How is quality of life related to future senior entrepreneurship in the US?

Thesis

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0. Abstract

Senior entrepreneurship may contribute to a solution for problems of an aging population in most developed countries. This is only a viable solution if a transition into entrepreneurship is also beneficial to older individuals. Therefore, it is important to understand the motivation to become a senior entrepreneur. This information is useful for motivational campaigns. In this thesis, it is hypothesized that a lower quality of life is related to a higher probability of future senior entrepreneurship, where the quality of life is measured using the satisfaction with the respective conditions of life. This is then divided into three domains: life satisfaction, job satisfaction, and financial satisfaction.

To examine this relationship between quality of life and future senior entrepreneurship, the analysis consists of two steps. In the first step, the relation between quality of life and leaving the wage-job for another career path is tested. Second, the level of quality of life of future entrepreneurs is compared to seniors that will transition into a new wage-job. Generalized linear models (GLM) are used in this thesis. The results showed that only job satisfaction and financial satisfaction are significantly negatively related to making a career change. However, this effect is not found specifically to senior entrepreneurs. Quality of life has no significant influence on the transition into entrepreneurship compared to seniors that change wage-jobs. These results suggest that a lower quality of life does not predict future senior entrepreneurship. This suggests that older individuals may not a low quality of life does not push seniors into self-employment.

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1.Introduction

Most countries in developed OECD-type economies find difficulties in tackling the consequences of the aging population (Annear et al., 2016; Stypinska et al., 2019). These consequences include an increase in the dependency ratio where relatively more people have claims on pension benefits and fewer people that work and pay taxes (Borji, 2016). This in combination with retirees that pay lower income taxes and higher spending commitments, governments can face spending problems (Borji, 2016). To address this challenge, policymakers and academics explore the possibilities to promote late-career entrepreneurship (Kulik et al., 2014). Society benefits from late-career entrepreneurship as self-employed retire later compared to wage workers (Burr & Mutchler, 2007). As a result, savings are generated in the pension systems and the human capital of experienced workers is better used in the economy (Maritz, 2015).

However, the promotion of late-career entrepreneurship can only be sustainable if the transition to entrepreneurship is also beneficial to the seniors. The relevant literature does propose some general potential benefits of moving into entrepreneurship (Kibler et al., 2015), or more specific for seniors who transition into entrepreneurship (Harms et al., 2014; Logan, 2014). There is limited research done on the effects of the seniors that forfeit their job and continue as an entrepreneur. There are two general approaches to research this topic. First, what effect the transition into entrepreneurship has on the seniors. This has been researched by Kautonen et al. (2017). The other approach examines whether certain aspects influence the choice to transition into entrepreneurship at a later age. Such an approach is used in this thesis.

Kautonen et al. (2017) investigated how monetary (income) and non-monetary (quality of life) were influenced by a late-career transition into entrepreneurship of an individual. They found that on average, quality of life significantly increased when a late-career worker transitioned to entrepreneurship. However, this transition is associated with a significant reduction in the average income (Kautonen et al., 2017).

It should be noted that Kautonen et al. (2017) used panel data. This means that the increase in life satisfaction is observed per person. Hence, the results could be biased by the type of senior that switched to entrepreneurship. It could be the case that seniors with a relatively lower life satisfaction choose to switch into self-employment. This could mean that the observed increase in quality of life only holds for a specific group of seniors that have a low

quality of life. Moreover, switching into entrepreneurship might be detrimental for seniors that have a high quality of life.

This thesis contributes to the literature by investigating whether the quality of life influences the choice to become an entrepreneur at an older age. Data from the United States (US) is used to examine the relationship of a developed country. Hence, the research question is:

How is quality of life related to future senior entrepreneurship in the US?

Answering the main question in this thesis provides perspective to the findings of Kautonen et al. (2017) by also taking into account the situation prior to the career choice. Furthermore, policies can take into consideration what type of seniors benefit from transitioning into entrepreneurship. This information could be beneficial to optimize the marketing strategy of senior entrepreneurship.

To answer this main question, the analysis in this thesis is divided into two parts. In the first part, it is examined whether quality of life is related to leaving the current wage-job for a career change at a later change. In the second part, the quality of life of seniors that transition into entrepreneurship is compared to seniors that move to a new wage-job. This approach is used to isolate the relationship between quality of life and future entrepreneurship.

This thesis is structured as follows: the second section reviews the theoretical background of late-career entrepreneurship. The third section presents the panel data being used and the methodology is explained. The results are described in the fourth section. These results are discussed in the fifth section. Finally, this thesis is concluded in the sixth section.

2. Theoretical Framework

In this section, the theoretical background of the relevant literature regarding late-career transitioning into self-employment is explained and divided into two parts. The first part deals with the entrepreneurial choice. This explains how seniors make choices regarding their career. In the second part, the two hypotheses are introduced.

2.1. Entrepreneurial Choice

Douglas & Sheperd (2000) assume that individuals choose the career path that maximizes both monetary and non-monetary returns. To account for the individuality and heterogeneity in the population, these returns are called utility. This utility is not solely gained through expected income and non-monetary rewards derived from the type of work. Utility also depends on the allocation of time between leisure and work. With respect to utility, Eisenhauer (1995) developed an economic choice model that based the decision to become an entrepreneur on the prospected utility. Such employment choice models are usually based on a general conceptual framework. In these frameworks, the individual's choice of employment type is based on various aspects related to different jobs (Heckman, 1993). Douglas and Sheperd (2002) in general, agree with this approach but expand the conceptual framework by linking income to entrepreneurial attitudes and individual ability. Moreover, the working conditions are investigated with regards to the individual's attitude like the exposure to risk, required effort, and autonomy in decision making (Douglas & Sheperd, 2002). This means that it is assumed that individuals act rationally in making their career choices by maximizing utility. Employment utility consists of both monetary and non-monetary rewards. For more information on the topic of employment choice models that emphasize on self-employment, Parker (2009) provides an extensive review of this literature. However, it should be noted that individuals cannot predict the exact change in utility resulting from a career change (Douglas, 2013).

2.1.1 Relationship with age

These type of employment choice models mostly treats the individual as being neutral concerning time and the career stage. This omission is peculiar as many studies show that age does have a significant effect on the individual's actions and motivation. The likelihood of starting with an entrepreneurial activity diminishes as an individual gets older (Zissimopoulos

& Karoly, 2007). This can be explained by the opportunity costs. The career stage influences the opportunity costs of entrepreneurship, unlike wages that are in the present (Levesque & Minniti, 2006). Older individuals have less time to reap the benefits from investments in entrepreneurial activity because there is less time to reap the benefits.

