Entrepreneurial intentions in the third age: the impact of perceived age norms

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Abstract This article investigates the impact of perceived age norms on the formation of entrepreneurial intentions in the third age. Age norms refer to those social norms that determine whether establishing and running a business are considered appropriate behavior for a mature individual. An empirical analysis of Finnish individuals finds that norms perceived as permissive of enterprising activity in the third age exert a significant positive influence on entrepreneurial intentions in this segment, even when controlling for the general level of entrepreneurship in the municipalities. This influence is partially mediated by whether the individual has a positive attitude toward entrepreneurship, by how the individual perceives their own ability to start and run a business, by the extent of support from their family and friends they perceive and by the importance of that support to them. Thus, if policy aims to increase enterprising activity in the third-age segment, the portfolio of instruments should include measures that address people's general awareness of third-age entrepreneurship as a viable, positive and attractive late-career option.

1 Introduction

This research contributes to the current discussion on the aging workforce in developed economies (e.g., Johnson and Zimmermann 1993; von Nordheim 2004; OECD 2001) by examining entrepreneurship at older ages (e.g., Curran and Blackburn 2001; Singh and DeNoble 2003; Weber and Schaper 2004). At least two lines of argumentation explain the recent surge of policy and research interest in entrepreneurship in the third age, which the extant literature defines as people aged 50-plus starting up in business (e.g., Curran and Blackburn 2001; Hart et al. 2004; Kautonen et al. 2008).

One is the expectation that the number of older business founders is likely to increase in the future as a result of both "pull" and "push" factors. The "pull" argumentation suggests that there will be growing numbers of (early) retirees with the experience, know-how and financial means for entrepreneurship (Baucus and Human 1994; Singh and DeNoble 2003) who may wish to remain economically active in order to maintain a lifestyle (Walker and Webster 2007) or choose self-employment as a

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flexible alternative to organizational employment (Curran and Blackburn 2001). The "push" argumentation, on the other hand, is based on the proposition that older employees are being "pushed" from the traditional labor market by factors such as age discriminatory practices in recruitment, promotion and training as well as a lack of attractive employment options (Chiu et al. 2001; Platman 2004). In such cases, starting up in business may be the only alternative for mature individuals wishing to resume economic activity. The other reason for the increasing topicality of late-career entrepreneurship is that the promotion of entrepreneurship in older age segments is a prospective policy option to prolong the working lives of older people (Webster et al. 2005), reduce older age unemployment (PRIME 2005), increase the social inclusion of older individuals (Kautonen et al. 2008) and enhance the innovative capacity of the economy by employing the human and social capital of mature individuals through new innovative start-ups (Botham and Graves 2009).

However, prior research into third-age enterprise suggests that while mature individuals are generally more capable of starting and running a business than younger people (Singh and DeNoble 2003; Weber and Schaper 2004), they are significantly less likely to engage in entrepreneurial activity (Curran and Blackburn 2001; Hart et al. 2004). Lévesque and Minniti (2006) clarify the age effect in entrepreneurship with the opportunity cost of time by arguing that as individuals get older, they become less willing to invest time in activities that do not produce instant returns, such as starting a new business. Nevertheless, entrepreneurship at older ages is not a marginal phenomenon. For example, individuals aged 50–64 found 16% of all new businesses in Finland (Kautonen 2008). Yet we know little about the factors that predict the likelihood of mature individuals starting up in business.

The present article works toward this end by investigating the formation of entrepreneurial intentions in the third age based on Ajzen's (1988, 1991) theory of planned behavior. Here, the study turns to the obvious, yet under-researched question of how the perception of age itself affects the intention to start a business. Recent literature on third-age enterprise suggests the role of the socio-cultural perception of the economic potential of aging people to be a factor that may influence their enterprising propensities

(Kautonen et al. 2008; Weber and Schaper 2004). Against this backdrop, the present study sets out to examine how third-age individuals' perceptions of the norms defining whether establishing and running a business are considered appropriate behavior for mature individuals (see Lawrence 1988; Neugarten et al. 1965; Settersten and Mayer 1997) influence their entrepreneurial intentions.

The empirical analysis employs survey data comprising responses from 496 individuals aged 45–64 in Western Finland. Although the age of 50 has been a common benchmark for the third age in entrepreneurship studies, this analysis, due to its focus on entrepreneurial intentions rather than current enterprising activity, also includes individuals who will turn 50 within 5 years. Moreover, following Hart et al. (2004), the analysis is limited to individuals under the traditional retirement age of 65. In order to account for the possibility that age norms and their impact on entrepreneurial intentions vary among different environments, the empirical analysis examines the potential moderating effect of the level of entrepreneurship in the 55 Western Finnish municipalities included in the study. For this purpose, the researchers supplemented the survey data with publicly available indicators concerning the proportion of entrepreneurs and small firms and also the net entry rate (difference between start-ups and closures) in each municipality.

The contribution of this article is twofold. First, it develops our theoretical understanding of the formation of entrepreneurial intentions by examining perceived age norms as a contextual variable within the framework of the theory of planned behavior. Second, it provides much-needed empirical evidence on third-age enterprising potential, which informs policy makers and serves as a foundation for further research.

