



Are the relationships between fear of failure, self-efficacy, entrepreneurial motivation and happiness of entrepreneurs moderated by gender?

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Abstract:

This thesis uses survey data from the Global Entrepreneurship Monitor 2013 and multilevel ordinal regressions to investigate whether perceptual variables (fear of failure, self-efficacy) influence happiness and if gender has a moderating effect on the relationships between entrepreneurial motivation, perceptual variables and happiness. Results indicate that perceptual variables have an effect on the happiness of entrepreneurs, that there are no moderation effects of gender on the relationship between perceptual variables and happiness. However, gender does seem to lessen the adverse effects of necessity entrepreneurship on happiness but does not seem to moderate the relationship between opportunity motive and subsequent happiness.

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1. Introduction

This study explores the interaction between gender, self-efficacy, fear of failure, entrepreneurial motivational factors and their relationship to happiness.

Happiness has become a much studied subject in recent years. An important reason for this, is that happiness can be used in multiple sciences such as sociology, psychology and economics (Graham, 2005). Research in economics pertaining to happiness has identified several determinants of subjective well-being or happiness. Employment stands out as a factor that systematically influences subjective well-being. Unemployed people are significantly less happy than other individuals when controlled for other factors such as income (Clark, Georgellis & Sanfey, 2001). Employment seems to create value beyond the income it generates.

Furthermore, wage-workers report to be less satisfied with work compared to self-employed people and sometimes wage-workers also report lower levels of life satisfaction (Benz and Frey, 2004; Blanchflower & Oswald, 2004; Block & Koellinger, 2009). Arguments for self-employed being happier are the non-monetary benefits of being your own boss, having more autonomy and having more flexibility in regard to time management. Benz and Frey (2008) argued that a link between self-employment and happiness is caused by 'procedural utility'. Procedural utility indicates that people value the process that leads to the outcome as well as the outcome.

While self-employed people seem to always be more satisfied with their job, the same is not the case for life satisfaction. The relationship between well-being and self-employment seems ambiguous (Blanchflower & Oswald, 2004; Block & Koellinger, 2009). This may be because the self-employed face more stress and are at higher risk of failures like losing their job. Self-employed people might also be forced into self-employment instead of staying in unemployment. Block and Koellinger (2009) found that nascent entrepreneurs that started a business out of necessity to avoid long-term unemployment were less satisfied with their business compared to those who did so out of opportunity. It seems that procedural utility encompasses more than just the job itself and even the process leading towards the decision to become self-employed.

According to Arenius & Minniti (2005) the proclivity to entrepreneurship is determined by different factors; some of these factors include an individual's judgement and perception about entrepreneurship. These judgements are shaped by the presence of perceptions about self-efficacy, risk tendency, alertness to opportunities and role models. The variables describing these personal

judgements and perceptions about the entrepreneurial environment and the ability to become an entrepreneur are referred to as perceptual variables (Arenius & Minniti, 2005). Variables like fear of failure and self-efficacy meaningfully influence the choice to become an entrepreneur (Arenius & Minniti, 2005).

Gender seems to play a substantial mediating role in entrepreneurship. The ratio of female entrepreneurs is significantly lower than the ratio of male entrepreneurs (Kelley, Baumer, Brush, Greene, Mahdavi, Majbouri & Heavlow, 2017). This might be because there are some gender-specific barriers in place that inhibit women from becoming an entrepreneur. Women have a harder time procuring financial resources to start a business (Marlow & Patton, 2005). Another reason could be that gender influences perception; women perceive themselves and the entrepreneurial environment more negatively (Langowitz & Minniti, 2007). Nevertheless, when it comes to happiness when related to life and job satisfaction, women seem to score higher than men. What is curious is that the relationships between entrepreneurial intention, gender, perception and happiness have not been extensively researched. Therefore this paper will have the following research questions:

Do the perceptual variables influence the happiness of entrepreneurs?

Does gender act as a moderator between perceptual variables and the happiness of entrepreneurs?

Does gender act as a moderator on the relationship between entrepreneurial intention and happiness?

2. Theoretical background & hypothesis development

2.1. Well-being, happiness and life satisfaction

Happiness has become a much studied topic in recent economic literature. The terms subjective well-being, life satisfaction and happiness have been associated with each other and used interchangeably (Easterlin, 2004), therefore in this thesis these terms will also be used interchangeably.

Well-being is a broad subject; therefore, much research has been done to identify and measure what influences well-being and not just in economic literature. Well-being cannot solely be linked to economics; it also has other scopes such as human rights, environmental factors and social aspects (Graham, 2005). Happiness or well-being encompasses many life domains and is influenced by a vast number of factors, it is not surprising that there has been no consensus in how to measure or define it precisely. Besides being a broad subject, it is hard to measure, in part because of the emotional aspects; according to Diener (1994) happiness has emotional determinates. Furthermore, people differ in what makes them happy and what contributes most to their well-being. Andrews and Withey (2012) state that the people have various and diverse sources of happiness and different measure of success in life.

