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Starting a new business at older ages

Abstract. Self-employment in later life may be either a career option or a form of partial retirement. This paper adds knowledge about those individuals who start a business when they are older. A large longitudinal data set is utilized to examine the transitions of individuals aged 55-74 to self-employment in Finland. The significance of prior activity as well as personal, household, financial and environmental characteristics are analyzed for the transitions. The results show that most of those entering self-employment in later life have prior self-employment experience, thus suggesting that entrepreneurship at later ages is often habitual. Habitual entrepreneurs deviate from novice entrepreneurs in many respects at older ages: they are less educated, more likely men and live mostly in urban areas. An entrepreneurial spouse has a significant effect for both, but this effect is greater for novice entrepreneurs. In most cases, a large income increases the probability to start a business at older ages.

Introduction

Older workers are significantly more likely than younger workers to be independent, self-employed workers (for example, Zissimopoulos and Karoly 2007). Many older entrepreneurs have been self-employed for much or all of their working careers. However, there are a growing number of individuals who enter self-employment later in life (Zissimopoulos and Karoly 2007; Järnefelt 2011). Although some studies have focused on transitions to self-employment among older workers (for example, Fuchs 1982; Bruce et al. 2000; Singh and DeNoble 2003; Hipple 2004; Zissimopoulos and Karoly 2007; Giandrea et al. 2008; Kautonen 2008; Kautonen et al. 2010; Backman and Karlsson 2013), questions about the background of these workers needs clarification. Why would someone on the verge of retirement start a business? This paper analyzes those individuals in Finland who start a new business when they are older. The core of

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the analysis is in the juxtaposition of habitual and novice older entrepreneurs. Are those without experience in entrepreneurship different from those who have such experience? Is self-employment in later life a real alternative only for habitual entrepreneurs?

Figure 1 shows that the rate of self-employment in Finland is higher among those in the older age group (55 to 74). In 2001, the rate of nonagricultural self-employment was 7.8%, though it was clearly higher, 11.8%, among employed individuals age 55 years and older. These higher rates occur partly because self-employed workers tend to stay in the labor force longer than wage-and-salary workers. Figure 1 also indicates that transitions to self-employment are most common during middle age. Starting a new business at older ages is not very common, but there are individuals who do it.

-- Figure 1 around here--

The question of entrepreneurship at a later age is especially important because of the increase in the aging population in most developed countries, among which Finland is one of the countries that is leading the way. Though the workforce is aging, it is still needed for productive work. Because current generations are healthier and more able to work than previous generations, careers have been extended. Older workers, however, may wish to have more control over their time and responsibilities than is possible when working for someone else. Self-employment allows the older worker the freedom to adjust working hours, an advantage for many aging full-time workers. Entrepreneurship—or self-employment—becomes more and more an option for older workers. Recent statistics from Finland indicates that the number of those entering self-employment at older ages has steadily grown in the 2000s (Järnefelt 2011).[1]

The legal framework and social security and tax systems are important for entrepreneurship. According to Holm (2000), the economic incentives for

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[1] A variety of different terms such as third age, second career, grey, silver and senior entrepreneurs or laterpreneurs, seniorpreneurs and olderpreneurs have been employed to describe older entrepreneurs (Weber and Schaper 2004).

entrepreneurship are smaller than the incentives for a working career in Finland. Despite this, Finnish systems do not contain any notable disincentives to entrepreneurship for older people. On the contrary, the pension system with its mandatory retirement age regulations for employees may tempt active older people to self-employment.[2] With regard to self-employment options, Finnish pension system is flexible (Kyrö et al. 2012). Furthermore, worsening economic situation may lead firms to avoid aged workforce which probably has a positive effect on seniors' transitions into self-employment.

In this analysis, we utilize a large longitudinal micro data set to examine the transition of individuals aged 55 to 74 to self-employment in Finland between 1998 and 2004. Due to the data, the definition of self-employment follows the statistical definitions used by Statistics Finland.[3] The data set represents a 7% sample of all Finns in 2001 for whom we have a great deal of register-based and other data from different years. The analyses are based on pooled data and probit models. We analyze separately those who have and those who do not have previous self-employment experience as well as those who switch to self-employment from wage work and those who make this transition from the state of non-employment, which is usually retirement but can also be unemployment or other inactivity.

The paper proceeds as follows. The next section lays out the relevant theory of senior entrepreneurship and develops the hypotheses. This discussion is followed by the presentation of the main points in the empirical analysis, such as the definition of self-employment and the description of the data and variables. In this section, some basic information on transitioning into self-employment later in life is also provided, including information on the number of transitions and the background of those seniors making this transition. Next section presents the estimation results for the whole

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[2] Prior to 2005, the general old-age retirement age was 65 years in Finland, after which it has been possible to retire flexibly on an old-age pension between the ages of 63 and 68.

[3] Despite our empirical definition, the terms "entrepreneurship" and "self-employment" are used synonymously in the text.

sample and then for novice and habitual entrepreneurs. We then differentiate the transitions from paid employment and from non-employment. The final section summarizes the key results and provides conclusions.