2 Theoretical foundations and hypotheses

2.1 Entrepreneurial intentions and the theory of planned behavior

Building on the theory of reasoned action (Fishbein and Ajzen 1975), the theory of planned behavior (Ajzen 1988, 1991) has become one of the most common psychological theories used to explain and predict human behavior, including entrepreneurship (e.g., Carr and Sequeira 2007; Kolvereid 1996;

Krueger and Carsrud 1993; Tkachev and Kolvereid 1999). Entrepreneurship scholars generally argue that entrepreneurial behavior is intentional, and so best predicted by intentions toward the behavior (e.g., Bird 1988; Krueger and Carsrud 1993). Ajzen (1991, p. 181) defines intentions as "indications of how hard individuals are willing to try, of how much of an effort they are planning to exert, to perform the behavior." The stronger the intention to engage in specific behavior, the more likely should be its actual performance (Ajzen 1991). In other words, Ajzen (1991, 2002) contends that intention is the immediate antecedent of behavior.

The theory of planned behavior posits that intentions have three conceptually independent determinants (henceforth referred to as the "antecedents of intentions"), namely attitude toward the behavior, the subjective norm and perceived behavioral control (Ajzen 1991). Attitude toward the behavior refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question. The term subjective norm refers to the perceived social pressure to perform or not to perform that behavior. Perceived behavioral control refers to the perceived ease or difficulty of performing the behavior. According to Ajzen and Fishbein (2004), the three theoretical antecedents should be sufficient to predict intentions, but only one or two may be necessary in any given application. In other words, the theory of planned behavior states that the relative importance of the three factors can vary from one context to another.

Demographic characteristics and other characteristics related to the individual's background and the surrounding environment are not directly addressed within the theory of planned behavior. The theory expects such factors not to have a direct impact on intentions, but an indirect one mediated by attitude, the subjective norm and perceived behavioral control (Kolvereid 1996; Krueger and Carsrud 1993). Therefore, this research proposes that (entrepreneurial) attitude, subjective norm and perceived behavioral control mediate the impact of perceived age norms on third-age entrepreneurial intentions (Fig. 1).

2.2 Perceived age norms and third-age entrepreneurial intentions

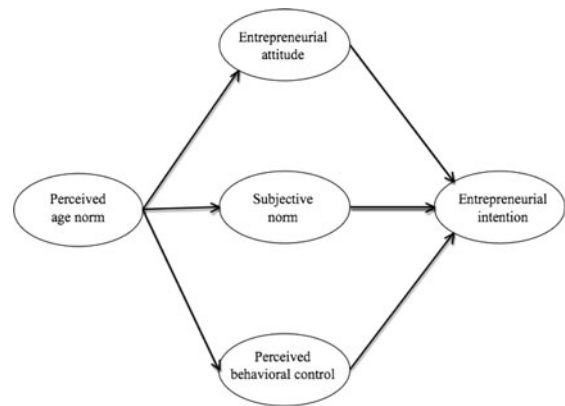Previous research implies that the broader social context in which people work and live affects their

Fig. 1 Conceptual model

entrepreneurial propensities (see, e.g., Acs et al. 2008; Smallbone and Welter 2001; Vaillant and Lafuente 2007). One set of social contextual factors that have an impact on aspiring entrepreneurs is social norms (Giannetti and Simonov 2004), which constitute common understandings and rules between members of a community that evolve in an interactive process where individuals constantly justify their actions and those of others (Giddens 1984). Age norms in this context represent a specific kind of social norm: they are shared understandings as to what kinds of behavior are considered appropriate for individuals of different age groups in a community (Lawrence 1988; Neugarten et al. 1965; Settersten and Mayer 1997).

This research is interested in how third-age individuals themselves perceive those age norms that define the social appropriateness of starting up in business at a mature age. The reasoning is that an age norm that is perceived as permissive or even supportive of business ownership at any age, including the third age, exerts a positive influence on third-age entrepreneurial intentions.

While an individual's perception does not represent the aggregate age norm in a community but merely its subjective interpretation, this interpretation is important since an age norm, as with any information, can only influence behavior if it is part of the individual's knowledge and influences their perception of the available courses of action (Koch 1998). Hence, this analysis posits that it is the individual's subjective understanding of the prevailing age norm that influences the formation of their entrepreneurial intention. This perspective concurs with the theory of planned

behavior, which, as a psychological theory, positions behavior as a function of salient information, or beliefs, relevant to the behavior (Ajzen 1991). Thus:

Hypothesis 1 An age norm that is perceived as favorable to third-age entrepreneurship will have a positive impact on entrepreneurial intentions in this age segment.

The theory of planned behavior posits that the impact of perceived age norms on entrepreneurial intentions is not direct, but is however mediated by the three antecedents of intentions: attitude, subjective norm and perceived behavioral control.

Attitudes emerge from beliefs that individuals hold about the object of attitude (Ajzen 1991), which in this case is a business start-up by a third-age individual. Moreover, these beliefs link the object of attitude with either positive or negative outcomes. The more positive the perception of a third-age individual of the outcome of starting a business, the more favorable their attitude should be toward that behavior and, consequently, the stronger the individual's intention to go ahead and start a business should be (Ajzen 1991, 2002). The present study argues that perceived age norms can contribute to the formation of entrepreneurial attitudes, which are defined as attitudes that favor business ownership (Kolvereid 1996). If mature people think that the community regards them generally as capable of business ownership, this belief is likely to reflect positively in their attitude toward entrepreneurship, as they would expect a positive response for a business start-up from the community. On the other hand, if mature people believe that the regional community and the closer social environment consider it inappropriate for third-age individuals to become entrepreneurs, they would expect any failure to conform to this norm to result in a negative outcome. This could have a pre-emptive effect and influence entrepreneurial intentions negatively. Hence:

Hypothesis 2a Entrepreneurial attitude will mediate the relationship between perceived age norms and entrepreneurial intentions in the third age.