Economic literature about happiness divides measures pertaining to well-being in objective and subjective measures (McGillivray, 2007). Objective indicators aim to define life satisfaction through indicators like income or education. Subjective measures aim to define well-being or life satisfaction by people's perception. Early economic research in well-being used economic factors such as GDP and income (McGillivray, 2007). Later research adds more factors such as education, health and some social factors (McGillivray, 2007). Subjective measure usually consist of data about an individual's perception. Subjective happiness can be split up into two components; either affective or cognitive happiness (Schimmack, Schupp & Wagner, 2008). Cognitive happiness refers to what a person thinks about their well-being in global terms (life as a whole), but also in domain term specific areas such as relationships or work. Affective happiness refers to moods, emotions and feelings.

Frey and Stutzer (2002) make a case for economists to incorporate subjective well-being into research their reasoning is that happiness is strongly related to utility and can be used as a proxy for utility. Furthermore, they argue that incorporating happiness allows economists to increase the amount of empirical research that can be conducted and gives a new option to test previous theories.

2.2. Entrepreneurial activity and happiness

Literature about entrepreneurs has defined two conditions to identify an entrepreneur. One condition is occupational, a person who manages and owns a business. The second is a behavioural condition; when a person seizes an economic opportunity (Sternberg & Wennekers 2005). The Global Entrepreneurship Monitor (GEM) combines these definitions and uses them as a basis for its research and data collection (Reynolds, Bosma, Autio, Hunt, De Bono, Servais & Chin, 2005). Creating a new venture is seen as a vital factor for entrepreneurship by GEM (Sternberg & Wennekers 2005). Entrepreneurs are considered a heterogeneous group of individuals. Therefore, various entrepreneurial research papers focus on finding determinants of entrepreneurship and the subsequent factors that influence the well-being of entrepreneurs.

Most research on the relationship between life satisfaction and entrepreneurship lays the focus on the differences in well-being between entrepreneurs and waged workers. In various studies self-employment is used as a proxy for entrepreneurship. Entrepreneurs are, in general, less susceptible to negative emotions than employees (Benz & Frey, 2008; Blanchflower & Oswald, 1999). Benz & Frey (2004) observed that certain factors of being self-employed increase well-being. Things like being independent, not having a boss and having control over working hours. Benz & Frey (2008) argued that the link between well-being and self-employment could be explained by "procedural utility". Procedural utility reveals that people value not just the outcome, but also the process. Scholars have also taken into account the heterogeneity of entrepreneurs and tried to find different determinants of happiness for entrepreneurs. When it comes to distinguishing entrepreneurs, motivation is often used, various research papers separate entrepreneurship between entrepreneurs who start out of necessity and entrepreneurs who engage in entrepreneurship because they pursue an opportunity. Block & Koellinger (2009) found that necessity entrepreneurs were less happy than opportunity entrepreneurs when other factors such as income are controlled for, this coincides with the theory of procedural utility, where the process and having autonomy are significant to well-being.

2.3. Perceptual variables

Arenius & Minniti (2005) show the significance of perceptual variables as a factor when it comes to predicting which individuals become entrepreneurs. The engagement in entrepreneurial activity is determined by diverse factors; some of these factors include an individual's judgement and perception about entrepreneurship. These judgements are shaped by the presence of perceptions about self-efficacy, risk tendency, alertness to opportunities and role models. The variables describing these personal judgements and perceptions about the entrepreneurial environment and the ability to

become an entrepreneur are referred to as perceptual variables (Arenius & Minniti, 2005). In this thesis, fear of failure and self-efficacy will be studied as perceptual variables since they relate the most towards life satisfaction.

2.3.1. Fear of failure

Most studies about fear in entrepreneurship pertain to fear of failure although a small number of research papers has focussed on general feelings of worry, anxiety and fear (Cacciotti & Hayton, 2015). In research fear of failure is usually seen as a determinant of an individual's inclination to engage in entrepreneurial activity. Furthermore, a great amount of entrepreneurship literature uses Global Entrepreneurship Monitor (GEM) data and use an individual item to measure fear of failure in this regard. Arenius & Minniti (2005) show fear of failure negatively influences the decision to become an entrepreneur.

Fear of failure is also studied from a psychological viewpoint, This school of thought identifies fear of failure as an unpleasant feeling or emotion (Cacciotti, Hayton, Mitchell, Giazitzoglu, 2016). Another stream of research uses a social perspective combined with a psychological one to analyse fear of failure. Here it is seen as a characteristic that influence how much one values the rewards and punishments in a social setting and can also be seen as risk aversion (Cacciotti, Hayton, Mitchell, Giazitzoglu, 2016). Fear of failure seems to negatively affect entrepreneurial engagement in general (Hessels, Grilo, Thurik, & Van der Zwan, 2011). However, when relating fear of failure to the wellbeing of entrepreneurs, there is surprisingly little research.