Self-employment transitions at older ages

The significance of age: literature review

The paths into entrepreneurship at a later age may be varied. The utility maximizing paradigm and human capital theory, first presented by Knight (1921) and Becker (1975), offer useful insights into the career choices of older workers (cf. Tervo and Niittykangas 1994; Tervo 2007). The famous utility maximizing paradigm predicts that individuals choose the occupation that offers the greatest expected utility. According to this theory, older individuals compare the utility of the current labor market state with the utility that they can obtain in other states in each period and, accordingly, decide whether to continue in the current state. Because many factors play a part in determining anticipated returns, these returns will be subject to a constant process of adjustment. Older individuals' perceptions of returns may gradually change due to, for example, accumulated savings or an increasing desire to adjust working hours. The perceptions of returns may also suddenly change in response to variations or modifications in other important factors.

Lévesque and Minniti (2006) identify age as an inherent triggering factor of entrepreneurship. When considering starting a new firm, aging individuals have an incentive to reallocate more of their time to waged labor and less to starting a new firm because the opportunity costs of starting a new firm increase (ibid, p. 181). Thus, everything else being the same, an age effect reduces the relative return to entrepreneurship as individuals become older. However, age may also increase interest in entering self-employment for various other reasons, such as the human and financial capital requirements of entrepreneurship, which are often unavailable to younger workers, or the better social and business networks, which older people typically have

(Parker 2009). Consequently, the opportunity to start a business tends to increase with age while the willingness decreases (cf. van Praag and van Ophem 1995).

The age dimension is explicitly present, for example, in the social development model by Gibb and Ritchie (1982) and in Dyer's (1994) model of entrepreneurial careers. These models advocate the view of entrepreneurship as a process (see also Ronstadt 1984; Low and MacMillan 1988; Davidsson, Low, and Wright 2001) and suggest that becoming an entrepreneur is a real option for older workers that may more commonly be an option in the near future than it was in earlier generations. A positive life-cycle effect was found, for example, by Bönte, Falck, and Heblich (2007), Leung and Robinson (1998) and Quinn and Kozy (1996). Improved health, finances and quality of life, as well as various innovative arrangements, enable individuals to continue working at later ages, even after having retired (Zhang 2007, 33-34).

In an analysis of early retirees' decision to become self-employed, Singh and DeNoble (2003, 209) differentiated two decisions. First, an early retiree has the option of permanently and completely withdrawing from work or continuing to participate in the market. Second, once an early retiree decides to remain active, (s)he must decide on the type of work activity. Forming one's own business venture represents a viable option. According to Singh and DeNoble (2003), the first decision is influenced by health, wealth, work history and macro-economic conditions, whereas at the second stage, liquidity constraints, environmental contingencies, individual characteristics and networks become most important.

Developing the hypotheses
Various reasons such as age, health, gender, education, family status, accumulated savings, organizational factors and environmental features can affect the decision between self-employment and other options as well as between full-time work, bridge employment and retirement. Our main interest is in the role of previous self-

employment experience, personal and household situation, the availability of financing and environmental factors.

Many of the individuals entering self-employment might have previous experience in self-employment. In fact, they may well be habitual or serial entrepreneurs (Hyytinen and Ilmakunnas 2007; Ucbasaran et al. 2008; Gordon et al. 2009) who have owned a previous business but no longer own it. The case of portfolio entrepreneurship in which an entrepreneur owns two or more businesses contemporaneously is not relevant here because there is no transition to self-employment. Serial entrepreneurs account for a significant portion of entrepreneurial activity: in Europe, 18-30% of entrepreneurs are serial, and in the US, their contribution is approximately one-eighth (Westhead and Wright 1998; Headd 2003; Hyytinen and Ilmakunnas 2007; Plehn-Dujowich 2010). Earlier literature on habitual entrepreneurs shows that serial founders start their first business at a younger age than other novice founders (for example, Westhead and Wright 1998). Amaral, Baptista, and Lima (2011) examined how ex-entrepreneurs' levels of general and specific human capital influence their likelihood of re-entering entrepreneurship over time. Their results revealed a negative effect of general human capital on the hazard of becoming a serial entrepreneur. The impact of entrepreneurial-specific human capital on the hazard of re-entering entrepreneurship was, in general, positive (Amaral, Baptista, and Lima 2011). Due to their skills and social connections, experienced compared to novice founders have some advantage in the process of raising venture capital (Zhang 2011). The evidence on entrepreneurial learning, however, is mixed: while self-report data is in support of entrepreneurial learning, econometric analyses based on panel data provide no compelling evidence in support of it (Frankish et al. 2012)

Regarding novice entrepreneurship, transitions to self-employment in later life may be either a career option or a step toward retirement known as "bridge employment." Older workers may choose self-employment as a career option because they have a lifetime of experience and better access to capital than younger workers (Parker 2009).

According to Singh and DeNoble (2003), those who enter self-employment at later ages may be constrained entrepreneurs who have harbored a desire to form their own venture for many years throughout their main careers but have lacked the financial or family flexibility needed to follow through on their ideas. Alternatively, they may be entrepreneurs who rationally decide to become self-employed, viewing self-employment as a progression of their careers and a way to increase personal wealth. In contrast, there may be reluctant entrepreneurs whose decision to become self-employed is based on a lack of employment opportunities and insufficient wealth to retire early (Singh and DeNoble 2003).