The subjective norm in this context is based on beliefs concerning whether important referent individuals or groups—such as family and friends—approve or disapprove of a third-age individual establishing a business and to what extent this approval or disapproval matters to the individual (Ajzen 1991). Age norms are likely to have at least some influence on the appraisals that a third-age individual receives from their significant others. As members of community, the prevailing social norms affect the evaluation of referent individuals as regards the appropriateness of entrepreneurship in the third age, and these people are likely to pass this evaluation on to the prospective third-age entrepreneur. Third-age individuals, in turn, use these evaluations to understand how they should behave, thus influencing their subjective norm (Carr and Sequeira 2007). Further, a third-age individual's own perception of the prevailing age norm is likely to affect whether she or he expects support from their significant others. For example, if the individual thinks that the community finds it perfectly acceptable for a mature person to pursue a business opportunity, it would be logical for them to expect their friends and family to find it acceptable, too, and thus be supportive of their start-up intentions. Generally speaking, the more influential the opinion of a particular referent group or individual is to the third-age individual and the more encouraging the third-age individual thinks it is of enterprising activity, the stronger should be the individual's intention to start a business (Ajzen 1991, 2002). Similarly, if the opinion is influential and the individual perceives it as discouraging of entrepreneurship, the effect on their entrepreneurial intentions should be negative. Therefore:

Hypothesis 2b The subjective norm will mediate the relationship between perceived age norms and entrepreneurial intentions in the third age.

The concept of perceived behavioral control in the theory of planned behavior is akin to Bandura's (1977) concept of self-efficacy, which refers to a person's belief in their ability to successfully deal with prospective situations, such as starting and running a business. In general, the greater this perceived behavioral control, the stronger should be the individual's intention to start up in business (Ajzen 1991, 2002). Ajzen (1991) contends that perceived behavioral control is based on beliefs regarding the presence or absence of requisite resources and opportunities for performing a given behavior. These beliefs can be influenced by second-hand information about the behavior that increases or reduces the perceived

difficulty of performing it. This research posits that age norms are one source of such second-hand information. For example, if the life experience of mature people is generally perceived to be an asset and third-age individuals themselves share this perception, such an age norm could contribute to a sense of empowerment, which in this context refers to a belief in one's own capability and competence to start and run a business. Similarly, if the third-age individual believes that the general shared understanding in a community places little value on the economic potential of older people, such a perceived age norm may reduce their belief in their own entrepreneurial capabilities. These effects, then, contribute to the emergence of third-age entrepreneurial intentions positively or negatively. Thus:

Hypothesis 2c Perceived behavioral control will mediate the relationship between perceived age norms and entrepreneurial intentions in the third age.

2.3 The moderating effect of the regional level of entrepreneurship

It is likely that a range of exogenous factors influence how third-age individuals' perceptions of the prevailing entrepreneurship-related age norm impact on their entrepreneurial intentions. This section introduces the regional level of entrepreneurship as one such potential factor into the analysis.

The reasoning behind this explorative hypothesis is based on prior literature, which maintains, for instance, that a higher number of entrepreneurs (within the labor force as a whole) in a regional and socially tight context can foster the acceptance and social legitimacy of entrepreneurial activity (Lafuente et al. 2007; Lundström and Stevenson 2005; Reynolds et al. 2000). Alongside the number of entrepreneurs, previous research contends that a stronger presence of small enterprises in the region enhances entrepreneurial aspirations, for example, by providing business ideas for potential entrepreneurs (Rotefoss and Kolvereid 2005). Besides contributing to the social legitimacy of business ownership in a region, a notable presence of entrepreneurs and small firms increases the likelihood of a third-age individual personally knowing one or more entrepreneurs, who provide (positive) role models that can stimulate the individual's enterprising intentions (Shane 2000). Moreover, previous research

raises the net entry rate—defined as the number of business start-ups less the number of closures (Audretsch and Fritsch 2002)—as a further indicator of regional entrepreneurship. On the one hand, prior studies show that a higher regional start-up rate in the past serves as an ongoing conduit for higher entrepreneurial activity, for example, by increasing innovation activity, knowledge spillovers, competition and firm diversity (Fritsch and Mueller 2007; Ritsilä 1999). On the other hand, new firms tend to have high failure rates, and if the regional exit rate is persistently high, this may communicate risks of failure and thereby reduce the attractiveness of business start-ups to potential (third-age) entrepreneurs (Pe'er and Vertinsky 2008). Nonetheless, this research expects a high net entry rate to indicate a positive entrepreneurial climate.

In summary, prior research suggests that a regional community with a strong presence of entrepreneurs and small firms, and where the stock of firms is growing as a result of a high net entry rate, provides a positive entrepreneurial climate where enterprising activity enjoys a high degree of social legitimacy. This research suggests that such a climate contributes positively to the appropriateness of business start-ups at any age, including the third age, which in turn exerts a positive effect on entrepreneurial intentions in the third-age segment too. Therefore:

Hypothesis 3 The level of entrepreneurship in a regional community positively moderates the relationship between perceived age norms and entrepreneurial intentions in the third age.