Most research about fear of failure and entrepreneurship lays the focus on the decision to engage in entrepreneurship, instead of asking the question if there is a negative effect on people who are already engaged in entrepreneurial behaviour. This paper will use GEM single item measure; therefore, fear of failure can be related to risk aversion, perception about the consequences of failing including negative feelings. There has been some qualitative research that hypothesises that fear of failure hurts wellbeing through feelings of fear and anxiety (Hayton, Cacciotti, Giazitzoglu, Mitchell & Ainge, 2013). It seems that that fear of failure as an entrepreneur would lead to excessive stress since entrepreneurship is an occupation where someone can fail in multiple areas, at multiple times and experience stress and avoidance behaviour (Cacciotti, Hayton, Mitchell, & Giazitzoglu, 2016). Therefore, the following hypothesis is formed.

H1: Fear of failure is negatively related to the happiness of entrepreneurs.

2.3.2. Self-efficacy

Self-efficacy stand for a person's believe in their ability to perform a task. The concept was first brought to attention by Bandura (1977). Self-efficacy is a relevant topic in entrepreneurship because a potential entrepreneur's perception of their skills is an indicator of who becomes an entrepreneur, individuals with a higher amount of self-efficacy are more likely to become entrepreneurs (Arenius & Minniti, 2005; Krueger, Reilly & Carsrud, 2000). Besides the decision to become an entrepreneur, self-efficacy also influences subjective well-being both directly and through mediating the effects on personality (Strobel, Tumasjan, & Spörrle, 2011). Self-efficacy seems to be positively linked to both the decision to become an entrepreneur and life satisfaction. Therefore, the following hypothesis is formed.

H2: Self-efficacy is positively related to the happiness of entrepreneurs.

2.4. Gender

Entrepreneurship is becoming more popular among women as a source of employment. However, the rate of entrepreneurship for men is still significantly higher than the rate of entrepreneurship of women in most countries (Kelley, Baumer, Brush, Greene, Mahdavi, Majbouri & Heavlow, 2017). There could be a couple of reasons for this. It might be the case that there are specific barriers in place that inhibit women from becoming entrepreneurs. Marlow & Patton (2005) find that female entrepreneurs experience barriers associated with their gender when procuring finance. Starting a business is usually more complicated for women and women are generally more sensitive to nonmonetary variables (Bird & Brush, 2002; Burke, FitzRoy, & Nolan, 2002). According Langowitz & Minniti (2007) Perceptual variables like fear of failure and self-efficacy explain most of the difference in entrepreneurial behaviour between the genders. Research has established that men are more likely to rate their self-efficacy and risk tolerance higher (Díaz-García & Jiménez-Moreno 2010; Verheul, Thurik, Grilo & Zwan, 2012). Carree & Verheul (2012) display that female entrepreneurs find it more difficult to handle stress. Men and women are in general, impacted by the same perceptual variables when it comes to entrepreneurship, but the size of the effect differs (Langowitz & Minniti, 2007; Marlow & Patton, 2005). Since women seem to experience the entrepreneurial environment as less favourable, and the effect size of perceptual variables differs when compared to men, which suggest that there is a mediating effect on the decision to become an entrepreneur, the following hypotheses are formed.

H3: Gender moderates the relationship between fear of failure and happiness by amplifying its adverse effects on happiness.

H4: Gender moderates the relationship between self-efficacy and happiness by decreasing its positive effects on happiness.

When taking into account all the difficulties that women experience when it comes to entrepreneurship, it would make sense that women are less satisfied with being an entrepreneur, being self-employed or even being employed. However, since sex or gender is usually taken as a control variable, we can see that women are usually more satisfied with startups, jobs and life. The results of Benz & Frey (2008) show that between self-employed and employed people; women are more satisfied with life. Women have higher rates of subjective well-being (Blanchflower & Oswald, 2004;) Block & Koellinger (2009) establish that women rate satisfaction with their startup higher. Likewise, women rate their job satisfaction higher (Blanchflower & Oswald, 1999; Blanchflower, 2004). Women seem to be motivated more by different things; women are more socially motivated to become entrepreneurs (McClelland, Swail, Bell, & Ibbotson, 2005). It does seem odd that female entrepreneurs are generally happier compared to their male counterparts. There are some explanations for this. Women are more satisfied with their income compared to men, even when they generally earn less (Carree & Verheul, 2012). This might be because they have been motivated more by social reasons, or that they have lower expectations when it comes to entrepreneurship. Little to no research has been dedicated to seeing if women and men have different rates of happiness based on motivational factors of entrepreneurship. Gender has only been used as a control variable in most entrepreneurial literature when related to happiness and not as a specification variable (Liu, & Veenhoven, 2018). Therefore following hypotheses are formed to see if men and women have different reactions to the motivational aspects of starting a business when related to life satisfaction.