As described in the previous section, the choice to participate in entrepreneurial activity depends on both monetary and non-monetary rewards. However, the weights of importance of these type of rewards change with age. When an individual gets older, the importance of non-monetary rewards increases, whereas the importance of monetary rewards decreases (Kooij et al., 2011). The motivational focus shifts from career success and growth to intrinsic rewards like personal fulfillment and the rewards related to a balance in work and life. Thus, older individual's that transition into entrepreneurship are generally more motivated by the intrinsic and less by the extrinsic job features compared to non-seniors (Ng & Feldman, 2010; Inceoglu et al., 2012; Kerr, 2017).

2.1.2. Monetary Rewards

Older individuals do not necessarily seek an increase in monetary rewards. Moreover, transitioning into entrepreneurship as a senior lowers the income (Kautonen et al., 2017). Thus, at an older age entrepreneurship is generally not a career path to pursue great financial success. The main focus of an older entrepreneur is not necessarily on the success of the business. This can be shown through the growth intentions of older entrepreneurs. Older entrepreneurs are less likely to start a growth-orientated business (Kautonen et al., 2014). Venture growth is one of the most important indicators of entrepreneurial success (Davidsson et al., 2006). Gielnik et al. (2012) found that for older individuals who transition into entrepreneurship, age is negatively associated with venture growth. This means that these older entrepreneurs focus less on the opportunities, which leads to a decline in performance.

Nonetheless, a career as an entrepreneur generally needs to have some financial success to sustain one's life. However, transitioning into entrepreneurship comes with certain risks. Older wage workers acknowledge that a major reason not to transition into entrepreneurship is the risks that come with self-employment (Curran & Blackburn, 2001; Solinge, 2014). Older individuals state that they need to be careful with their savings (Kenny & Rossiter, 2018). Therefore, these seniors generally emphasize the fear of losing savings and welfare benefits as the main fear associated with the risk of entrepreneurship. Not everyone can afford to take the risks associated with entrepreneurship at an older age.

Therefore, primarily older individuals with relatively high financial means choose to transition into entrepreneurship (Solinge, 2013). In other words, the seniors that transition into entrepreneurship have, in most cases, a relatively high income (Trevo, 2014). This supports the findings of Kautonen et al. (2014) that necessity is seldom the reason for seniors to switch to entrepreneurship.

Entrepreneurship is a potential model for retirement, or complementary to retirement, to overcome any shortcoming in financial resources (Wainwright & Kibler, 2014). Such shortcomings can be the result of pension regimes where individuals cannot capably save towards retirement (Munnell et al., 2002). This means that entrepreneurship is an opportunity to earn extra money when a full-time wage job is not an option. Other reasons can be found in non-monetary rewards.

2.1.3 Non-Monetary Rewards

Non-monetary rewards are an important aspect of the literature on senior entrepreneurship (Kearney et al., 2008; Benz, 2009; McClough et al., 2014). As individuals get older, the influence of non-monetary rewards regarding employment choice increases (Kooij et al., 2011). In this thesis, the model of Douglas & Sheperd (2002) is used as a framework where both monetary and non-monetary rewards affect employment choice. However, the concept of non-monetary rewards is not as straightforward as monetary rewards. Monetary rewards are an objective measure that easily can be identified as income or venture growth. In contrast, non-monetary rewards depend on the individual. Each individual extracts different weights of utility from various non-monetary rewards (McClough et al., 2014.

Therefore, these non-monetary rewards are often identified through self-reported measures. The concept that is used most often and can capture the utility of non-monetary rewards is work-related subjective wellbeing (SWB) (Benz, 2005). Simply put, SWB is measured by asking individuals about their self-perceived happiness (Dolan & Metcalfe, 2011). This means that people are allowed to assess how satisfied they are with their life, without any interference from outsiders (Graham, 2010).

SWB can be measured in various domains. The use of multiple domain satisfaction is a prominent approach concerning a person's life (Weiss, 2002). There is a range of domain satisfaction, for example, health, income, job, leisure time, and partner. In order to determine the domains, first, it has to be clear what non-monetary aspects influence the choice of seniors to become an entrepreneur.

These intrinsic rewards differ per person. Nonetheless, some general non-monetary rewards that are often mentioned with respect to entrepreneurship at an older age include: autonomy in work and decision making (Harms et al., 2014); the ability to better combine the work-life balance (Kerr, 2017); self-fulfillment (Say & Patrickson, 2012); contribute to society (Stirzaker & Galloway, 2017); and improving personal interests (Gimmon et al., 2018).

2.1.4 Quality of Life

Non-monetary rewards are used to understand what is important in the working life of an older individual. This information puts the individual's satisfaction with life into perspective. From this follows the term quality of life. However, quality of life is a broad concept with multiple definitions and levels generality (Schalock et al., 2002). Therefore, the conceptualization of this term shows some variety. Quality of life is often constructed with both objective and subjective indicators. In this thesis, certain objective measures like income and health condition are taken into account. Therefore, in this thesis, the definition of quality of life needs to focus more on the subjective aspect. This follows the definition of Borthwick-Duffy (1992) where quality of life is defined by one's satisfaction with the respective conditions of life.

Quality of life is still a broad concept that can be divided into different domains. According to Felce & Perry (1995), there are five domains relevant to the quality of life: Physical wellbeing, material wellbeing, social wellbeing, development & activity, and emotional wellbeing. Each domain deals with a different aspect of an individual's quality of life. Physical wellbeing includes overall health and fitness (Blunden, 1988). Material wellbeing includes income, finances, and the living environment (Blunden, 1988). Social wellbeing subsumes the quality and satisfaction with relationships with family, friends, and the community. Development and activity deal with self-determination and the possession of skills, together with the pursuit of work activities. Emotional wellbeing subsumes the satisfaction and feeling of fulfillment.

Felce & Perry (1995) based these domains on an overlap between various sources. However, it is important to note that these aspects of quality of life are not empirically derived. This approach is specified pragmatically by Felce & Perry (1995) to classify the literature on this topic. It appears that there is an understanding that quality of life is a multidimensional concept (Felce & Perry, 1995).

2.2. Hypothesis development

In this thesis, the analysis of employment choice is based on the utility of older individuals. Necessity is seldom a reason for older individuals to transition into entrepreneurship (Kautonen et al., 2014). Therefore, it is regarded that total utility depends on both monetary and non-monetary rewards with respect to work. Monetary rewards are regarded as income from either wage-work or entrepreneurial activities. Non-monetary rewards affect the quality of life. The individual's career path is regarded as a voluntarily and rational choice.

It is assumed that individuals maximize their utility. This means that the career choice is generally an intended outcome (Douglas, 2013). However, these individuals do not know precisely the outcomes of a career change (Douglas, 2013). Furthermore, the ability to make an evaluation, individual environment and the individual factors influence the judgment of a person.

Besides individual differences, it is derived from existing literature that age plays an important role in career choice (Gianakos, 1999; Shadbolt & Bunker, 2009). As people get older, the importance of monetary rewards declines. In contrast, aging people increasingly value non-monetary rewards. This means that older people do not seek an increase in income if they transition into entrepreneurship. Kautonen et al. (2017) showed that transitioning from wage-work to self-employment decreases the income of older individuals. Therefore, the transition into self-employment has to be compensated by the expected gain in quality of life. Otherwise, seniors choose not to leave wage-work.