3 Methodology

3.1 Data collection and sample characteristics

The following empirical analysis uses primary survey data as well as secondary regional data from public databases in Finland to test the hypotheses outlined above. The survey data were collected as part of a research project on Ostrobothnian entrepreneurship in the provinces of Central Ostrobothnia, Ostrobothnia and South Ostrobothnia in Western Finland in November and December 2006. The researchers used the Finnish Population Register Center to obtain a random sample of 5,600 individuals from a sampling

frame that included all individuals aged 15–75 who were registered as residents in one of the Ostrobothnian provinces at the time the sample was drawn (October 2006). Thus, the sampling frame comprised approximately 350,000 individuals. The mailing of 5,600 questionnaires resulted in a total of 1,301 responses, indicating a response rate of 23.2%. For this analysis, the researchers chose only those respondents who were aged 45–64 when they filled out the questionnaire. They further excluded responses from individuals who were already either full or part-time entrepreneurs.

The final sample employed in this analysis consists of 496 respondents aged 45–64. The gender distribution shows 42% male and 58% female respondents, while the educational background variable reveals that 15% of the respondents had earned a higher education degree. At the time the survey was conducted, 77% of the respondents were working full or part-time, 20% were retired or on incapacity benefits, and 3% were unemployed. When asked to describe the central content of their careers so far, 85% of the respondents reported having been in paid employment, 10% in self-employment, a further 4% evenly in paid and self-employment, and the remaining 1% had been homemakers.

The researchers obtained supplementary regional data from the year 2006 from public databases maintained by Statistics Finland, a government agency that maintains and develops national official statistics. The regional data were added to the survey data at the level of the 55 municipalities in the Ostrobothnian provinces. These three provinces are predominantly rural. The mean number of inhabitants in the 55 municipalities is 19,322, with the smallest municipality having 942 inhabitants and the largest 57,622. According to the regional classification system of Statistics Finland (2009), 9% of the 55 municipalities are urban, 22% semi-urban and 69% rural.

3.2 Measures

The survey enquired about the respondents' opinions, attitudes and intentions related to entrepreneurship as a personal choice and more generally. The researchers adapted the measurement instrument item scales for entrepreneurial intentions, entrepreneurial

attitude, the subjective norm and perceived behavioral control from Kolvereid (1996) and, given that a suitable scale was not available in the extant literature, developed a new one for perceived age norms (Appendix Table 4). All scale items in the survey were measured on a seven-point Likert scale. The scale developed to capture the level of entrepreneurship in the regional community is based on relevant recent enterprise literature.

3.2.1 Entrepreneurial intention

The four items used to measure entrepreneurial intention follow the spirit of, but do not correspond exactly to, those found in Kolvereid (1996), because the researchers adapted the original items to the third-age context. In the resulting index, a high score indicates a desire to become an entrepreneur, and a low score a desire to become/remain organizationally employed or retire (or stay retired).

3.2.2 Entrepreneurial attitude

The survey instrument features three separate scales, which according to Kolvereid (1996) represent attitudes that are favorable to entrepreneurship as opposed to organizational employment: authority and autonomy (four items, Cronbach's alpha = 0.75), self-realization (three items, Cronbach's alpha = 0.73) and economic opportunity (two items, Cronbach's alpha = 0.65). The researchers created three corresponding indices by averaging the item scores and used them as measured variables for the latent variable entrepreneurial attitude in the structural model.

3.2.3 Subjective norm

The subjective norm was constructed using three items that measure the individual's perceptions of whether family, friends, colleagues or other important people think that the individual should or should not start a business. These belief items were multiplied by the respective motivation to comply items, which measure the degree to which the opinions of those people influence the individual's decision to start a business or not. The resulting products became the

observed variables for the subjective norm latent variable in the structural model.

3.2.4 Perceived behavioral control

This construct consists of three rating scales, which measure the individual's perception of how easily and successfully they could establish and run a business, if they chose to start one.

3.2.5 Age norm

Based on the literature review, the researchers developed three items to establish how third-age individuals perceive the entrepreneurship-related age norm in their community. These items measure the degree to which the respondent agrees that it is socially appropriate for a person of any age, and a mature person in particular, to start a business.

3.2.6 Entrepreneurial environment

The researchers chose three measures to capture the level of entrepreneurship in each of the 55 municipalities included in the analysis. Following the labor-market approach (e.g., Audretsch and Fritsch 1994), each indicator is measured in relation to the size of the labor force or the number of employees in the municipality. The first indicator represents the proportion of entrepreneurs relative to the labor force in the municipality (Fritsch 2004). The second item reflects the presence of small businesses in the municipality, measured as the average size of firms, that is, the total number of employees relative to the stock of firms (Kangasharju 2000). The third item refers to the net entry rate in the past (Audretsch and Fritsch 2002) by measuring the difference between the number of start-ups and closures in the period 2000–2006, relative to the size of the labor force. The items were standardized before they were aggregated to the construct level. The data for these environmental indicators were derived from public databases maintained by Statistics Finland, which publishes such data only at the municipal level. Since the actual analysis in this paper is performed at the individual level, the data were disaggregated by assigning each respondent the value representing the municipality in which they live (e.g., Rotefoss and Kolvereid 2005).