H5: Gender moderates the effects of necessity entrepreneurship on happiness by dampening the adverse effects of necessity entrepreneurship.

H6: Gender moderates the effects of opportunity entrepreneurship on happiness by strengthening the positive effects of opportunity entrepreneurship.

The moderation effects of gender are hypothesized to have a positive effect on entrepreneurial motivation. For one since women seem to be more satisfied with entrepreneurship in general; when

they self-select into entrepreneurship. Furthermore, since women usually have more socially motivated reasons to start entrepreneurship, it might be the case that they experience opportunity entrepreneurship as more conducive to happiness and experience less adverse effect to happiness from a necessity motive.

3. Data

The population of this study will be a population of entrepreneurs since this study focusses on the effect of motivational and perceptual variables on the happiness of entrepreneurs. The data comes from the 2013 survey of the Global Entrepreneurship Monitor (GEM). Every year GEM collects survey data from adults around the world. The survey data from 2013 is used because GEM included questions about life satisfaction in the survey of 2013.

3.1. sampling

The Global Entrepreneurship Monitor data is sampled in two stages. In the first stage countries are chosen, this is done through self-selection, where countries choose whether they want to participate. The second stage is randomly sampling adults within the population of each country. The second stage sample is a representation of the adults within a country; hence, it includes entrepreneurs. This enables findings to be generalised to entrepreneurs across the world. This study will use only entrepreneurs in the sample. Ranging from nascent entrepreneurs to established entrepreneurs. According to GEM nascent entrepreneurs are people have been taking the steps to start their own business in the past twelve months. Established entrepreneurs are entrepreneurs who manage and own a business for more than three and a half years. Data from seventy countries will be used, see appendix table I for a full list of countries.

3.2. Measures

Happiness

Happiness has like previously said been related to many things. This study will relate happiness to life satisfaction. In this thesis a single-item scale will be used since single item measures are significantly, highly and positively correlated with multi-item scales; while also being highly and positively correlated to hope, extraversion, optimism, self-esteem, positive self-ratings of mental and physical health (Abdel-Khalek, 2006). Single-item scales have also been shown to be reliable when used for cross-cultural comparisons (Abdel-Khalek, 2006).

The response to the following statement will measure well-being: "I am satisfied with my life." Respondents could reply based on a five-point scale ranging from 5 "strongly agree" to 1 "Strongly disagree."

Motivation

In the GEM survey, respondents were asked if they started a business out of opportunity, partly opportunity and partly out of necessity or purely out of necessity or for other reasons. To give an accurate image of motivations, the data from other reasons will be excluded. The data will be coded into three groups opportunity motive, partly opportunity motive and necessity motive, where partly opportunity motive will be used as a baseline for the dummy variables.

Gender

To test whether gender has a moderating effect, a binary variable for female will be included. Coded as "1" if female and "0" if male.

Entrepreneurial fear of failure

In the GEM questionnaire, the following question was asked: "Would fear of failure would prevent you from starting a business?" The respondents could answer with either yes or no. A dummy variable for fear of failure is used coded as "0" for no and "1" for yes.

Entrepreneurial self-efficacy

The variable for self-efficacy is added coded as "0" for no and "1" for yes. Respondents could answer the following question: "Do you have the knowledge, skill and experience required to start a new business?" The question was answered with either a yes or a no.

Interaction term

In order to test the hypotheses interaction terms between gender and motivation; between gender and self-efficacy; between gender and fear of failure will be used in addition to the variables themselves.

3.3. Control variables

Income

Income is coded as a categorical variable in the GEM dataset. The categories are based on national income. National income is split into three categories (Upper 33%, middle 33% and lowest 33%).

Income is used as a control variable since income is positively related to happiness (Easterlin, McVey, Switek, Sawangfa, & Zweig, 2010; Clark, Frijters, & Shields, 2008). Furthermore, According to

Keuschnigg & Nielsen (2004), income is one of the foremost factors that can differentiate early-stage entrepreneurs and established entrepreneurs, which means that it positively affects the probability of an entrepreneur to maintain his or her business and become an established entrepreneur. Income also influences necessity and opportunity entrepreneurship. Some people pursue entrepreneurship as a necessity when they cannot find a job and need income. While others pursue entrepreneurship as an opportunity to gain higher rewards (Eckhardt & Shane, 2003), all these factors make income a necessary control variable.

Age

Age is used as a control variable as well as a squared age term. Both variables are included to account for the U-shaped relationship between life satisfaction and age. Various research papers have found this relationship (Blanchflower & Oswald, 2004; Blanchflower & Oswald, 2008; Frijters & Beaton, 2012). Furthermore, Levesque & Minniti (2006) found an inverted U-shaped relation linking age and entrepreneurial engagement for both women and men alike, the period between 25 and 34 has the most entrepreneurial activity while declining afterwards. Additionally, Kautonen, Down, and Minniti (2014) found that the effect of age on entrepreneurial behaviour is smaller for necessity entrepreneurs.