In addition, the phenomenon of quasi-entrepreneurship is pertinent. Quasi-entrepreneurs combine self-employment and wage work (Delmar, Fonta, and Wennberg 2008), in which case self-employment may be only episodic (Carroll and Mosakowski 1987). Parallel concepts are "hobby entrepreneurship" (Giacomin et al. 2011) and "hybrid entrepreneurship" (Folta, Delmar, and Wennberg 2010; Eliasson and Westlund 2012). Individuals might transition incrementally by retaining their wage job while entering self-employment. In addition, older people may start many "lifestyle" businesses to use their time beneficially or also to realize a long-held ambition. These people are entrepreneurs who prioritize lifestyle benefits over profits, including flexible hours, fulfilling work, spending time with family and friends, hobbies, charity work, or creative pursuits.

Hypothesis 1 - Prior activity:
a) Previous entrepreneurship experience will have a strong positive effect on the probability of self-employment transitions at older ages.
b) Prior occupational status is an important distinguishing factor in the transition to self-employment: being engaged in wage work is a more favorable status than being in non-employment (retired).

There are differences in the self-employment rates between men and women, with women tending to be a minority of the self-employed workforce in all developed countries (Parker 2009). This situation also applies to Finland. Tervo and Haapanen (2010) showed that for men, age has a nonlinear effect on the probability of being self-employed in Finland, whereas the result is not significant for women. Women may be somewhat more likely than men to choose bridge employment because they usually exit from the workforce earlier in their careers and, consequently, have smaller pensions upon which to draw. The effects of gender on decisions to pursue bridge employment are, however, inconclusive (Kim and Feldman 2000).

The role of formal education as a determinant of entrepreneurship has been analyzed much in the literature (Parker 2009). The customary hypothesis is that education will increase an individual's probability of becoming self-employed because it enhances her/his human capital (Rees and Shah 1986). This hypothesis is consistent with many empirical findings (for example, Blanchflower and Oswald 1998; Parker 2009); however, Finnish results suggest that individuals with a higher level of education have a lower probability of being self-employed (for example, Johansson 2000; Uusitalo 2001; Niittykangas and Tervo 2005; Tervo and Haapanen 2010). In addition to the level of education, the main educational orientation can be important.

Hypothesis 2 - Individual characteristics:
a) The effect of gender is indeterminate at older ages.
b) Higher education will increase the probability of entering self-employment at older ages.

Self-employment decisions may be best viewed from the perspective of the household rather than that of the individual (Karoly and Zissimipoulos 2004). An individual's family network and family responsibilities may play a key role in the decision to accept bridge employment because a complete withdrawal from the workforce involves the loss of both income and social interaction. Having a working spouse increases the probability of self-employment (Bernhardt 1994; Blanchflower and Oswald 1998). In

particular, individuals who have self-employed spouses have higher self-employment rates. Self-employed persons in the family are role models and can offer assistance in many practical matters.

Hypothesis 3 - Family relations:

a) If a spouse is entrepreneur, the probability of entering self-employment increases at older ages.
b) *If a spouse is in working life, the probability of entering self-employment increases at older ages.*

The availability of financing is emphasized in the entrepreneurship literature because liquidity constraints may play an important role in determining those who become self-employed (Evans and Jovanovic 1989; Blanchflower and Oswald 1998). The role of wealth in a senior's decision to become self-employed may vary depending on the type of individual (Singh and DeNoble 2003). As an individual's accumulated savings or pension benefits become greater, there is a lower economic need for continued work. In these cases, incentives for starting a business may be low. In contrast, if older individuals are capable and motivated, they are more likely to become self-employed if they have access to financial resources.

Hypothesis 4 - Financial situation:

Good financial situation enhances entrepreneurship at older ages.

Different regions may provide varying opportunities for entrepreneurship (Reynolds et al. 1994; Tervo 2007; Naude et al. 2008; Baughn et al. 2013), which may also be the case at older ages. Not all places are alike in their potential to generate senior entrepreneurship, partly because of varying demand conditions and human capital and partly because the possibilities for entrepreneurial learning processes differ among regions (cf. Tervo and Niittykangas 1994). Regions with strong traditions of entrepreneurship may be more favorable to bridge employment in the form of self-employment than regions that do not display such strong traditions. Rural areas are

typically characterized by weaker conditions of employment but a stronger tradition of entrepreneurship than urban areas, thus also providing role models for potential older entrepreneurs. Less educated individuals in these small, dispersed labor markets may be pushed into self-employment if they see no other realistic employment options in the region (cf. Moore and Mueller 2002; Ritsilä and Tervo 2002; Kalantadiris and Bika 2006; Kim and Cho 2009). However, larger market possibilities and better formal education in urban areas may become decisive. Because of higher level of demand and higher educational capital, transitions into self-employment at older ages will be more frequent in urban than rural areas, despite the strong tradition of entrepreneurship in rural areas.

Hypothesis 5 - Environmental characteristics:
Living in an urban area enhances entrepreneurship at older ages.