3.3 Common method variance

Compared to other disciplines, the extent of common method bias is generally below average in fields such as marketing and management (Cote and Buckley 1987). Nonetheless, the researchers took a number of steps, both procedural and statistical, to ensure that the risk of common method bias was minimized. Procedurally, in order to reduce socially desirable responses and item ambiguity, the questionnaire featured different response formats and a "counter-balanced" question order, and the respondents could choose to remain completely anonymous (Podsakoff et al. 2003). Statistically, Harman's (1976) post hoc one-factor test was applied to the model variables. This test did not result in a strong first factor, which indicates that common method bias is not a serious limitation in this dataset. One should bear in mind, though, that this procedure does nothing to statistically control for the common method effect; it is merely a diagnostic technique (Podsakoff et al. 2003, p. 889). As a result, the presence of common method problems cannot be fully discounted.

4 Data analysis and results

4.1 Analytical strategy

The research hypotheses require the testing of whether entrepreneurial attitude, subjective norm and perceived behavioral control mediate the impact of the perceived age norm on third-age entrepreneurial intentions. Instead of applying linear regression to test for mediation, the researchers chose to utilize structural equation modeling given that such models not only account for measurement error (Baron and Kenny 1986), but potentially provide a more complete illustration of the relationships among the constructs under investigation. The research model is examined by means of the partial least squares (PLS) approach to structural equation modeling, which is a regression-based technique that has gained popularity among entrepreneurship researchers recently (e.g., Fink et al. 2008; Liñán and Chen 2009; Mitchell et al. 2008). Like other methods of structural equation modeling, PLS renders the measurement of latent variables possible (Jacoby 1978; Churchill 1979). Generally speaking, PLS is more appropriate than maximum likelihood

approaches when the goal of the research is prediction rather than model fit (Fornell and Bookstein 1982), and it is particularly well suited to exploratory, theory-building research because it makes minimal demands with respect to measurement scales, sample size and residual distributions (Chin 1998; Wold 1985). Since the aim of this research is to predict the formation of third-age entrepreneurial intentions and because it introduces age norm and entrepreneurial environment as new constructs into the theory of planned behavior framework, the PLS approach is well suited for this analysis.

The analysis applies the software package Smart-PLS 2.0 (Ringle et al. 2005) in four steps to examine the research model. The first step of the analysis involves the calculation of a reduced model, which examines the direct impact of age norm on entrepreneurial intention, thus testing Hypothesis 1. The second step tests Hypotheses 2a–c with a complete mediation model featuring entrepreneurial attitude, the subjective norm and perceived behavioral control as mediators (Baron and Kenny 1986). Entrepreneurial environment is included as a control variable in the second step to determine its possible effect on all endogenous variables (Srite and Karahanna 2006). The third step examines the potential moderating effect of entrepreneurial environment, as proposed in Hypothesis 3.

Finally, the fourth stage of the analysis subjects the full research model, including the moderating effects from the third step, to an explorative group comparison (Chin 2000) between "younger" (45–54 years, $N = 254$) and "older" (55–64 years, $N = 242$) third-age individuals. While the third age is often defined in terms of chronological age, it does not represent a homogeneous age group. The age-related expectations concerning a 51- and 63-year-old person are likely to vary (see McKay 2001), as are those individuals' perceptions of age norms related to entrepreneurship. Hence, the group comparison aims to explore whether the model results are robust across age segments within the third-age category.

4.2 Reliability and validity assessment

The research model consists of six latent variables with reflective measurement models. The construct reliability measures for the latent variables are satisfactory. Both the composite reliability and convergent validity (average variance extracted, AVE) scores (Table 1) clearly exceed the recommended threshold values of 0.7 and 0.5, respectively (Chin 1998). Discriminant validity was assessed both at the item level and at the construct level. With respect to item discriminant validity, the PLS confirmatory factor analysis indicates that all indicators load at their highest with their respective construct and that no indicator loads higher on other constructs than on its intended construct. It is therefore safe to assume item discriminant validity. At the construct level, the comparison of latent variable correlations and the square root of each reflective construct's AVE (Table 1) suggests that there is satisfactory discriminant validity (Chin 1998; Fornell and Larcker 1981). Overall, the evaluation of the reflective measurement models reveals that all constructs are of satisfactory reliability and validity for the purposes of this analysis.

4.3 Model testing

The path weighting scheme is utilized to estimate the paths between the latent variables because it is the only weighting scheme that explicitly considers the directions of the causal relationships between exogenous and endogenous variables (Chin 1998; Lohmöller 1989). A standard bootstrapping procedure (Yung and Bentler 1996) with 500 resamples consisting of the same number of cases as in the original sample is applied in order to determine the statistical significance of each estimated path.

The first step of the analysis tests Hypothesis 1, which predicted that an age norm perceived as favorable to entrepreneurship at older ages would have a positive direct impact on entrepreneurial intention. The results show that this relationship is indeed statistically significant at the $p < 0.001$ level (path coefficient: 0.48) with a medium to strong effect ($f^2 = 0.30$) according to Cohen (1988). Age norm alone explains 23% of the variance in entrepreneurial intention.

