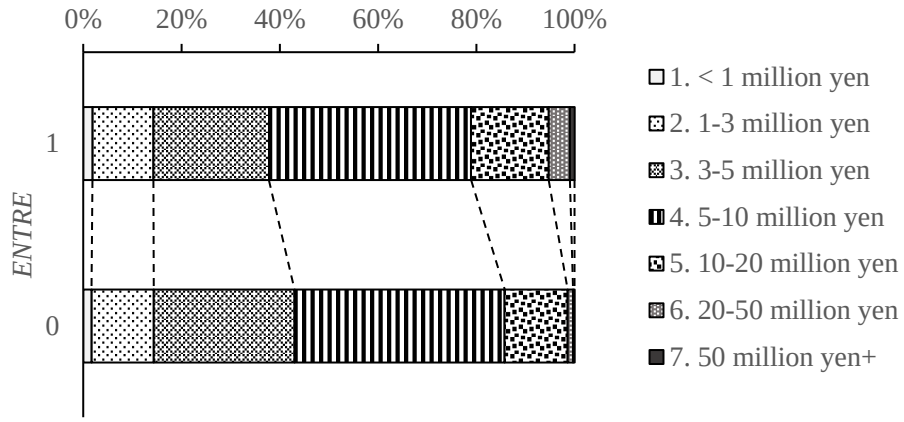
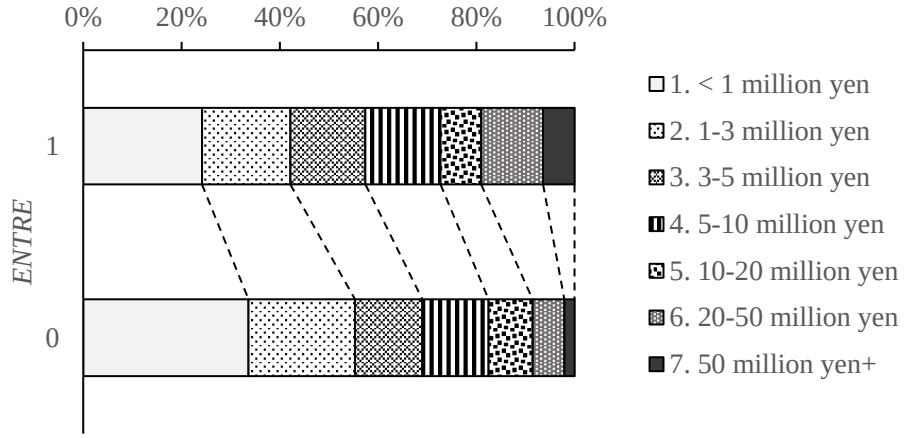