Psychological needs of seniors can be satisfied by transitioning into entrepreneurship (Deci et al., 2001). An individual is a senior entrepreneur when this person starts a business at age 50 or older (Matos et al., 2018). Late-career entrepreneurship can fulfill personal needs that cannot always be satisfied in other lines of work, like the need for autonomy and the ability to be flexible in the work-life balance (Harms et al., 2014). In summary, in this thesis, it is tested whether the inability to fulfill psychological needs of seniors, that lead to low quality of life result in a transition into self-employment.

To test this, two sets of hypotheses are developed to test two parts of the analysis. Besides the transition into senior entrepreneurship, it is also possible that personal psychological needs that are not fulfilled in the current wage-job but can be fulfilled in a new wage-job. Switching to a new job can improve the QWL of a senior (Dingemans & Henkens, 2014; Kulik et al., 2014). Therefore, the first step in this thesis analyses whether quality of life influences

the choice to leave the current wage-job for a new career path. A new career path can both be a transition into self-employment or a new wage-job

Unfortunately, due to data restrictions not all quality of life dimensions can be included. Emotional wellbeing, development & activity, and material wellbeing are represented respectively by life satisfaction, job satisfaction, and financial satisfaction. Therefore, the first set of hypotheses is:

H1a: A low level of life satisfaction is associated with a senior's transition from the current wage-job into a new career path in the US.

H1b: A low level of job satisfaction is associated with a senior's transition from the current wage-job into a new career path in the US.

H1c: A low level of financial satisfaction is associated with a senior's transition from the current wage-job into a new career path in the US.

The second set of hypotheses is used to analyze the differences between the seniors before their career change. A transition later in life from employment to self-employment generates a greater increase in the quality of life compared to switching from a wage-working job to a new job (Kautonen et al., 2014). Therefore, the second set of hypotheses answer the question if future seniors have a lower quality of life prior to the career change. The second set of hypotheses is:

H2a: A lower level of life satisfaction is associated with a senior's transition from employment to self-employment compared to switching to a new wage-job in the US.

H2b: A lower level of job satisfaction is associated with a senior's transition from employment to self-employment compared to switching to a new wage-job in the US.

H2c: A lower level of financial satisfaction is associated with a senior's transition from employment to self-employment compared to switching to a new wage-job in the US.

3. Data

In this section, the data selection procedure is described. Furthermore, some descriptive statistics give a first insight into the data. Furthermore, the variables are introduced. Finally, the method that leads to the results is explained.

3.1. Data collection.

In this thesis, the unbalanced biennial panel data from the Health and Retirement Study (HRS) is used. The HRS is a longitudinal study conducted by the University of Michigan. In this study, a representative sample of middle-aged and older Americans are surveyed. The purpose of the HRS survey is to gather data useful to analyze the opportunities and challenges of aging. Therefore, the HRS survey includes a wide variety of topics including psychological health, social issues, economic circumstances, quality of life and more. As a result, the HRS data allow examining the determinants and patterns of career transitions among older participants in the workforce.

The HRS primarily targets individuals over the age of 50 that live in the United States. The surveys consist of interviews conducted both face-to-face and through forms for self-administration. A wave consists of approximately 20,000 respondents. Attrition is compensated for by new respondents that are included in each wave. The total longitudinal data covers the period from 1992 to 2016.

In this thesis, the HRS longitudinal data for the period 2004 to 2016 is used. The data is used to examine the individual's situation prior to the transition. Therefore, only individuals that are observed in at least two consecutive waves are included. Thus, if an individual drops out of the survey, it is possible that the waves prior are included in the sample. Furthermore, an individual has to be active in the workforce during two consecutive waves. To determine whether an individual is active in the workforce, a self-reported career description is used. Seniors that transition into retirement are not included in this thesis. Hence, the sample consists of wage workers in period t who are working the same job, a new job, or are self-employed in $t + 2$. As a result, the sample used in this thesis consists of 10,802 respondents aged 50 to 70. In this sample 9,255 respondents remained in the same job, 1,257 switched to a new job, and 290 transitioned into entrepreneurship.

In this thesis, variables on self-perceived quality of life are used to answer the hypotheses. Since these variables are self-reported about perceptual measures, common method bias can be a problem (Conway & Lance, 2010). However, it is not expected that common method bias causes major issues in this thesis. In the analysis, the dependent variable is constructed with observations that are separated by two years. Therefore, it is not the case that all responses are noted at one point in time. Moreover, the data is collected from a large study with multiple purposes. This should limit any bias through the social desirability effect.

3.2. Descriptive analysis of transitions in employment

The values of the dependent and control variables are measured at the baseline (t). These values are measured before any career change has taken place. This means that these values are not influenced by the future career change the respondents make between t and $t + 2$. The variables include life satisfaction, job satisfaction, financial satisfaction, income, age, gender, optimism, and years of education. Table 1 summarizes the data on these variables.

Table 1: Variables and descriptions - the mean and standard error (between brackets) for each variable at t for the total sample and the respondents that are going to stay in their job, change jobs, or become an entrepreneur in $t+2$

Variable name	Description	Measurement level	Total sample	Sub samples based on employment status in in $t+2$		
				Stayed in same job	Switch to new job	Switch to entrepreneur
Life satisfaction	Whether individual is satisfied with life	0-10 strongly disagree-strongly agree	5.043 (1.707	5.0677 (1.706)	4.828 (1.694)	5.149 (1.741)
Job satisfaction	Whether individual is satisfied with his or her job	1-4 strongly disagree-strongly agree	3.274 (0.763)	3.306 (0.742)	3.016 (0.871)	3.244 (0.825)
Financial satisfaction	Whether individual is satisfied with his or her financial situation	1-5 completely satisfied-not at all satisfied	3.001 (1.06)	2.969 (1.052)	3.268 (1.054)	3.138 (1.160)
Income	Total yearly wage income at t	Dollars	44,202.46 (41,485.63)	44,915.22 (41,954.97)	38,239.66 (35,396.99)	47,525.92 (48,961.54)
Age	Individuals age	Range: 50-70	58.177 (5.048)	58.255 (5.079)	57.505 (4.738)	58.593 (5.136)
Gender	Individual's gender	female= 1 Male= 0	0.683 (0.465)	0.690 (0.462)	0.651 (0.477)	0.576 (0.495)
Optimism	Whether the individual is optimistic about the future	1-6 strongly disagree-strongly agree	4.509 (1.364)	4.503 (1.362)	4.506 (1.399)	4.723 (1.29)
Health condition	Health condition that limits work	No = 1 Yes = 0	0.904 (2.95)	0.906 (0.292)	0.890 (0.314)	0.883 (0.322)
Years of education	years of education	Number of years	13.642 (4.648)	13.654 (4.802)	13.48 (3.754)	13.94 (2.880)

3.2.1. Independent variables

The first two variables are the independent variables that indicate the quality of life. First, life satisfaction is a self-perceived cognitive judgment that defines the individual's global quality of life (Diener et al., 1985). This measure points out how satisfied the respondents are with their current state in life. Unfortunately, the scale that is used to measure this variable varies per wave in the HRS data. Therefore, the scales are converted to a 0 to 10 point scale.[1] This rescaling is based on the approach proposed by Preston & Colman (2000). The formula is:

[1] Life satisfaction is measured on a 7 point Likert scale, except in the wave of 2006. In 2006 life satisfaction is measured on a 6 point Likert scale. The choice to convert this variable to a 10 point scale is based on the formula provided by Preston & Colman (2000).

$$\frac{rating - 1}{number\ of\ response\ categories - 1} * 10$$

Table 1 shows that future entrepreneurs are on average most satisfied, whereas the respondents that switch to another wage-job are on average the least satisfied with their life.