Education

Education is included as a categorical variable with five categories (no education, some secondary, secondary degree, post-secondary degree and graduate experience).

Education is used as a control variable because being higher educated is associated with higher levels of well-being. Blanchflower & Oswald (2004) showed that happiness increases with more years of education and that the effect cannot solely be attributed to the higher earnings that more educated people enjoy. Furthermore, entrepreneurs with higher levels of education perform better than entrepreneurs with lower levels of education (Solomon, Dickson, Solomon, & Weaver, 2008). However, research found no conclusive proof in linking the relationship between education and entrepreneurship (Solomon et al., 2008).

Members of household

Members of household denote how many people in the same house as the respondent, including the respondent. The square root is used to reduce skew. It is used as a control variable since it can be used as a proxy for members who contribute to household income and income increases happiness.

3.4. Descriptive statistics

The standard deviations, means, observation frequencies and percentages are presented in Table II. The number of observations in the dependent variable life satisfaction consists of 38451 individuals ranging from nascent entrepreneurs to established entrepreneurs. The two answers “strongly agree” and “somewhat” agree seem to account for most of the answers in life satisfaction both 32.43% and 34.89% respectively. When it comes to the independent variables of interest we that there are more male entrepreneurs 60.62% versus 39.38% of female entrepreneurs. When it comes to entrepreneurial motivation, most entrepreneurs in the sample seem to be opportunity entrepreneurs (51.07%) a relatively small number of entrepreneurs who occupy a middle ground between opportunity and necessity (17.81%) and again there is a relatively large group of necessity entrepreneurs (31.11%). Most entrepreneurs seem to have self-efficacy (82.31%), and most entrepreneurs do not believe that fear of failure would prevent them from starting a business (71.2%). Furthermore, most of the entrepreneurs seem to have either secondary education (33.35%) or post-secondary education (29.25%). Most households seem to have four members with a standard deviation of two. Finally, Table III shows a correlation matrix with the variables that are used in this thesis.

Table II Descriptive statistics for entrepreneurship sample

| variable | Mean (SD) | frequency | percentage |
|----------------------------|---------------------|------------------|-------------------|
| life satisfaction | 3,751(1,209) | 38451 | |
| Strongly disagree | | 2556 | 6.65% |
| Somewhat disagree | | 4352 | 11.32% |
| Neither agree nor disagree | | 5660 | 14.72% |
| Somewhat agree | | 13414 | 34.89% |
| Strongly agree | | 12469 | 32.43% |
| Motivation | | 38451 | |
| Opportunity | | 19638 | 51.07% |
| Partly Opportunity | | 6849 | 17.81% |
| Necessity | | 11964 | 31.11% |
| Gender | 0,394(0,489) | 38451 | |
| Male | | 23310 | 60.62% |
| Female | | 15141 | 39.38% |
| Fear of failure | 0,288(0,453) | 38451 | |
| Yes | | 11073 | 71.20% |
| No | | 27378 | 28.80% |
| Self-efficacy | 0,8231(0,382) | 38451 | |
| Yes | | 31648 | 82.31% |
| No | | 6803 | 17.69% |
| Education | | 38451 | |
| None | | 6304 | 16.39% |
| Some secondary | | 6290 | 16.36% |
| Secondary | | 12825 | 33.35% |
| Post-secondary | | 11248 | 29.25% |
| Graduate degree | | 1784 | 4.64% |
| Income | | 38451 | |
| Lowest 33% | | 11559 | 30.17% |
| Middle 33% Upper 33% | | 11255 | 29.27% |
| Upper 33% | | 15597 | 40.56% |
| Age | 40,014(12,269) | 38451 | |
| Age² | 1707,611 (1016,375) | 38451 | |
| household size | 4.075(2.115) | 38451 | |

Table III Correlation matrix

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------|
| (1) | 1 | | | | | | | | | | | |
| (2) | 0.016* | 1 | | | | | | | | | | |
| (3) | -0.062* | -0.164* | 1 | | | | | | | | | |
| (4) | 0.117* | 0.052* | -0.059* | 1 | | | | | | | | |
| (5) | -0.026* | 0.036* | -0.014* | -0.484* | 1 | | | | | | | |
| (6) | -0.105* | -0.086* | 0.076* | -0.682* | -0.309* | 1 | | | | | | |
| (7) | 0.033* | -0.046* | 0.005* | -0.007 | -0.034* | 0.035* | 1 | | | | | |
| (8) | 0.042* | -0.065* | -0.005* | -0.002 | -0.035* | 0.031* | 0.982* | 1 | | | | |
| (9) | -0.039* | 0.076* | -0.030* | -0.039* | -0.005 | 0.046* | -0.235* | -0.253* | 1 | | | |
| (10) | 0.087* | 0.039* | 0.010* | 0.139* | 0.001 | -0.151* | -0.105* | -0.110* | -0.103* | 1 | | |
| (11) | 0.123* | 0.099* | -0.041* | 0.131* | -0.009 | -0.135* | -0.035* | -0.046* | 0.087* | 0.229* | 1 | |
| (12) | 0.001 | -0.129* | 0.070* | -0.033* | 0.006 | 0.031* | 0.020* | 0.023* | -0.007* | -0.030* | -0.071* | 1 |