Figure 2: Wealth by entrepreneurial experience

(a) Household income



(b) Cash and deposits



(c) Assets other than cash and deposits

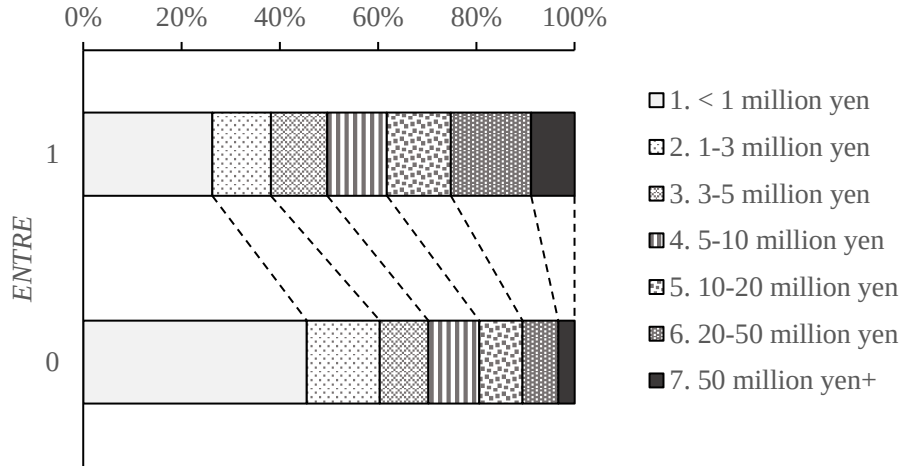


Figure 3: Debt by entrepreneurial experience

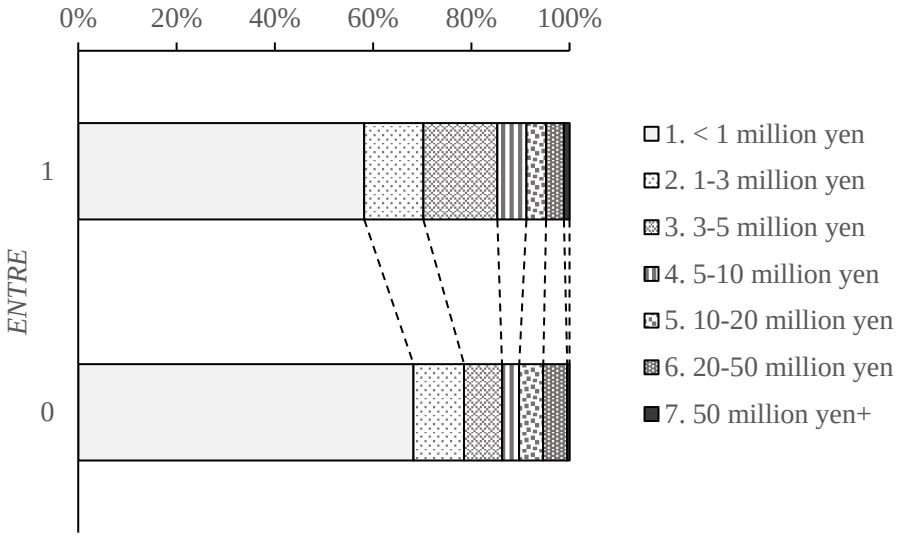
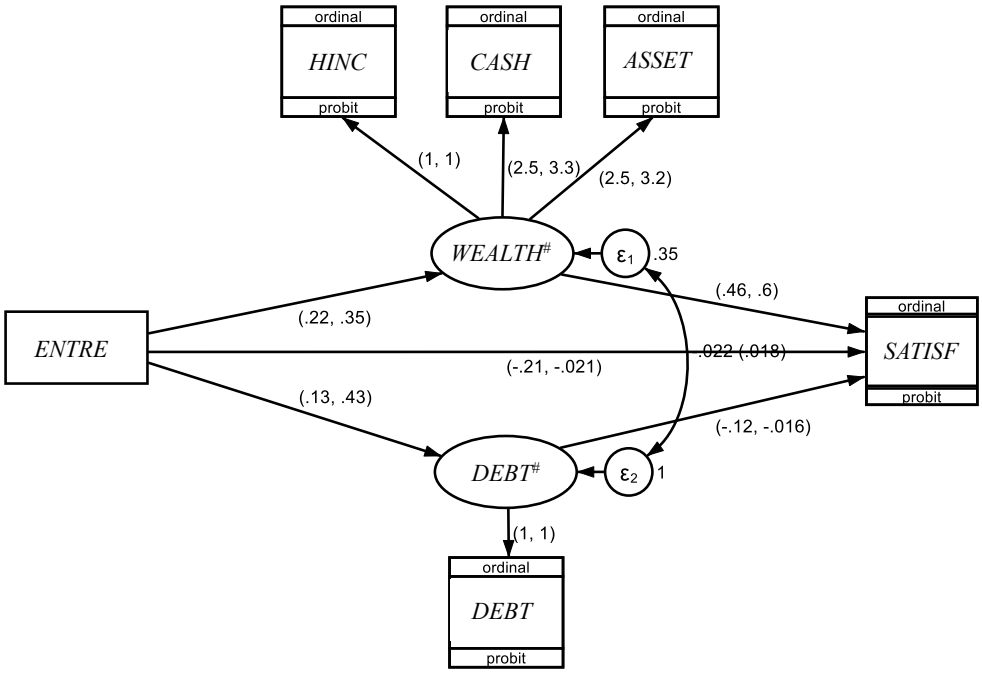


Figure 4: Path diagram of main results of the GSEM



Notes: The definitions of variables are presented in Table 2. Variables with superscript # are latent variables. ε_1 and ε_2 are error terms. 95% confidence intervals of the estimated coefficients are in parentheses adjacent to arrows. The numbers outside error terms (circle) indicate the variance of errors. The number adjacent to double-headed arrows and the number in parentheses indicate covariates and its standard error, respectively.