The second independent variable is job satisfaction. This is a self-perceived measure that represents the state of emotion and pleasure as a result of the job and the working experience (Locke, 1970). Table 1 shows that the respondents that stayed in the same wage-job are most satisfied with their work.

Third, financial satisfaction indicates whether the respondent is satisfied with his or her financial situation. This is a self-perceived view of their economic circumstance. This variable is added in order to test for a push effect that the financial situation can have towards self-employment (Harms et al., 2014).

3.2.2 Control variables

Table 1 also contains a number of control variables. First, the age of the respondent is included, because there is a relationship between age and both quality of life and career choice (Bowling et al., 2002; Lévesque & Minniti, 2011). However, Table 1 shows that for the present data there is no large difference in the mean age between the groups.

The dummy gender is included where 1 indicates that the respondent is female. Studies generally do not find that quality of life differs between men and women (Huebner et al., 2000; Fugl-Meyer et al., 2002), being female is generally associated with a negative relationship with entrepreneurial activity (Koellinger et al., 2013). Moreover, the difference in earnings between genders is often found in the relevant literature (Goldin et al., 2017). Table 1 shows that, compared to the total sample, men are more likely to transition into self-employment.

The second control variable is the total yearly wage income at t. Wage income is used as an indicator of the respondent's wealth. A good financial situation is associated positively with quality of life (Havasi, 2013). However, the relationship between the financial situation and entrepreneurship can be both positive as negative. A higher income and more wealth can make it easier to finance a new company (Kautonen & Minniti, 2014). Alternatively, income and wealth can deter transitioning into self-employment because additional income might not

be necessary to preserve the individual's lifestyle (Zissimopoulos & Karoly, 2007). Moreover, the individual might not want to take the risk of losing the lifestyle, for a less certain career as a nascent entrepreneur (Parker & Rougier, 2007). In the sample, the income distribution is skewed, therefore in the analysis, income is added in its natural logarithm. The values in Table 1 show that future entrepreneurs earn slightly more than the mean, while being less satisfied with their financial situation. Furthermore, the respondents that switch jobs earn less than the mean while also being less satisfied with the financial situation.

Optimism is a self-perceived variable that indicates whether the respondent is optimistic about the future. Optimism is positively related to quality of life (Grant & Higgins, 2003; Wrosch & Scheier, 2003). Furthermore, it is well documented that optimism as a character trait is positively related to entrepreneurs (Astebro et al., 2014; Dawson et al., 2014; Morgan & Sisak, 2016). Table 1 shows that the mean of optimism for future entrepreneurs is slightly higher compared to the other groups.

Health condition is a self-perceived variable that indicates whether the respondent has any health condition that limits work. A poor health situation is negatively associated with quality of life (Ziolkowski & Blachnio, 2015). Health conditions that limit the ability to work have a positive relationship with transitioning into self-employment (Sahut et al., 2015). This probably follows from the entrepreneur's ability to control the workload, time, and pace of work (Sahut et al., 2015). The results in Table 1 show that 90% of the respondents indicate that they do not have a health condition that limits work. This value does not change much between the different groups.

Years of education is added to Table 1. This variable represents the number of years the respondent followed an education. This is used as a general measure of competence and ability. Individuals with a high level of education generally have more educational years. Shane and Venkataraman (2000) argue that with a higher education lever, individuals can obtain abilities quicker, which allows them to identify and exploit business opportunities. As a result, higher educational attainment of seniors positively affects the likelihood of becoming an entrepreneur (Logan, 2014). Table 1 shows that future entrepreneurs do have slightly more educational years on average compared to the other groups.

Finally, as a control variable, t is added to the model as a baseline. The years in the period 2004-2016 are not comparable in terms of the economy, most significantly the economic crisis in 2008. Therefore, this variable included to control for any time trends in the workforce

transitions related to the economy. In this thesis, the initial base year is 2004. This year is used as the reference group.

3.3. Correlation matrix

At first sight, some variables seem too related, for example, life satisfaction and financial satisfaction. To make sure that there is sample variation in the explanatory variables, two correlation matrices are constructed (see Table 2 and Table 3). Since variables like job satisfaction, financial satisfaction, and gender are not continuous in its nature, both Pearson and Spearman correlation tests are performed. Pearson uses true values and represents the linear relationship. Spearman represents the monotonic relationship based on ranks and is therefore often used to measure the correlation between categorical variables.

Table 2 - Pearson Correlation Matrix

	Life sat.	Job sat.	Fin. sat.	Income	Age	Gender	Optimism	Health cond.	Years of educ.	Year
Life sat.	1									
Job sat.	0.315	1								
Financial sat.	-0.404	-0.302	1							
Income	0.094	0.041	-0.175	1						
Age	0.078	0.131	-0.143	-0.211	1					
Gender	-0.002	0.025	0.034	-0.154	0.012	1				
Optimism	0.334	0.227	-0.181	0.083	0.013	-0.006	1			
Health cond.	0.133	0.068	-0.120	0.144	-0.001	-0.013	0.066	1		
Years of educ.	0.019	0.021	-0.068	0.205	-0.034	-0.040	0.039	0.019	1	
Year	-0.007	0.010	-0.065	0.092	-0.004	-0.029	0.011	-0.079	0.008	1

Table 3 - Pearson Correlation Matrix

	Life sat.	Job sat.	Fin. sat.	Income	Age	Gender	Optimism	Health cond.	Years of educ.	Year
Life sat.	1									
Job sat.	0.320	1								
Financial sat.	-0.424	-0.307	1							
Income	0.111	0.061	-0.210	1						
Age	0.074	0.143	-0.125	-0.120	1					
Gender	-0.008	0.022	0.048	-0.147	-0.029	1				
Optimism	0.382	0.259	-0.247	0.067	0.029	-0.005	1			
Health cond.	0.119	0.075	-0.116	0.138	-0.004	-0.033	0.093	1		
Years of educ.	0.088	0.053	-0.168	0.397	-0.045	-0.060	0.039	0.051	1	
Year	0.086	0.024	-0.045	0.131	-0.048	-0.000	0.023	-0.037	0.052	1

The first thing to notice is that the correlation matrices do not show large differences. To assess whether independent variables are highly correlated, the rule of thumb is applied where a correlation higher than 0.5 is moderate to strong (Chiulli, 2018). Taking this into account, no problematic correlations are found in Table 2. This means the sample outcomes on the independent variables are not all the same value in the analysis.