The mediation effects model (Model 1 in Table 2) examines Hypotheses 2a–c, which suggested that the impact of age norm on entrepreneurial intention would be mediated by entrepreneurial attitude, subjective norm and perceived behavioral control. Overall, the PLS algorithm results in acceptable explanatory power for the four endogenous variables

Table 1 Reliability and validity assessment

Measurement model			Latent variable correlations (off-diagonal) versus the square root of AVE (diagonal, *italicized*)[a]					
	Composite reliability	AVE	Intention	Attitude	Subjective norm	PBC	Age norm	Environment
Intention	0.81	0.51	0.71					
Attitude	0.81	0.59	0.43	0.77				
Subjective norm	0.88	0.71	0.48	0.19	0.85			
PBC	0.90	0.75	0.56	0.35	0.46	0.86		
Age norm	0.77	0.54	0.45	0.33	0.23	0.35	0.73	
Environment	0.90	0.74	0.15	0.09	0.11	0.08	0.09	0.86

AVE average variance extracted, *PBC* perceived behavioral control

[a] For adequate construct discriminant validity, diagonal elements should be greater than the corresponding off-diagonal elements

in the model, with R^2 values ranging from 0.06 to 0.12 for the mediators and 0.48 for the dependent variable. Moreover, the Q^2 values associated with the Stone–Geisser criterion are consistently higher than zero, indicating that the prerequisites of predictive relevance for the model are fulfilled (Chin 1998).

Age norm shows a significant positive path coefficient to all three mediators ($p < 0.001$), which in turn are all statistically significant predictors of entrepreneurial intention at the $p < 0.001$ level. However, the model also shows a significant path coefficient from age norm to entrepreneurial intention. Since this path coefficient (0.22) and the corresponding effect size ($f^2 = 0.08$) are considerably lower than in the direct effect model (0.48 and 0.30, respectively), entrepreneurial attitude, subjective norm and perceived behavioral control seem to partially mediate the relationship between age norm and entrepreneurial intention. This finding partly supports Hypotheses 2a–c, which predicted a full mediation effect based on the theory of planned behavior. The level of entrepreneurship in the municipality, included as a control variable in Model 2, plays only a marginal role in the structural model as a whole, exerting a moderately positive influence on the mediators and the dependent variable.

Introducing the interaction terms (age norm × entrepreneurial environment) in Model 2 (Table 2) does not greatly change the model results, and none of the paths from the interaction terms to the mediators or the dependent variable is statistically significant. Therefore, this finding does not support Hypothesis 3.

That is, the level of entrepreneurship in the municipality does not moderate the impact of the perceived age norm on entrepreneurial intentions in the third age.

Table 3 displays the results of the exploratory group comparison (Chin 2000) between "younger" (45–54 years, Model 3) and "older" (55–64 years, Model 4) respondents in the sample. The group comparison involved running the analysis for both subsamples separately and subsequently comparing the differences in path coefficients. Table 3 shows three statistically significant ($p < 0.05$) differences. First, the moderating effect of entrepreneurial environment on the relationship between age norm and entrepreneurial attitude becomes significant in the 55–64-year-old subsample. This means that a 1-SD increase in the score for entrepreneurial environment will increase the path coefficient of age norm to entrepreneurial attitude by 0.17. In other words, if the level of entrepreneurship in a municipality is high, the positive impact of the perceived age norm on entrepreneurial attitude is stronger for the 55–64-year-old respondents than in municipalities where the level of entrepreneurship is lower. At the same time, the impact of entrepreneurial attitude on entrepreneurial intentions is significantly weaker in the 55–64-year-old subsample. The third significant difference is in the path from entrepreneurial environment to subjective norm, which is non-significant in the "older" subsample but significant at the $p < 0.01$ level in the "younger" subsample. Thus, the level of entrepreneurship in the municipality exerts a positive

Table 2 Results of the PLS path model analysis for the sample of 45–64 old respondents ($N = 496$)

Model 1: mediation effects						Model 2: interaction effects					
IV	DV	Path	f^2	R^2	Q^2	IV	DV	Path	f^2	R^2	Q^2
Age norm		0.32***	0.11			Age norm (AN)		0.32***	0.13		
Environment		0.06†	0.01			Environment (ENV)		0.06†	0.01		
						AN × ENV		0.09	0.01		
	Attitude			0.11	0.06		Attitude			0.12	0.06
Age norm		0.22***	0.05			Age norm (AN)		0.23***	0.07		
Environment		0.09*	0.01			Environment (ENV)		0.09*	0.02		
						AN × ENV		0.11	0.01		
	Subjective norm			0.06	0.04		Subjective norm			0.07	0.05
Age norm		0.34***	0.13			Age norm (AN)		0.34***	0.14		
Environment		0.05†	0.01			Environment (ENV)		0.05	0.01		
						AN × ENV		0.09	0.01		
	PBC			0.12	0.09		PBC			0.13	0.09
Age norm		0.22***	0.08			Age norm (AN)		0.22***	0.08		
Environment		0.06*	0.01			Environment (ENV)		0.06*	0.01		
Attitude		0.21***	0.06			Attitude		0.20***	0.06		
Subjective norm		0.25***	0.09			Subjective norm		0.25***	0.08		
PBC		0.29***	0.10			PBC		0.29***	0.10		
						AN × ENV		0.05	0.00		
	Intention			0.48	0.23		Intention			0.48	0.24

Effect sizes (Cohen 1988): $f^2 > 0.35$ strong effect; $f^2 > 0.15$ moderate effect; $f^2 > 0.02$ weak effect

DV Dependent variable, *IV* independent variable, *PBC* perceived behavioral control

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (based on one-sided *t*-test with 500 df)

effect on the perceived support from family and friends, but only for respondents aged 45–54. As a whole, however, the group comparison shows only minor differences in the model results between "younger" and "older" third-age individuals.