| | | |
|------------------------------|-------------------------------------|-------------|
| (1) Life Satisfaction | (6) Necessity motive | (11) Income |
| (2) Self-efficacy | (7) age | (12) Female |
| (3) fear of failure | (8) Age ² | |
| (4) Opportunity motive | (9) (Household size) ^{1/2} | |
| (5) Party Opportunity motive | (10) Education | |

* $p < 0.05$

4. Methods

In order to test the different hypotheses mixed multilevel ordered probit regressions will be calculated using the “meoprobit” command in STATA. In the first place, an ordered probit model will be used to account for the nature of the dependent variable life satisfaction. Because the dependent variable contains ordinal data, an ordered probit model is a more robust method compared to other econometric techniques. A multilevel mixed effect model is used because it allows individuals to be nested within countries. The “mixed” part of the model refers to the combination of a random component and a “fixed” set of standard variables. In this case, the multilevel model assumes two levels with different estimates of error variances, (1) individual and (2) country. The “fixed” effect of level 1 refers to the coefficients on level 1 (individual level) covariates. As operationalised: self-efficacy, fear of failure, age, age2, the squared root of household size, education, income, gender and the interaction effects. At level 2 country is used to estimate the error variance based on an individual’s resident country. In short, the mixed-effects model allows controlling for country-specific random-effects as intercepts. The rest of the model can be interpreted as an ordinary ordinal probit regression. Equation (1) can be observed as looking at the latent linear response model underlying the probit model. Where Y^* can be seen as latent continuous responses, X_{ij} represents the fixed-effect covariates, β stands for the regression coefficients of the fixed-effects. X_{ij} Does not hold a constant term since the

constant term is absorbed by the cut-points. Denoted by μ_j is the random effect accounting for variation at level two and ε_{ij} stands for the random effect at level one.

$$Y_{ij}^* = X_{ij}\beta + \mu_j + \varepsilon_{ij} \quad (1)$$

Y is the dependent variable happiness measured from one to five. Y^* is latent; however, the relationship between Y^* and observed variable Y could be expressed as in equation (2), Where K_1 till K_5 are parameters of the unknown population that will be estimated.

$$Y_{ij} = \begin{cases} 1 & \text{if } -\infty < Y_{ij}^* \leq K_1 \\ 2 & \text{if } K_1 < Y_{ij}^* \leq K_2 \\ 3 & \text{if } K_2 < Y_{ij}^* \leq K_3 \\ 4 & \text{if } K_3 < Y_{ij}^* \leq K_4 \\ 5 & \text{if } K_4 < Y_{ij}^* \leq \infty \end{cases} \quad (2)$$

The first model will test the first two hypotheses and include self-efficacy and fear of failure, as well as the control variables. Consequent models will add interaction terms between gender, perceptual variables and entrepreneurial motivation to test the other hypotheses. In total, four multilevel ordinal probit models will be used to test the hypotheses.

5. Results

Table IV represents the main findings, including standard errors, coefficients and significance tests. The first model shows that there seems to be a significant positive effect for gender, coded 1 as female and 0 as male, there also seems to be a significant effect for both opportunity and a necessity motive. Where opportunity entrepreneurs report a higher life satisfaction score compared to necessity entrepreneurs, this is in line with previous findings.

Hypothesis 1 was tested by incorporating fear of failure into model 1. Fear of failure seems to have a negative coefficient of -0.111 and is significant at a 1% level. Therefore the first hypothesis is accepted. Fear of failure negatively affects the happiness of entrepreneurs.

Hypothesis 2 is tested in model 1. Self-efficacy has a coefficient of 0.068 and is significant at a 1% level. The second hypothesis is also accepted. Self-efficacy is positively related to the happiness of entrepreneurs

To test hypothesis 3, model 4 has an added interaction term between gender and fear of failure. However, the interaction term is not significant. Hypothesis 3 is rejected; gender does not seem to moderate the relationship between fear of failure and life happiness.

Hypothesis 4 is tested by model 3, where an interaction term between gender and self-efficacy is added. However, the coefficient for the interaction term is insignificant. Therefore, hypothesis 4 is rejected. Gender does not moderate the relationship between self-efficacy and the happiness of entrepreneurs.

Hypothesis 5 is tested in model 2 by the interaction term between necessity motive and gender. The coefficient is 0.093 and significant at a 1% level. This means that female necessity entrepreneurs are happier compared to male necessity entrepreneurs. Therefore hypothesis 5 is accepted. Gender moderates the relationship between necessity motive and the happiness of entrepreneurs by diminishing the adverse effects that necessity motive has on happiness.