3.4. Regression analysis

The main focus is of the analysis is on what influence quality of life has on the career choice of seniors. The analysis consists of two steps. First, the respondents make a career change between t and $t + 2$. This career change is either a transition into self-employment or a new wage-job. A similar approach is used for the second step of the analysis where the future entrepreneurs are also compared to the wage-workers who change jobs.

Therefore, the dependent variable is binary in both steps. In the first step, the respondents that make a career change before $t + 2$ take the value of 1. Conversely, the respondents that remain in their job have the value of 0. In the second step, the value of 1 indicates a future entrepreneur, whereas 0 represents seniors that enter a new wage-job.

Normally, in this situation, a logistic model would be used. However, this approach has a relatively demanding minimum sample size requirement. Generally, the rule of thumb of Peduzzi et al. (1996) is used, which states that the sample should exist at least 10 events per predictor variable (EPV). This proposes a problem in this thesis. The analysis run in the next section would only include 52 future entrepreneurs, 263 individuals that change jobs, and 2.028 individuals that remained at the same job. Even with the more lenient minimum of 5 EPV requirement proposed by Vittinghoff & McCulloch (2007), problems are likely to arise. These problems include biases and both type I and type II errors.

Since the HRS has missing values per respondent, the sample used in the analysis is smaller compared to the numbers provided in section 3.1.. One solution in overcoming missing data is to impute observations that fill the gaps in the dataset. However, to meet the dataset requirements, the number of imputations would exceed the amount of complete data. As this enhances the chance of wrong results, no data is imputed and the logistic model is not used in this thesis.

Therefore, the model used in the analysis is the generalized linear model (GLM). GLM is an econometric model that generalizes linear regressions through a link function that allows the

dependent variable to be related to the linear model. Furthermore, the GLM allows that the variance is a function of its predicted value. Moreover, GLM does not reject dependent variables without a normal distribution and there is no minimum sample size. Since the dependent variable is binary, a logit link function is applied in the analysis. As the distribution function, the Bernoulli distribution is chosen, which is used generally in such cases. Equation 1 and Equation 2 represent the models used in the analysis.

$$Change_{t+2} = \propto + \beta_1 Life\ Satisfaction_t + \beta_2 Job\ Satisfaction_t + \beta_3 Financial\ Satisfaction_t + \beta_n Control_t + \varepsilon \quad (1)$$

$$ENT_{t+2} = \propto + \beta_1 Life\ Satisfaction_t + \beta_2 Job\ Satisfaction_t + \beta_3 Financial\ Satisfaction_t + \beta_n Control_t + \varepsilon \quad (2)$$

This equation is used respectively to the step of the analysis. In both cases, all variables are treated as continues. This shows whether there is a continues relationship between de dependent and independent variables. In the second case, the independent variables that were significant in the first case, are changed to categorical variables. This measures the potential differences per category. It could be the case that, for example, only the respondents with the lowest life satisfaction choose to become entrepreneurs. This effect would not necessarily show in a linear regression with continuous variables if the other categories do not differ in the likelihood of becoming an entrepreneur. For this analysis, life satisfaction is divided into four categories: 0-2, 3-5, 6-8, and 9-10. Where the 0-2 is used as the reference group. Job satisfaction is already in four categories, where category 1 is used as the reference group.

4. Results

4.1 Differences Between Future Entrepreneurs and Seniors Who Do Not Switch Jobs

In this section, the first set of hypotheses are answered. These hypotheses are formulated to assess whether a low quality of life influences the probability to make a career change at a later age.

H1a: A low level of life satisfaction is associated with a senior's transition from the current wage-job into a new career path in the US.

H1b: A low level of job satisfaction is associated with a senior's transition from the current wage-job into a new career path in the US.

H1c: A low level of financial satisfaction is associated with a senior's transition from the current wage-job into a new career path in the US.

These hypotheses are answered with the first two models. Since the dependent variable is binary, the GLM's have a logit link function with a Bernoulli distribution. The dependent variable represents the probability of making a career change within the next two years compared to staying in the same job. This means that the numerator consists of 1,547 seniors that will make a career change before $t + 2$ and the denominator consists of 9,255 seniors that did not change jobs. The results of the GLM's show whether there are significant differences in the situation before the career choice.

Table 4 - Logit GLM results that predict the probability of making a career change compared to remaining in the same job as a senior

	(1)	(2)	Number of observations	
Variables	Change	Change	Stayed in same job	Career switch
Life satisfaction	0.03 (0.03)	0.03 (0.03)	3,175	506
Job satisfaction[2]	-0.41*** (0.08)		3,071	460
Slightly dissatisfied		-0.35 (0.29)		
Slightly satisfied		-1.01*** (0.25)		
Very satisfied		-1.23*** (0.26)		
Financial satisfaction[3]	0.17** (0.07)		3,183	504
Very satisfied		0.23 (0.30)		
Somewhat satisfied		0.48* (0.29)		
Not very satisfied		0.61** (0.31)		
Not at all satisfied		0.68* (0.35)		
Income (natural log)	-0.13* (0.07)	-0.13* (0.07)	7,330	1,196
Age	-0.02* (0.01)	-0.02* (0.01)	9,255	1,547
Gender			9,255	1,547
Female	-0.11 (0.13)	-0.11 (0.13)		
Optimism	0.07 (0.05)	0.07 (0.05)	3,168	505
Health problem			7,469	1,263
No	0.27 (0.23)	0.26 (0.23)		
Years of Education	-0.01 (0.02)	-0.01 (0.02)	7,461	1,271
Year[4]			1,257	1,547
2006	-0.25 (0.30)	-0.24 (0.30)		
2008	-0.21 (0.30)	-0.20 (0.30)		
2010	-0.23 (0.31)	-0.23 (0.31)		
2012	-0.33 (0.30)	-0.33 (0.30)		
2014	-0.03 (0.29)	-0.03 (0.30)		
Constant	1.38 (1.36)	1.18 (1.36)		
Log likelihood	-894.96	-893.46		
Wald chi2(14)	55.07	59.18		
Prob > chi2	0.00	0.00		

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The number of observations represent the available respondents per category for each variable that are used in the GLM.

[2] Very dissatisfied is used as a reference in the second model.
[3] Completely satisfied is used as a reference in the second model.
[4] The year 2004 is used as a reference.