5 Discussion

This research found that if a third-age individual perceives it as socially acceptable to be entrepreneurially active at any age, and in the third age in particular, such a perception exerts a significant positive influence on their entrepreneurial intention. In other words, if the shared understanding between members of a regional community signals to the individual that aging people are an asset and that they should pursue their economic potential by means of business start-ups, such an age norm has a positive impact on third-age individuals' enterprising inclinations.

The results further show that this impact is partially mediated by the three theoretical antecedents of intentions put forward in the theory of planned behavior: attitude, subjective norm and perceived behavioral control. This means that the perceived age norm not only affects the formation of entrepreneurial intentions directly, but also indirectly via how entrepreneurship-friendly the individual's attitudes toward work are, how the individual perceives the extent and importance of support from their family and friends, and how the individual perceives their ability to start and run a business. Since the mediation turned out to be only partial, this finding actually contradicts the theory of planned behavior to some extent, given that the theory would anticipate the three antecedents fully mediating the impact of the perceived age norm on entrepreneurial intention.

A possible explanation for this finding is that perhaps perceived social norms emanating from the surrounding community are not contextual variables

Table 3 Comparison of respondents aged 45–54 and 55–64

IV	Model 3: 45–54 year olds (N = 254)					Model 4: 55–64 year olds (N = 242)					Δ Models 3 and 4
	DV	Path	f^2	R^2	Q^2	DV	Path	f^2	R^2	Q^2	
Age norm (AN)		0.28***	0.11				0.35***	0.19			0.07
Environment (ENV)		0.06	0.02				0.06	0.04			0.00
AN × ENV		−0.13	0.02				0.17***	0.03			0.30*
	Attitude			0.11	0.05	Attitude			0.17	0.08	
Age norm (AN)		0.24***	0.10				0.22***	0.07			0.02
Environment (ENV)		0.16**	0.07				0.01	0.01			0.15*
AN × ENV		0.21	0.05				0.11	0.01			0.10
	Subjective norm			0.12	0.05	Subjective norm			0.07	0.04	
Age norm (AN)		0.32***	0.16				0.36***	0.15			0.04
Environment (ENV)		0.09†	0.05				0.02	0.00			0.07
AN × ENV		−0.18	0.04				0.02	0.00			0.20
	PBC			0.15	0.09	PBC			0.13	0.09	
Age norm (AN)		0.18***	0.05				0.23***	0.10			0.05
Environment (ENV)		0.00	0.00				0.12**	0.04			0.12*
Attitude		0.23***	0.09				0.14**	0.03			0.09
Subjective norm		0.30***	0.14				0.22***	0.06			0.08
PBC		0.31***	0.14				0.30***	0.10			0.01
AN × ENV		−0.03	0.01				0.09†	0.02			0.12
	Intention			0.53	0.26	Intention			0.47	0.23	

Effect sizes (Cohen [1988]): $f^2 > 0.35$ strong effect; $f^2 > 0.15$ moderate effect; $f^2 > 0.02$ weak effect

DV Dependent variable, *IV* independent variable, *PBC* perceived behavioral control

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (based on one-sided t-test with 500 df)

in the theory of planned behavior after all, but in fact another dimension of subjective norm. In enterprise studies including the present one, subjective norm is commonly operationalized as referring to particular, identifiable groups of individuals, such as family members, friends and colleagues—so-called significant others. Perhaps subjective norm also includes anonymous sources such as perceived social norms, which refer to the generalized other in a community. This would imply that in entrepreneurial contexts, subjective norm in the theory of planned behavior consists of two distinct sources: an individual's significant others and the generalized other.

This interpretation is in line with the empirical results, which indicate both a direct and a partially mediated indirect effect from the perceived age norm on entrepreneurial intent. According to this line of reasoning, the direct effect occurs because the age norm is another source of subjective norm, and thus actually an antecedent of intention. However, previous research has found subjective norm also to exert an indirect effect on entrepreneurial intent via attitude and perceived behavioral control (Liñán and Chen 2009). Thus, as a source of subjective norm, the perceived age norm should influence entrepreneurial intention indirectly as well. The finding of the present study that subjective norm mediates the effect of the perceived age norm does not contradict this reasoning. Different sources of subjective norm are unlikely to be independent and social norms (the generalized other) in particular affect the appraisals that an individual receives and expects from their significant others, to whom the operationalization of subjective norm in this study referred. Further research is required to determine whether social norms in general are part of the concept of subjective norm, as proposed here, or a contextual variable, as previous theories imply.