Hypothesis 6 is tested by the interaction term between gender and opportunity motive in model 2. However, since the coefficient of the interaction term is insignificant hypothesis 6 is rejected. Gender does not moderate the relationship between opportunity motive and the happiness of entrepreneurs.

Table IV Life Satisfaction for entrepreneurs, Multilevel Ordered Probit Regressions

| variable | Life satisfaction | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|-------------------------------------|-------------------------------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| | | Coefficient | Std. Err. | Coefficient | Std. Err. | Coefficient | Std. Err. | Coefficient | Std. Err. |
| Motive | | | | | | | | | |
| | Opportunity | 0.149** | 0.016 | 0.138** | 0.020 | 0.149** | 0.016 | 0.149** | 0.016 |
| | Necessity | -0.079** | 0.017 | -0.118** | 0.022 | -0.079** | 0.017 | -0.080** | 0.017 |
| | Opportunity*Female | | | 0.025 | 0.031 | | | | |
| | Necessity*Female | | | 0.093** | 0.033 | | | | |
| Self-efficacy | | | | | | | | | |
| | Yes | 0.068** | 0.015 | 0.067** | 0.015 | 0.079** | 0.019 | 0.068** | 0.015 |
| | yes*Female | | | | | -0.025 | 0.029 | | |
| Fear of failure | | | | | | | | | |
| | yes | -0.111** | 0.013 | -0.111** | 0.013 | -0.111** | 0.013 | -0.124** | 0.016 |
| | Yes*Female | | | | | | | 0.033 | 0.025 |
| Gender | | | | | | | | | |
| | Female | 0.024* | 0.012 | -0.014 | 0.003 | 0.045 | 0.026 | 0.014 | 0.014 |
| Age | | | | | | | | | |
| | Age | -0.014** | 0.003 | -0.014** | 0.000 | -0.014** | 0.003 | -0.014** | 0.003 |
| Age2 | | | | | | | | | |
| | Age2 | 0.001** | 0.000 | 0.001** | 0.000 | 0.001** | 0.000 | 0.001** | 0.000 |
| household-size^{1/2} | | | | | | | | | |
| | household-size ^{1/2} | 0.029* | 0.012 | 0.029* | 0.012 | 0.029* | 0.012 | 0.029* | 0.012 |
| Education | | | | | | | | | |
| | Some secondary | 0.028 | 0.020 | 0.028 | 0.020 | 0.028 | 0.020 | 0.028 | 0.020 |
| | Secondary | 0.038* | 0.019 | 0.037* | 0.019 | 0.038* | 0.019 | 0.038* | 0.019 |
| | Post-secondary | 0.014 | 0.021 | 0.013 | 0.021 | 0.014 | 0.021 | 0.014 | 0.021 |
| | Graduate degree | 0.068* | 0.033 | 0.067* | 0.033 | 0.068* | 0.033 | 0.068* | 0.033 |
| Income | | | | | | | | | |
| | Middle 33% | 0.128** | 0.015 | 0.128** | 0.015 | 0.128** | 0.015 | 0.128** | 0.015 |
| | Upper 33% | 0.248** | 0.015 | 0.248** | 0.015 | 0.248** | 0.015 | 0.248** | 0.015 |
| Observations | | 38451 | | 38451 | | 38451 | | 38451 | |

* $p < 0.05$, ** $p < 0.01$

6. Discussion & conclusion

Based on a gap in previous literature about the moderating effect of gender and the effects of perceptual variables, this thesis came to be. Based on the main findings it seems to be the case that most of the difference in happiness between female and male entrepreneurs can be explained by the fact that women experience less adverse effects to happiness from being a necessity entrepreneur. There seems to be a moderation effect when it comes to the necessity motive; however, the same cannot be said about the opportunity motive. Which leads me to conclude that women experience less of a negative effect on happiness if they become a necessity entrepreneur. When it comes to self-efficacy and fear of failure, both variables seem to act according to what was hypothesized. Self-efficacy is positively related to life satisfaction, and fear of fail failure is negatively related to life satisfaction. For self-efficacy, this falls in line with previous findings. Fear of failure seems not just related to the proclivity to become an entrepreneur, but also on subsequent levels of satisfaction. This

coincides with previous qualitative research that stated that fear of failure is negatively correlated to well-being (Hayton, Cacciotti, Giazitzoglu, Mitchell & Ainge, 2013). However, there does not seem to be a moderation effect of gender. While perceptual variables seem to explain much of the variance in female to male entrepreneurship rate (Langowitz & Minniti, 2007). There does not seem to be an adverse effect on happiness for the women compared to men who choose to become entrepreneurs, at least if when talking about fear of failure and self-efficacy. Women are more prone to experience fear of failure and have less self-efficacy (Díaz-García & Jiménez-Moreno 2010; Verheul, Thurik, Grilo & Van der Zwan, 2012), but they do not seem to experience more severe consequences on happiness compared to men who fear failure or who do not have a good level of self-efficacy.