Data and variables

The data are based on various registers kept by Statistics Finland. By using the personal identifiers, data from various registers are merged. In addition, data on spouses are merged for every individual. As a consequence, the data set holds rich information on many variables, including labor-market performance, educational attainment, family characteristics, and neighborhood. We have in use a 7% random sample of the individuals who resided permanently in Finland in 2001, drawn from the basic registers.[4] The individual-level panel data were transformed and pooled into a sample of aged individuals to analyze their labor-market transitions in the period from 1998-2004.[5] According to the definitions of Statistics Finland, an entrepreneur is aged if (s)he belongs to the age-group 55 - 74 (Järnefelt 2011). As Fig. 1 showed, entrepreneurial

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[4] Due to Finland's data protection legislation, the size of the sample, 7% of all Finns was the maximum Statistics Finland provided for the analysis.
[5] The total number of observations in the data is 385,371, and the number of individuals is 88,829.

activity is highest in this age group. The cut-off age of 55 is used widely Finland to define aged workers.[6]

The pooled data set includes transitions from a six-year period. The pooling was done to ensure a sufficient number of transitions to self-employment. In addition to the age restriction, the agricultural sector was excluded from the sample because the concept of self-employment is more vague in agriculture than in other industries and because farm businesses have very different characteristics compared with nonfarm businesses (Blanchflower 2000; Parker 2009). Accordingly, the analysis concerns the transitions of individuals aged 55-74 to non-agricultural self-employment in Finland during the period from 1998-2004. In the analysis, the definition of self-employment follows the definitions used by Statistics Finland (2001). The variable "occupational status" describes the position of the employed in the labor market: entrepreneurs and wage and salary earners. The category of entrepreneurs also includes family members working without pay in a family business. If an individual is not employed, (s)he belongs in the third category, non-employed. The non-employed are either unemployed or out of the labor force who are primarily retired individuals and students. [7]

An individual was included in the sample for each year if (s)he met the age criteria and was either in wage work or non-employed. If an individual switched to self-employment, (s)he was not included in our data for the subsequent year; once an individual entered self-employment, (s)he could not enter it the subsequent year

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[6]The literature includes many different definitions of what constitutes an "older" person. In this analysis, the cut-off age of 55 is used. The reason is that individuals at this age already are relatively close to retirement but are still active. Using 50 instead of 55 would bring into the analysis many individuals who still are in the mid of their working life, especially since retirement age is rising.

[7] The data on occupational status are based on the individual's national insurance status (YEL) and wage, salary and/or entrepreneurial income received. There are two requirements to define a person as an entrepreneur: (s)he had a self-employed person's pension insurance during the last week of the year, and her/his income from entrepreneurship exceeds her/his wage income if the person is also in an employment relationship (for details, see Statistics Finland 2001). Accordingly, having self-employed pension insurance is the primary criterion. This insurance is required by law if self-employment has continued for at least four months and the individual's entrepreneurial income exceeds an annual specified limit.

(although an individual can enter self-employment the year thereafter if (s)he switched from self-employment during the intervening year).

In the data, there were 425 transitions to self-employment, of which 226 were from wage work and 199 were from non-employment.[8] Combined, these figures show that the annual probabilities for becoming self-employed in later life are relatively low, 0.11%. However, when these figures are generalized, approximately 1,000 individuals aged 55-74 switched to non-agricultural self-employment in Finland per year. Some individuals entered self-employment twice during the study period. For them, self-employment has been episodic (Carroll and Mosakowski 1987). In most cases (69%), those who switched to self-employment had self-employment experience earlier in life. In sum, 14% had been self-employed for one or two years; 10% for three to five years; 15% for six to ten years; and 30% for more than ten years. Only 31% of the individuals had no previous self-employment experience. Of the habitual entrepreneurs, 39% had been in a state of self-employment two years earlier and were thus only one year out of entrepreneurship; 18% had an interval of three to five years; and 43% had a period of more than five years since their previous self-employment experience. These findings show that the variable describing previous self-employment experience may be important for the results and must be considered in the analysis.

Many of the transitions to entrepreneurship were in two industries. One industry was wholesale and retail trade, and the other industry was real estate, renting and business activities. The shares of transitions into both of these industries were 14%. Manufacturing industries, construction and other services are also industries in which transitions to entrepreneurship were common. Unfortunately, the industry was unknown in many transitions.

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[8] In addition to transitions into self-employment, there were outflows from self-employment into wage work and non-employment, but this paper concentrates on the analysis of the flows into self-employment.

Table 1 provides information on the formation and means of the explanatory variables used in the analysis. The means are also given separately for those who have switched into self-employment. A comparison of the means gives a first picture of the factors affecting the transition into self-employment. First, two dummy variables, i.e., prior self-employment experience and occupational status (wage work vs. non-employment), describe the basic features of individuals. Second, a dummy variable indicates whether the individual is male or female. Third, the two education variables separate those with an intermediate and a higher level of education from those with a basic education. In addition to the level of education, three variables indicate three main education orientations: the first variable separates those with a commercial and social education, the second variable identifies those with a technical education, and the third variable identifies those with a medical and/or related education. Fourth, a dummy variable indicates whether the individual is married or cohabiting, on the one hand, or single, on the other hand. Fifth, three variables assess the financial situation. Two variables describe taxable property in the family, and the third variable describes taxable income. Finally, a dummy defines whether the individual resides in a rural or in an urban area.[9]

-- Table 1 approximately here--

Results: Who begins or returns to entrepreneurship later in life?

Table 2 shows our estimation results on the transitions to self-employment. To first assess the role of the two key variables, that is, previous self-employment experience and prior occupational state, a specification with all variables was estimated. The results show previous self-employment to have a great effect on the probability of entering self-employment at a later age. While the effect of prior occupational status does not dominate, its effect is also important. Because these two variables are essential for a proper understanding of the phenomenon under scrutiny, we have performed the

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[9] A municipality is classified as an urban area if not less than 80% of people live in urban settlements. Otherwise, a municipality is classified as a rural area.

estimations for the groups separately. We first considered those who made their transitions from wage work to be distinct from those who transitioned from non-employment. We then looked within each group for those with and without preceding self-employment experience.