The results of the GLM's are shown in Table 4. Life satisfaction does not have a significant effect. This means that life satisfaction does not significantly influence the probability of making a career change at an older age. However, both job satisfaction and financial satisfaction are significant at the 5% level. This means that ceteris paribus, an additional level of job satisfaction in t decreases the probability that the individual makes a career switch before $t + 2$ compared to staying in the same job. Furthermore, ceteris paribus, an additional level of financial satisfaction increases the probability that the individual makes a career switch before $t + 2$ compared to staying in the same job.

The magnitude of these effects cannot directly be interpreted in a logistic regression. In Table 4, the average marginal effect of job satisfaction is -0.05. Furthermore, the average marginal effect of financial satisfaction is 0.02. This means that an additional level of job satisfaction lowers the probability of a career switch with 5 percentage point, whereas an additional level of financial satisfaction increases the probability of a career switch with 2 percentage points. Both of these effects are a fairly small effect. With regards to job satisfaction, this can be explained by the fact that in the sample, future entrepreneurs were not necessarily dissatisfied with their job in t. Table 5 shows the distribution of the responses on both job satisfaction and financial satisfaction. It is clear that most respondents were generally satisfied with their job. However, when seniors were dissatisfied, the probability of making a career switch before $t + 2$ is higher.

To further investigate the effect of job satisfaction and financial satisfaction on the probability of making a career switch, the second model in Table 3 expands job satisfaction and financial satisfaction as categorical variables. Since life satisfaction is not significant in the second model, it is not necessary to explore differences between these categories. Furthermore, keeping life satisfaction variables continues benefits the explanation power.

Job satisfaction is categorical in the second model. Now the third and fourth category are significant at the 1% level compared to category 1. This means that ceteris paribus, being satisfied with one's job decreases the probability of making a career change within two years compared to being strongly dissatisfied with the job. The second model shows that the relation between job satisfaction and future entrepreneurship is not linear. Only dissatisfaction with the job is associated with a higher probability to transition into a new career at a later age. Therefore, hypothesis 1b is accepted.

Similarly, in the second model, not being satisfied with the financial situation increases the probability of making a career change. Category 3, 4, and 5 are statistically different from the reference category. This means that a lower level of financial satisfaction is associated with a career change at a later age. Hence, hypothesis 1c is accepted.

However, life satisfaction is not significant in Table 4. This means that low levels of life satisfaction is not statistically associated with future career switch. Hypotheses 1a is therefore not accepted.

Table 5 - Job satisfaction (4 response categories) and financial satisfaction (5 response category) per type of senior

	Job satisfaction				Financial satisfaction		
	Stayed in same job	Switch to new job	Switch to entrepreneur		Stayed in same job	Switch to new job	Switch to entrepreneur
1	97	29	4	1	275	23	8
2	227	53	9	2	712	64	19
3	1,386	179	34	3	1,305	157	35
4	1,361	117	35	4	618	112	15
				5	273	54	17
Total	3,071	378	82	Total	3,183	410	94

4.2. Differences Between Future Entrepreneurs and Seniors Who Switch Jobs

The second set of hypotheses are included in this thesis to validate whether the observed results are associated with future entrepreneurship or a change in wage-jobs. These hypotheses represent the differences before the career change of seniors.

H2a: A lower level of life satisfaction is associated with a senior's transition from employment to self-employment compared to switching to a new wage-job in the US.

H2b: A lower level of job satisfaction is associated with a senior's transition from employment to self-employment compared to switching to a new wage-job in the US.

H2c: A lower level of financial satisfaction is associated with a senior's transition from employment to self-employment compared to switching to a new wage-job in the US.

Again, a GLM with a logit link function and a Bernoulli distribution is constructed. The dependent variable is binary and represents the probability of becoming an entrepreneur before the next wave compared to switching wage-jobs. Thus, the numerator consists of 290

future entrepreneurs and 1,257 seniors that will switch wage-jobs. The results in the GLM show whether the situation before the career change is different between the two groups.

Table 6 – Logit GLM results that predict the probability of future entrepreneurship compared to switching jobs

		Number of observations	
Variables	Fut. Ent.	Switched job	Transition into entrepreneurship
Life satisfaction	0.07 (0.07)	412	94
Job satisfaction	0.15 (0.20)	378	82
Financial satisfaction	0.02 (0.18)	410	94
Income (natural log)	-0.04 (0.18)	991	207
Age	0.01 (0.04)	1,257	290
Gender		1,257	290
Female	-0.15 (0.34)		
Optimism	0.02 (0.14)	411	94
Health problem		1,023	240
No	0.82 (0.78)		
Years of Education	0.17** (0.08)	1,.025	246
Year[5]		1,257	290
2006	0.37 (0.86)		
2008	1.06 (0.84)		
2010	0.68 (0.88)		
2012	0.22 (0.86)		
2014	-0.22 (0.87)		
Constant	-6.55* (3.63)		
Log likelihood	-130.49527		
Wald chi2(14)	18.81		
Prob > chi2	0.1722		

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The number of observations represent the available respondents per category for each variable that are used in the GLM.

Table 6 shows the results of the GLM. In this model, none of the independent variables are significant. This means that an additional level of either life, job, or financial satisfaction does not influence the probability to become an entrepreneur compared to switching wage-jobs. Hence, there are no significant differences in the satisfaction levels before the career change. Since there is no significant relationship in the dependent variables, it is not necessary to test

[5] The year 2004 is used as a reference.

for differences between categories in de dependent variable with a new model. Therefore hypotheses 2a, 2b, and 2c are not accepted.

Only the control variable "years of education" has a significant effect at the 5% level. Thus, an additional year of education increases the probability of future entrepreneurship compared to switching wage-jobs, ceteris paribus. The other control variables do not have a significant effect.

Since the dependent variables do not have a significant effect in Table 6, it cannot be concluded that the situation before the career change differs between future entrepreneurs and wage-job switchers. This means that the effect described in the previous section is not isolated to future entrepreneurs. It could be the case that lower job satisfaction is associated with leaving the current job, not moving into either self-employment or a new job.

4.3. Goodness of fit

Table 4 and Table 6 include measures of fit. The models only have a few significant coefficients with a small effect. It is, therefore, worthwhile to assess the usability of the models. Table 4 and Table 6 include the model's Wald chi-square. This gives a general idea of how well the model fits the data. The Wald chi-square tests whether the model as a whole is statistically significant. The Wald-chi-square test is only significant for the models in Table 4. This indicates that in Table 6 the coefficients are simultaneously equal to zero. Since significant predictors improve the prediction of the dependent variable, thus the model fit, it cannot be concluded that the model in Table 6 fits the data.

In this analysis, if the model does not fit the data, there are no significant differences between the groups. This could mean two things. First, the future entrepreneurs are largely similar to future switchers of wage-jobs in the situation prior to the career choice. Second, the model does not include the predictors that explain the differences the different groups. This is further explored in the next section which discusses the results.