This thesis tries to fill the gap in the literature when it comes to, fear of failure, self-efficacy and their relationship with happiness. The moderating effects of gender-related to factors that influence the happiness of entrepreneurs. While simultaneously trying to help people make more informed decisions about entrepreneurship and if it should be something they consider as an option.

6.1. Limitations

While this study does allow comparison of individual variables across different nations without the effect of respondent resident country happiness fixed effects to skew the results. The mixed multilevel ordered probit model does not account for different slopes in what determines happiness. It just allows for different intercepts. Furthermore, while the models account for the difference between countries, it does not allow comparisons between countries. Another limitation is that this thesis uses cross-sectional data, and while it does seem that there is a moderation effect, these results cannot be taken as causal. Future research should use panel data to explore the effects of fear of failure and self-efficacy on the happiness of entrepreneurs, as well as the moderating effects of gender. There is also a particular bias since previous research has pointed out that perceptual variables are explanatory for the differences in male and female entrepreneurial engagement rates. The differences in happiness might be caused because women are better at determining whether entrepreneurship is a fruitful endeavor for them personally. This does not seem likely since all of the differences are in necessity entrepreneurship, but it is relevant to mention and can be a topic for future research. Furthermore, the data used in this study comes from 2013; it might be interesting to see if the results of this thesis still hold up with more recent data.

6.2. Policy & personal implications

The results of this thesis can have some implication for policy and also for the decisions a person can make. In the first place, fear of failure seems to negatively affect the happiness of entrepreneurs. However, fear of failure is not static, and entrepreneurs can find coping strategies. There should be programs that assist entrepreneurs in coping with fear of failure since people with higher well-being are better able to perform their job. The same can be said about self-efficacy, although here assistance should be provided in skills required to become an entrepreneur, things like accounting, networking, etc. It would be especially welcome for women to get help with this since women are more likely to think negatively of the entrepreneurial environment and themselves. However, according to the results of this thesis, women who already self-select in entrepreneurship do not need extra help when compared to men.

Since it seems that women are less prone to experience the adverse effects of entrepreneurship, stimulating women who suffer from unemployment to become entrepreneurs seems to be a sound decision since they do not experience the same loss in well-being. This could imply that necessity entrepreneurship is a viable tool to emancipate women in less developed countries. Previous research found that women have more social reasons for entrepreneurship (McClelland, Swail, Bell, & Ibbotson, 2005), so more female necessity entrepreneurs might increase the level of happiness in a country.

Future research could find out if female necessity entrepreneurship has more positive social benefits compared to the usual drawbacks of necessity entrepreneurship. Furthermore, research should also try to figure out why women seem less prone to the adverse effects of necessity entrepreneurship. Finally, it would be interesting to see if fear of failure and self-efficacy have the same effects on happiness when distinguishing entrepreneurs based on the time they have been an entrepreneur.

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Appendix

Table I Country and amount of Entrepreneurs used in the sample

| Country | Frequency | Country | Frequency |
|------------------------|-----------|---------------------|-----------|
| Algeria | 144 | Macedonia | 149 |
| Angola | 318 | Malawi | 801 |
| Argentina | 291 | Malaysia | 230 |
| Barbados | 357 | Mexico | 266 |
| Belgium | 132 | Namibia | 624 |
| Bosnia and Herzegovina | 246 | Netherlands | 386 |
| Botswana | 431 | Nigeria | 1,395 |
| Brazil | 2,863 | Norway | 184 |
| Canada | 448 | Panama | 425 |
| Chile | 1,667 | Peru | 459 |
| China | 761 | Philippines | 592 |
| Colombia | 938 | Poland | 265 |
| Croatia | 216 | Portugal | 197 |
| Czech Republic | 198 | Puerto Rico | 122 |
| Ecuador | 915 | Romania | 243 |
| Estonia | 220 | Russia | 107 |
| Finland | 183 | Singapore | 241 |
| France | 95 | Slovakia | 241 |
| Germany | 573 | Slovenia | 159 |
| Ghana | 854 | South Africa | 378 |
| Greece | 277 | South Korea | 275 |
| Guatemala | 297 | Spain | 1,693 |
| Hungary | 274 | Suriname | 74 |
| India | 477 | Sweden | 224 |
| Indonesia | 1,922 | Switzerland | 218 |
| Iran | 773 | Taiwan | 302 |
| Ireland | 184 | Thailand | 916 |
| Israel | 256 | Trinidad and Tobago | 431 |
| Italy | 83 | Turkey | 5,017 |
| Jamaica | 156 | Uganda | 1,433 |
| Japan | 138 | United Kingdom | 159 |
| Latvia | 319 | United States | 741 |
| Libya | 282 | Uruguay | 239 |
| Lithuania | 324 | Vietnam | 584 |
| Luxembourg | 100 | Zambia | 969 |