-- Table 2 approximately here ---

Before moving on to these group-specific estimations, we consider the results related to the entire sample. In addition to previous self-employment experience and prior occupational state, gender, level of education, family relations, spouse's situation and the type of region have a significant effect on the probability of transitioning into self-employment at later ages. To illustrate the probability of entering self-employment and the effects of various factors on it, we have calculated some predicted probabilities in certain interesting cases (Table 3). As a nonlinear function, probit has the property that the marginal effect of any independent variable on the response probability will vary depending on the initial probability. The magnitude of the effect also depends on the values of the other variables, though the direction of the effect can be observed immediately from the sign of the coefficient.

--- Table 3 approximately here ---

Our illustrative calculation is based on the case of the most favorable situation according to our estimated model. This situation entails a highly educated working male with a technical orientation who has previous self-employment experience, is married, has a self-employed wife, has very high annual earnings, but has no property and lives in an urban area. In this case, the predicted probability of entering self-employment during a year is as high as 7.3% (Table 3). The significance of any individual variable can now be illustrated if we change the value of the variable in question while keeping all other variables unchanged. Table 3 confirms that prior self-employment experience has a considerable effect on the predicted probability: if a man

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does not have this prior experience, his predicted probability falls from 7.3% to 1.4%. If a man is retired instead of being engaged in wage work, the predicted probability is smaller by half, 3.3%, than in the most favorable situation. Furthermore, if a man is both retired and has no prior self-employment experience, the predicted probability that he will enter into self-employment is only 0.5%, though all of the other factors would be as favorable as possible with regard to a positive self-employment decision.

A woman, compared to a man, has a lower probability of entering self-employment at an older age. Consequently, the situation does not change with increasing years, since women also have a lower probability at younger ages. In our illustrative case, if the question is about a woman instead of a man, the predicted probability falls from 7.3% to 5.5%.

Individuals with a high level of education have a higher probability of entering self-employment in later life than individuals with a basic education. In our illustrative case, if a working man has only basic education rather than a high level of education, the predicted probability falls to 4.7%. The result is in accordance with the standard hypothesis of the effect of human capital and is consistent with many international findings; however, this result contrasts with previous Finnish results. Our study, with its focus on older entrepreneurs, shows that in mature years, a higher earnings capacity due to higher education does not reduce the probability of becoming self-employed, perhaps because mature workers have a higher preference for leisure than younger workers.

Married or cohabiting individuals have a somewhat higher probability of transitioning into self-employment than single individuals. This result is in accordance with the general finding that self-employment status is positively associated with marital status (Parker 2009). Furthermore, if a spouse is self-employed, the probability increases; however, if the spouse is non-employed—retired or unemployed—the probability decreases. In our example, if the wife of the working man is retired, the predicted

probability falls from 7.3% to 4.5%, and if she is not self-employed, it falls even more, to 3.7%, *ceteris paribus* (Table 3). These results highlight the significance of a spouse and the significance of the overall life situation. A self-employed spouse may serve as a role model and provide business skills and valuable advice for the individual (Bruce 1999; Tervo and Haapanen 2010). In contrast, a retired spouse may prefer that her/his mate is also not working.

The regional environment has some importance on the decision of older individuals to transition into self-employment: living in an urban area advances entering self-employment at older ages. This finding is interesting because the self-employment rate in Finland is higher in rural than in urban locations. The finding perhaps reflects the fact that those entering self-employment at older ages are different in many respects from those who already are self-employed.

Group-related results
An analysis of the group-specific estimations reveals the determinants of self-employment in each group. There are notable differences with regard to the effects of certain variables. Gender is not significant among those who have no prior self-employment experience; however, gender is significant if individuals have such experience. This finding is particularly true among those who have prior self-employment experience because men are more likely than women to transition into self-employment at later ages. This result reflects the fact that habitual entrepreneurs are more often male.

Higher education increases the probability of entering self-employment, particularly among non-employed individuals without earlier self-employment experience. If an older worker has prior experience, higher education does not have a significant effect. The field of education also plays some role. Among those who have prior entrepreneurship experience, commercial education increases the probability of transitioning to self-employment, particularly from non-employment, compared with

older adults with education in other fields. A medical education also increases the probability of entering self-employment if the older individual has prior self-employment experience and is non-employed. Among those without prior self-employment experience, none of the three fields has a significant effect.

Marriage or cohabitation increases the probability of self-employment, particularly for former entrepreneurs. Interestingly, we find a strong result related to the effect of a self-employed spouse: self-employed spouses pull their partners into entrepreneurship at later ages, particularly if an older worker has no prior self-employment experience. The effect of a self-employed spouse contrasts with the effect of a non-employed spouse. As previously noted, an individual with a non-employed spouse is less likely to become self-employed. This effect increases when the individual has prior self-employment experience. If an older individual has no earlier self-employment experience, the effect of a non-employed spouse is not significant.