4.3. Robustness Test

Since the analysis in this thesis has some data limitations, testing for robustness is helpful to see whether the results have some rigor or are the result of chance. To test for robustness, two tables are included in the appendix that test the influence that quality of life has on future

entrepreneurship compared to seniors that remain in the same wage-job. Furthermore, future entrepreneurs are compared to seniors that do not transition into self-employment (Table A.1). The latter group consists of seniors that either continue to work in the same wage-job or switch to a new wage-job (Table A.2).

Table A.1 shows that only job satisfaction has a significant influence on the probability to become a senior entrepreneur compared to remaining in the same job. This means that when a senior is dissatisfied with the job, this senior is more likely to transition into self-employment. This result is also observed in Table 4. However, similar to the results in Table 6, when seniors that switch wage-jobs are included in the analysis, the significant effects disappear. Thus, the robustness tests has similar results as the analysis in section 4.1.. It appears that low quality of life is more related to leaving the current wage-job, rather than transitioning into self-employment at a later age.

5. Discussion

In this section, the results as presented in the previous section are discussed by answering the main question of this thesis is:

How is quality of life related to future senior entrepreneurship in the US?

Answering this question is an attempt to understand what type of seniors choose to transition into entrepreneurship as compared to those remaining in a wage-paying job. In the analysis three categories of seniors are identified: seniors that remain in the same wage-job, those who switch to a new wage-job, and those who transition into entrepreneurship. With the use of a generalized linear model (GLM), the individual's situation prior to the career change is assessed. The findings show that job satisfaction and financial satisfaction are significantly associated with the probability of leaving the current wage-job for a new career. However, this effect is small. Furthermore, future senior entrepreneurs do not significantly differ in the situation before the career change compared to seniors that change wage-jobs. Thus, the relation between quality of life and future senior entrepreneurship in the US is weak. It appears that the differences between the senior categories do not strongly predict the future career move.

The limited size of the found effects can be explained by the use of quality of life and control variables as push-factors. This means that individuals with lower levels of life satisfaction are "pushed" into entrepreneurship to make up for any dissatisfaction. Push-factors may have a limited influence on future senior entrepreneurship. This explains why there are is no observed strong relationship between low quality of life and future senior entrepreneurship. It could be the case that the pull-factors of entrepreneurs are the predominant predictor of a late-career switch to self-employment. Gimmon et al. (2018) did find that older individuals are predominantly motivated by pull-factors. Seniors perceive becoming an entrepreneur as part of active aging (Gimmon et al., 2018). Pull-factors for older individuals include autonomy increase, purposeful action, flexibility in time, enjoyment, and the expectation of an increase in wellbeing (Harms et al., 2014).

With regards to the small effect that job satisfaction has on future senior entrepreneurship, a ceiling effect seems to be present. In data gathering, a ceiling effect occurs when most of the respondents score in the upper level of the question (Ho & Yu, 2015). As a result, the

independent variable has only limited variance, which limits the size of the relationship with future entrepreneurship. The scores for job satisfaction show such a ceiling effect. Table 4 in the previous section shows the scores for job satisfaction for each type of senior. The response to job satisfaction is predominantly high in each senior category.

To overcome this ceiling effect, future research could include job satisfaction in the model in two different ways. First, give respondents more categories to choose from. The four-point scale could be too narrow. It is possible that respondents need more options to be able to differentiate between the levels. The other self-reported variables used in this thesis have a wider range of options and do not present a ceiling effect. Second, the scope of the current self-reported job satisfaction construct might not be extensive enough. Perhaps, this variable should be measured on a scale with multiple items. This approach can cover different aspects of the job and give a more comprehensive view of (Wanous et al., 1997). However, practical limitations should be considered, as there is often not enough room in a questionnaire to include a multi-item measure.

Job satisfaction and financial satisfaction on future entrepreneurship were only significant in the first part of the analysis. This means that this effect is not predominantly on future senior entrepreneurship, but rather on leaving the wage-job. Several reasons may explain this. First, the small sample proposed some problems for the analysis. In the sample, only a small fraction of the seniors chose to transition into entrepreneurship. In combination with the fact that respondents had missing data, a small sample has difficulties. Normally, one would use the largest available sample size available, because the chance of outliers is larger in a smaller sized sample. This can cause a large standard deviation, which indicates less accurate results. Large standard deviations are also observed in the models used in this thesis (see Table 3 and Table 4). Hence, the small sample size causes problems with high variability. This could explain why the descriptive table in section 3 does show differences between the categories, but these differences are not to be found significant in the results.

Second, the HRS dataset only includes senior respondents from the US. This means that the sample is homogeneous. Since by default the respondents are relatively similar, it may be difficult to find significant differences in the three types of seniors. Irrespective of these limitations of the dataset, the HRS is an extensive survey for seniors in a developed country. The relevant literature on this topic also covers the implications concerning senior entrepreneurship in developed countries.

Third, the final model is not significant. This means that the model has low predictive power. This could be partly be caused by the previous two points or by the possibility that the respondent categories are homogenous and that there are no differences in the situation prior to the career choice. However, this could also mean that the variables being used are not predictive. In other words, future entrepreneurship is caused by other determinants, or the model misses certain control variables.

Personality could be an aspect that is missing in the analysis in this thesis. For example, optimism is the only personality construct included in the present thesis, even though in the literature on nascent entrepreneurship describes various personality traits that influence the choice to transition into self-employment. For example, the Big Five personality traits (agreeableness +/-, conscientiousness +, extraversion +, neuroticism -, and openness to experience +) influence the probability of becoming an entrepreneur in general (Brandstätter, 2011). Other personality measures like the behavioral inhibition system and behavioral activation system (BIS/BAS) (Lerner et al., 2018) and affect (Baron, 2008) are also related to future entrepreneurship. For other personality traits, such as risk propensity, studies have not reached consensus regarding their relationship with becoming an entrepreneur. For example, Zissimopoulos & Karoly (2009) found no relation between risk aversion and the transition into entrepreneurship. Whereas, Herranz et al. (2015) did find a relation between risk aversion and entrepreneurship. Future research could examine a broader range of personality variables and whether the importance of these variables in opting for an entrepreneurial career differs between younger versus senior individuals

Finally, quality of life is not strongly related to transitioning into entrepreneurship at an older age compared to remaining in a wage-job. However, there may be a stronger relation between quality of life and leaving the workforce. It could be the case that seniors are pushed into retirement rather than transitioning into entrepreneurship. However, in the literature, it is not clear whether seniors are more likely to be pulled or pushed toward retirement (De Preter et al., 2013)

6. Conclusion

The population in most developed countries is aging. This poses policy challenges in the coming years for these countries. Future senior entrepreneurship could be a solution to maintain the knowledge and skills of these older individuals in the labor force. Therefore, it is important to understand what seniors drive to become an entrepreneur. In this thesis, the motivation to move into self-employment at an older age is examined. It is hypothesized that lower quality of life is associated with a higher probability to become a senior entrepreneur. For a deeper understanding of this association, quality of life is divided into three domains: life satisfaction, job satisfaction, and financial satisfaction. In this thesis, the analysis is divided into two parts. In the first part seniors that leave their current wage-job are compared to seniors that remain in their wage-job. The former group is examined in the second part. In this part, the future senior entrepreneurs are compared to the seniors that change wage-jobs. The first part shows that both job satisfaction and financial satisfaction are significantly related to making a career change. However, there are no significant results found in the second part of the analysis. This means that there are no significant differences between future senior entrepreneurs and seniors that switch wage-jobs before the career change. This suggests that seniors are not pushed into self-employment as a result of low quality of life, specifically. Seniors are rather pushed by low level of job satisfaction and financial satisfaction to leave the current wage-job for a new career path. Other motivations related to senior entrepreneurship need to be explored, such as pull factors and personality characteristics.