The empirical analysis did not find notable support for the hypothesis that the level of entrepreneurship in the regional community moderates the impact of the perceived age norm on entrepreneurial intention. It may well be that the perceived age norm exerts an influence on the formation of entrepreneurial intention regardless of the level of entrepreneurship in a municipality. Moreover, it may be that even though the level of entrepreneurship does not moderate the impact of age norms, it affects entrepreneurial intention as a further contextual variable within the theory of planned behavior, mediated by attitudes,

subjective norm and perceived behavioral control. The preliminary results in this analysis point in this direction, since the entrepreneurial environment was found to exert a moderate influence on attitude, subjective norm and entrepreneurial intent. Further research is required to examine these relationships in more detail. However, the non-finding in terms of the moderation effect would suggest that objective measures of entrepreneurship (number of entrepreneurs/small firms, net entry rate) do not set conditions that change the way an individual's perceptions affect the formation of entrepreneurial intentions. By the same token, the implication of this would be that even in a community with a low level of entrepreneurial activity, it would be possible to foster the level of entrepreneurial intention in the population by addressing their perceptions regarding the appropriateness and attractiveness of business ownership.

The principal policy implication of the study is that if the aim of government policy were to increase enterprising activity in the third-age segment, the portfolio of instruments should include measures that encourage people's general awareness of third-age entrepreneurship as a viable, positive and attractive late-career option (see Lundström and Stevenson 2005). Even if the aim of policy were not (only) to encourage third-age business start-ups explicitly, increasing positive awareness of third-age enterprising potential might have a positive effect on the participation of the aging population in social and economic life in broader terms, including but not limited to social enterprise and voluntary work. Such activities may not only generate economic benefits, but also contribute toward a better quality of life (Kautonen et al. 2008).

6 Limitations and future directions

Like all research, this study is not without some notable limitations. First, the cross-sectional data used in this analysis limit the demonstration of causation. Future studies should thus seek to develop longitudinal research designs. A particularly interesting study design would be one where entrepreneurial intentions and their antecedents at one point in time would be connected to actual behavior (i.e., whether or not the individual has started up in business) at a later point in time. The theory of planned behavior posits that intention is the immediate antecedent of

behavior (Ajzen 1991). However, without empirical enquiry based on longitudinal research designs, we will remain in the dark about the actual extent of the predictive power of entrepreneurial intentions vis-à-vis start-up behavior in the third age, and more generally.

A further limitation is the geographic scope of the sample, which was limited to three provinces in Western Finland. Understanding the empirical versatility of the phenomenon requires further investigation, as it is likely that not only the nature of the enterprise-related age norms as such, but also the magnitude of their influence on entrepreneurial intentions will vary across regional and national cultures (see Weber and Schaper 2004). Hence, further studies using culturally versatile, preferably cross-border samples, would increase our knowledge of the potential differences in the effects of perceived and institutionalized age norms across diverse socio-cultural environments. Such analyses should not be restricted to the individual level, but they should also consider the application of multilevel analytical techniques (see e.g., Hox 2002) to examine cross-regional and cross-national differences in the impact of age norms on entrepreneurial intentions.

Finally, while the focus of this research was limited to intentions to start a business in the third age, future studies should seek to examine whether age norms that are favorable to third-age entrepreneurship also exert a positive influence on other forms of economic and social activity that may benefit society, such as return to employment (from unemployment or early retirement), social entrepreneurship or voluntary work. Positive results from such investigations would bolster the tentative policy implication of the present study that consideration of policy measures that increase awareness of third-age enterprise, in terms of its being a positive late-career alternative, is well worthwhile.

Appendix

See Table 4.

Table 4 Construct variables

Variable (all measured on a 7-point Likert scale; translated from Finnish)

Entrepreneurial intention

  If you were to choose between running your own business and being employed by someone, what would you prefer?

  If you were to choose between running your own business and being unemployed, what would you prefer?

  How likely is it that you will start your own business?

  When you retire, how likely is it that you will run your own business?

Subjective norm[a]

  I believe that my closest family members think that I should not/should start my own business and become an entrepreneur × motivation to comply

  I believe that my closest friends think that I should not/should start my own business and become an entrepreneur × motivation to comply

  I believe that my colleagues and people important to me think that I should not/should start my own business and become an entrepreneur × motivation to comply

Perceived behavioral control

  For me starting my own firm and becoming an entrepreneur would be (very difficult–very easy)

  If I wanted to, I could easily pursue a career as an entrepreneur

  If I started my own business and became an entrepreneur, the chances of success would be (very low–very high)

Age norm

  One can very well become an entrepreneur after retiring

  In my opinion, a person of any age can start up in business

  There is no point in starting up in business when aged over 50 (reversed scale)

Authority and autonomy[b]

  I look for independence

  I want decision-making power

Table 4 continued

Variable (all measured on a 7-point Likert scale; translated from Finnish)

I look for a position of authority

I would like to be my own boss

Self-realization[b]

I would like to make use of my creativity

I would like to carry out my dreams

I would like to create something new

Economic opportunity[b]

I would like a large proportion of my salary to be based on results

I would like to be paid according to my achievements

[a] The subjective norm scores were calculated by multiplying the item score for the belief statement (shown in the table) with the item score for the motivation to comply (both measured on a seven-point Likert scale), which was measured by asking "How much do you care what the following people would think if you strove to start your own business?" and providing a list of groups of people to match the belief statements

[b] The construct "entrepreneurial attitude," as used in the analysis, is based on these three scales. The items in these scales were measured as responses to the general question "To what extent do you agree or disagree with the importance of the following items in terms of your working career?" (1 for definitely disagree, 7 for definitely agree)

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