A high income level increases the probability of becoming self-employed especially if a senior enters self-employment from wage work and has not previously been self-employed. This finding may well reflect the situation of constrained entrepreneurs who have harbored a desire to form their own venture for many years during their main careers but have lacked the financial means and other factors necessary to follow through on their ideas (cf. Singh and DeNoble 2003). In contrast, senior's or his/her spouse's taxable property has no significance, except for those retired who have no prior self-employment experience and who start a business.

Finally, from the regional point of view, an important finding is the effect that region type has on entering self-employment in later life. If a senior is from an urban area and has worked earlier as an entrepreneur, the probability of transitioning to self-employment increases whereas region type does not matter if (s)he has no prior self-employment experience. In this case, a rural area is at least as favorable an environment for entering self-employment at older ages as an urban area.

Novice vs. habitual entrepreneurship

An important finding is that novice entrepreneurship is more rare at later ages. As expected, novice entrepreneurs deviate from habitual entrepreneurs in many respects. To summarize, the most important differences are the environment in which an individual lives, the individual's financial position, one's gender, and the situation of the individual's spouse. *First,* while older workers entering habitual entrepreneurship often are male, gender does not differentiate older workers entering entrepreneurship for the first time. In this case, women transition equally into self-employment. *Second,* the educational background differs between the groups because novice entrepreneurs are often highly educated. However, educational background is not significant among habitual entrepreneurs though habitual entrepreneurs often have business-orientated training. *Third,* an entrepreneurial spouse has an important effect on the decision to enter self-employment at a later age, particularly if an individual has no prior self-employment experience. The effect is smaller but also positive among habitual entrepreneurs. This result describes the importance of role models, particularly for novice entrepreneurs at older ages. *Fourth,* although high income or assets in general do not increase the probability of entering self-employment at older ages, high earnings increase the probability if a senior is still in wage work and has no previous personal experience in entrepreneurship. Thus, a good financial situation contributes to novice entrepreneurship of wageworkers at older ages.

Validity of the hypotheses

A summary of the findings and the confirmation of the hypotheses presented are shown in Table 4. Most of our hypotheses are verified, at least partially. The results provided strong support for **H1a**: prior entrepreneurship experience has a great importance for the decision to start a new business. **H1b** is also confirmed: occupational status is an important distinguishing factor in the transition to self-employment. While the effects of gender were hypothesized to be inconclusive, it turned out that women at older ages still tend to enter self-employment less actively than men (**H2a**). For novice

entrepreneurs, however, the difference was not significant. Higher education enhances entrepreneurship for novice, but not for habitual entrepreneurs (**H2b**). The field of education has also some importance. Family relations play an important role (**H3a**, **H3b**). Especially, having a spouse who is entrepreneur him- /herself increases the probability of starting a business at older ages. Having a working spouse increases this probability only for habitual entrepreneurs. The hypothesis of the financial situation is partially supported (**H4**). A large income increases the probability to start a business at older ages, but not a large property. Finally, living in an urban area enhances habitual, but not novice entrepreneurship at older ages (**H5**).

-- Table 4 approximately here ---

Discussion and conclusions

Age is an important factor in entrepreneurship. Even in their social development model, Gibb and Ritchie (1983) examined entrepreneurial careers and found age and stage of life to be crucial factors. Depending on the individual, aging can both encourage and discourage the decision to enter self-employment. Singh and DeNoble (2003) theorized that certain characteristics distinguish different types of older entrepreneurs. Our empirical results show that many characteristics related to the person, family, financial situation and environment affect the decision to enter self-employment in later life.

It is particularly important to distinguish habitual entrepreneurs from novice entrepreneurs; those who have prior self-employment experience from those who do not. Habitual entrepreneurs may be serial entrepreneurs who continuously start new businesses, or they may be quasi-entrepreneurs who have combined self-employment and wage work. Habitual entrepreneurship, whether serial or quasi-entrepreneurial, is important because most individuals entering self-employment in later life have prior self-employment experience — some even have a long history of entrepreneurship behind them.

The paths into entrepreneurship at older ages may be varied. Most enter self-employment from paid employment, though a small number do enter from non-employment. Our results suggest that a career option is often linked with transitions from wage work, whereas those transitioning from non-employment seek a bridge to full retirement. No sharp division between these two options can be made, however.

From the point of view of a society, entrepreneurship is potentially an important option to offset the negative effects of an aging labor force because entrepreneurs work much longer than wageworkers. Unfortunately, our results, which indicate that novice entrepreneurship in later life is relatively rare, do not indicate a widespread use of this option. Entrepreneurship becomes, however, more and more an option for older workers, as the recent statistics from Finland shows. The fact that entrepreneurship at later ages is often habitual supports the view that senior entrepreneurship in many cases is a way of life rather than a new activity. Furthermore, for many seniors, entering self-employment most likely is a form of bridge employment. Of course, this fact could also contribute to extending careers.

The question is whether anything can or should be done to support entrepreneurship among those over 55 years of age? Policymakers are keen to promote self-employment among older age groups as one way of offsetting higher unemployment and early retirement among these groups, thereby reducing demands on welfare that result from having an increased number of older people in the population (Curran and Blackburn 2001). Public policies affect early and normal retirement ages, unemployment insurance, disability insurance, and other social insurance programs, which, in turn, may also affect the self-employment decisions of older workers or pensioners. Most important is to ensure that there are no disincentives for senior entrepreneurship within social support and tax systems. An increased availability and lower costs of technology help those who choose to enter self-employment at any age, including more advanced ages, thus making it easier and cheaper to start a business and develop the connections that

allow an operation to succeed even in non-traditional locations. Government and corporate outsourcing also encourage older, self-employed individuals to provide services previously provided only in-house.