6.1 Implications

The results of this thesis can have implications on how to target potential future senior entrepreneurs. As mentioned in the introduction, senior entrepreneurship can be beneficial to society. Therefore, policymakers need an understanding of how to make a late-career switch to entrepreneurship interesting. The results in this thesis showed that job satisfaction and financial satisfaction are related to leaving the wage-job at a later age. The government and the chamber of commerce could use this information to promote senior entrepreneurship as a good escape from an uninteresting wage-job with few financial prospects. This could give seniors who feel stuck in the current job their extra motivation to make the switch.

However, it is a little bit surprising that lower financial satisfaction is related to leaving the current wage-job while life satisfaction is not. The literature on senior career choice indicates

that monetary rewards become less important and intrinsic rewards become more important over time. One possible explanation is that society imposes significance to growth orientation on entrepreneurial activity, which is a narrative that only endorses individuals that are successful economically (Stypinska, 2018). This excludes potential entrepreneurs that do not have ambitious growth prospects as their main goal (Stypinska, 2018). This could mean that not the full group of potential senior entrepreneurs is reached. Therefore, the results of this thesis could be different if governments and research agencies would adopt policies and measures that do not mostly rely on economic success. Including more subjective goals to the definition of entrepreneurial success could persuade a larger or different group of seniors to become an entrepreneur. In turn, relation between financial satisfaction and leaving the current wage-job could become smaller and life satisfaction could show to be a significant predictor of future senior entrepreneurship.

Besides a policy implication, this thesis also provides an academic implication. It is not uncommon that studies include quality of life or one domain as a single variable with regards to future senior entrepreneurship (Maritz, 2015; Kautonen et al., 2017). In this thesis, quality of life is divided into different aspects to capture the differences in motivation to transition into entrepreneurship. The used approach showed to be fruitful, as there were differences in the relation between future senior entrepreneurship and the three domains of quality of life. This implies that the quality of life is more complex with concerning senior entrepreneurship. Moreover, there could be differences in the relation between different domains of quality of life and future entrepreneurship of all ages. Therefore, using multiple aspects of quality of life, rather than one general variable, could benefit analyses on senior entrepreneurship.

6.2. Limitations & Future Research

This thesis is not without limitations that lead to propositions for future research Some limitations are already mentioned in the discussion but are also mentioned more briefly. First, the sample has certain limitations. Both the size and convenience aspect of the used sample should be improved in future research. In its present form, the study is prone to high variance and the inability to generalize across the population.

Second, due to data restrictions, a certain type of variables was not included in the analysis. Future analyses on senior entrepreneurship would benefit from including factors that cover pull-factors relating to senior entrepreneurship, personal characteristics, and job description.

Finally, the choice between quitting the workforce and senior entrepreneurship can be explored. In this thesis, senior entrepreneurship is only compared to continuing in wage-job. The results show that there is some evidence that seniors are pushed into a new career. Future empirical research could explore the relationship between quality of life and future senior entrepreneurship compared to quitting work.

7. References

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8. Appendix

Table A.1 - Logit GLM results that predict the probability of future entrepreneurship compared to remaining in the same job

	(1)	(2)	Number of observations	
Variables	Fut. Ent.	Fut. Ent.	Stayed in same job	Transition into entrepreneurship
Life satisfaction	0.10 (0.06)	0.09 (0.06)	3,175	94
Job satisfaction[6]	-0.33* (0.18)		3,071	82
Slightly dissatisfied		-0.54 (0.70)		
Slightly satisfied		-1.02* (0.57)		
Very satisfied		-1.13* (0.59)		
Financial satisfaction	0.14 (0.16)	0.15 (0.16)	3,183	94
Income (natural log)	-0.11 (0.15)	-0.11 (0.15)	7,330	207
Age	-0.03 (0.03)	-0.03 (0.03)	9,255	290
Gender			9,255	290
Female	-0.26 (0.30)	-0.26 (0.30)		
Optimism	0.11 (0.12)	0.11 (0.12)	3,168	94
Health problem			7,469	240
No	0.89 (0.74)	0.89 (0.74)		
Years of Education	0.02 (0.02)	0.02 (0.02)	7,461	246
Year[7]			9,255	290
2006	0.03 (0.80)	0.04 (0.80)		
2008	0.76 (0.77)	0.75 (0.77)		
2010	0.41 (0.80)	0.39 (0.80)		
2012	-0.13 (0.80)	-0.15 (0.80)		
2014	-0.17 (0.82)	-0.18 (0.82)		
Constant	-2.70 (3.15)	-2.63 (3.19)		
Log likelihood	-234.79303	-234.43126		
Wald chi2(14)	16.56	17.73		
Prob > chi2	0.2805	0.3402		

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The number of observations represent the available respondents per category for each variable that are used in the GLM.

[6] Very dissatisfied is used as a reference in the second model.
[7] The year 2004 is used as a reference.

Table A.2 - Logit GLM results that predict the probability of future senior entrepreneurship compared to continue working in a wage-job

		Number of observations	
Variables	Fut. Ent.	Stayed in same job	Transition into entrepreneurship
Life satisfaction	0.10 (0.06)	3,587	94
Job satisfaction	-0.27 (0.18)	3,449	82
Financial satisfaction	0.13 (0.16)	3,593	94
Income (natural log)	-0.09 (0.15)	8,321	207
Age	-0.02 (0.03)	10,512	290
Gender		10,512	290
Female	-0.25 (0.30)		
Optimism	0.11 (0.12)	3,579	94
Health problem		8,492	240
No	0.85 (0.74)		
Years of Education	0.02 (0.02)	8,486	246
Year[8]		10,512	290
2006	0.07 (0.79)		
2008	0.82 (0.77)		
2010	0.46 (0.79)		
2012	-0.09 (0.80)		
2014	-0.16 (0.82)		
Constant	-3.33 (3.16)		
Log likelihood	-241.464		
Wald chi2(14)	15.64		
Prob > chi2	0.3361		

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The number of observations represent the available respondents per category for each variable that are used in the GLM.

[8] The year 2004 is used as a reference.