There is still much that needs to be learned about senior entrepreneurship. Therefore, more research is needed. The principal limitation with this research was the data which ended to the year 2004. For example, the effects of the financial crisis of 2007-2008 and the events after that are not included into the analysis. There is a need for further analysis using more recent data. Another limitation with the data is the relatively small number of those seniors making the transition to self-employment. In the immediate future, both of these shortcomings can be overcome, since more recent data will be soon available. In addition, new interpretations of the data protection confidentiality practices specified in statistical legislation will allow to handle total data (on certain conditions).

In the future, it is particularly important to analyze the differences between older and younger entrepreneurs. Do the motives and determinants of the transition into self-employment differ based on the age of the entrepreneur? Analyzing these questions would also offer some leverage regarding current debates on aging and the role of entrepreneurial behavior in providing incomes for the non-employed. Another important research question is to analyze factors influencing survival of older entrepreneurs. Will the habitual entrepreneurs continue to "come and go"? Are they entrepreneurship tourists of only negligible economic significance (Burke et al. 2008)? Is there a difference between them and novices? Metzger (2006) has shown that previous experience of business ownership enhances firm performance, but this effect is outweighed if the previous firm has failed, leading to an overall negative effect. A third strand of future research, related also to the previous one, is to analyze flows out of self-employment and their reasons at older ages.

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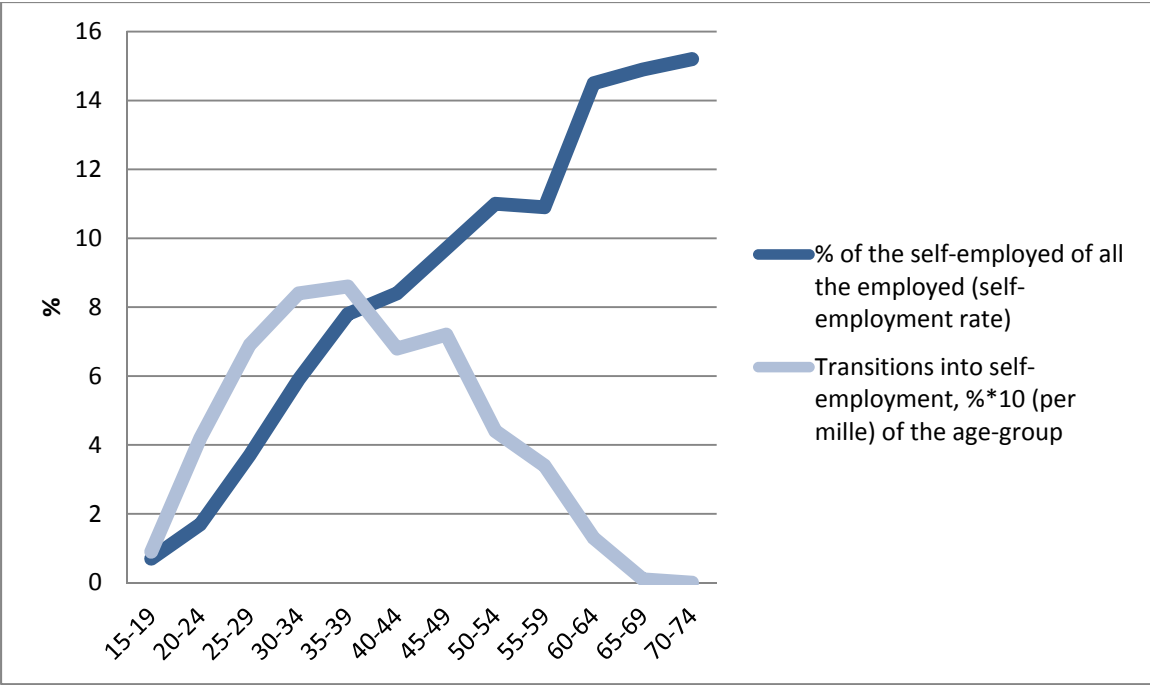
Figure 1.   Self-employment rate and transitions into self-employment by age in
             Finland in 2001 (nonagricultural self-employment)
             Source: Calculations from data set

Table 1. Description and means of the explanatory variables

Variable	Description	Means All	Has switched into self-employment[1]
Prior activity			
Previous self-employment experience	1 if has been self-employed earlier (from 1970 on), 0 otherwise	0.23	0.69
Wageworker	1 if in wage work in year *t-1*, 0 if non-employed	0.23	0.53
Individual characteristics			
Male	1 if male, 0 if female	0.46	0.64
Level of education (reference category basic education)			
-Intermediate	1 if secondary education is attained, 0 otherwise	0.23	0.27
-High	1 if tertiary education is attained, 0 otherwise	0.19	0.35
Field of education (reference category other fields)			
-Social sciences and business	1 if field of education is business or social sciences, 0 otherwise	0.08	0.14
-Technology	1 if field of education is technology or natural sciences, 0 otherwise	0.14	0.24
-Health and welfare	1 if field of education is health or welfare, 0 otherwise	0.06	0.06
Family relations			
Married or cohabiting	1 if married or cohabiting in year *t-1*, 0 otherwise	0.69	0.80
Spouse entrepreneur	1 if spouse is self-employed in year *t-1*, 0 otherwise	0.02	0.13
Spouse non-employed	1 if spouse is non-employed in year *t-1*, 0 otherwise	0.31	0.14
Financial situation			
Taxable income	Income subject to state taxation in year *t-1* (in 10,000 euros)	1.84	2.85
Taxable property	Property subject to state taxation in year *t-1* (in 100,000 euros)	0.27	0.40
Spouse's taxable property	Spouse's property subject to state taxation in year *t-1* (in 10,000 euros)	0.62	0.64
Environmental characteristics			
Urban municipality	1 if home municipality is classified as an urban area (in which not less than 80% of people live in urban settlements), 0 otherwise	0.59	0.60
Number of observations		385,582	425

[1]Concerns transitions of individuals aged 55-74 years to non-agricultural self-employment in Finland during the period from 1998 to 2004.

Table 2. Probit estimations for the determinants of transitions into self-employment at older ages

Variable		All transitions		Transitions from wage work		Transitions from non-employment	
		Self-employment experience		Self-employment experience		Self-employment experience	
		No	Yes	No	Yes	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Prior activity							
Previous self-employment experience	0.76***	--		--		--	
Transitions from wage work	0.38***	0.22***	0.49***	--		--	
Individual characteristics							
Male	0.15***	0.06	0.21***	0.12	0.22***	0.00	0.20***
Level of education (reference category basic education)							
-Intermediate	0.10*	0.12	0.06	-0.08	-0.05	0.31***	0.11
-High	0.22***	0.32***	0.09	0.20*	0.01	0.49***	0.12
Field of education (reference category other fields							
-Social sciences and business	0.04	-0.15	0.21**	-0.18	0.13	-0.12	0.31**
-Technology	0.07	0.00	0.14*	0.03	0.17	-0.07	0.11
-Health and welfare	0.03	-0.09	0.13	-0.02	-0.14	-0.17	0.37***
Family relations							
Married or cohabiting	0.13***	0.06	0.19***	0.12	0.17*	0.05	0.21***
Spouse entrepreneur	0.33***	0.56***	0.20***	0.49***	0.06	0.76***	0.33***
Spouse non-employed	-0.25***	-0.09	-0.36***	0.06	-0.26***	-0.18*	-0.39***
Financial situation							
Taxable income	0.01*	0.02*	0.01	0.04***	0.02*	-0.06	0.00
Taxable property	-0.01	0.00	-0.03	-0.00	-0.05	0.00*	-0.02
Spouse's taxable property	-0.01	-0.00	-0.02	-0.07	-0.01	0.00**	-0.03
Environmental characteristics							
Urban municipality	0.11***	-0.04	0.18***	-0.09	0.20***	0.02	0.15**
Constant	-3.86***	-3.63	-3.22***	-3.41***	-2.67***	-3.59***	-3.24***
Number of observations	385 582	298 308	87 274	77 660	12 259	220 684	75 015
McFadden's pseudo R²	0.133	0.061	0.102	0.049	0.038	0.056	0.061

Note: * Significant at 10% level; **Significant at 5% level; ***Significant at 1% level.

Table 3. Predicted probabilities for a probit model of older adults' employment choices (based on estimated model 1)

	Predicted probabilities of entering self-employment	95% confidence interval
Most favorable situation:	0.073	0.037 – 0.110
A highly educated working male with technical orientation who has previous self-employment experience, is married and whose wife is an entrepreneur, has a very high income level, but no property and lives in an urban area.		
Otherwise the same; however,		
- has no previous self-employment experience	0.014	0.005 – 0.023
- is retired	0.033	0.013 – 0.054
- has no previous self-employment experience & is retired	0.005	0.001 – 0.009
- is female	0.055	0.024 – 0.085
- has only basic education	0.047	0.017 – 0.077
- wife is not an entrepreneur	0.037	0.017 – 0.058
- wife is retired	0.045	0.018 – 0.072
- not married	0.057	0.025 – 0.088
- lives in a rural area	0.059	0.028 – 0.091

Table 4. Hypotheses and summary of findings: transitions of individuals aged 55-74 years to non-agricultural self-employment

Hypothesis	Explanatory variables	Expected sign	Actual sign			Hypothesis supported
			All	Novices	Habitual entrepreneurs	
1. Prior activity	Previous s-e experience	+	+			Yes
	Transitions from wage work	+	+	+	+	Yes
2. Individual characteristics	Male	+/-	+	0	+	(-)
	Level of education	+	+	+	0	Yes
	Field of education	+	0	0	+a)	Partial
3. Family relations	Married or cohabiting	+	+	0	+	Partial
	Spouse entrepreneur	+	+	+	+	Yes
	Spouse non-employed	-	--	0	--	Partial
4. Financial situation	Taxable income	+	+	+	0b)	Partial
	Taxable property	+	0	0c)	0	
	Spouse's taxable property	+	0	0c)	0	
5. Environmental characteristics	Urban municipality	+	+	0	+	Partial

a) For habitual entrepreneurs, commercial or technological education increases the probability of returning to entrepreneurship at older ages. In addition, medical education increases this probability for pensioners (non-employed).
b) For those habitual entrepreneurs who transit form wage work, taxable income is significant.
c) For those novice entrepreneurs who transit from non-employment, both own and spouse's taxable property are significant.