



# Hybrid entrepreneurs' second-step choice: The nonlinear relationship between age and intention to enter full-time entrepreneurship

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## ABSTRACT

Entrepreneurs who run venture startups parallel to wage employment engage in so-called hybrid entrepreneurship. Not all hybrid entrepreneurs, however, eventually leave the wage employment to become a full-time entrepreneur (second-step entrepreneurship). Significant research has focused on first-step entrepreneurial choice (to engage in a business start-up), but much less has focused on a second-step entrepreneurial choice, which captures the transition to full-time entrepreneurship. The present study, which examines the second-step entrepreneurial choice, reveals a U-shaped relationship between age and the intention to enter full-time entrepreneurship. Interestingly, this contrasts with prior studies on the effects from age in the first-step entrepreneurship choice, demonstrating an inverted U-relationship between age and venture startup.

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## 1. Introduction

In practice, it is common that entrepreneurial activities are initiated parallel to wage employment, which researchers have labeled hybrid entrepreneurship (Folta et al., 2010; Raffiee and Feng, 2013). The decision to make a full-time commitment to entrepreneurship, therefore, is likely taken when the business is already operating. Moreover, such a decision may, in fact, never be taken at all. Rather, the individual might decide to continue his or her dual commitment to wage employment and the business or even withdraw from the business in favor of the wage employment. As we illustrate in Fig. 1, the entrepreneurial choice among hybrid entrepreneurs can be conceptualized to occur in two steps. In a first step, the entrepreneur chooses whether to engage in a business startup, which we conceptualize as a first-step entrepreneurial choice. In a second-step entrepreneurial choice, the individual might decide to leave wage employment and become a full-time entrepreneur. This second-step choice has been neglected in the entrepreneurship literature; therefore, we examine this subject in the present study.

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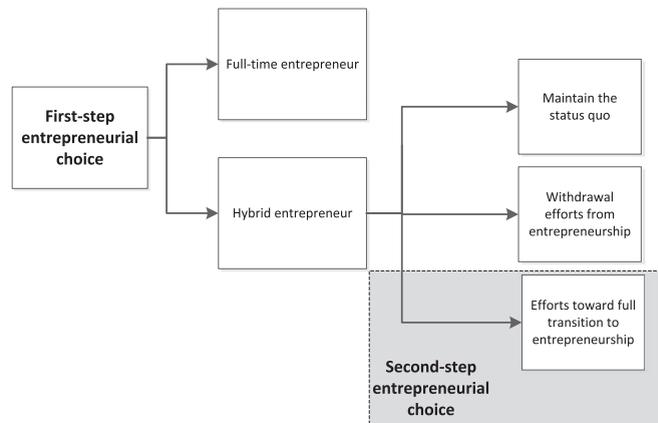


Fig. 1. Entrepreneurial choice as a two-step process.

Age has proven relevant for entrepreneurial behavior in relation to the first-step choice (Kautonen et al., 2014; Lévesque and Minniti, 2006; Singh and DeNoble, 2003). Economic reasons have been used to explain a positive linear relationship (Lévesque and Minniti, 2006) or sometimes an inverted U-shaped relationship (Kautonen et al., 2014), between age and venture startup. Research has also examined the ‘entrepreneurial ladder’ metaphor, which implies that the older people become, the less likely they are to think of themselves as future entrepreneurs (van der Zwan et al., 2010). Some scholars have suggested, however, that being more mature when entering entrepreneurship may ensure that the individual is prepared more effectively to cope with interferences with other roles (Arenius and Minniti, 2005; Grandey and Cropanzano, 1999; Herslund and Tanvig, 2012).

In the present study, we expect that age is also relevant for the second-step entrepreneurial choice, in which entrepreneurial entry has taken place but is still combined with wage employment. We believe that other reasons than those used to explain the first-step entrepreneurial choice may be at play. For hybrid entrepreneurs, the decision may be based on how compelling the individual finds it to self-realize oneself through the entrepreneurial role and in doing so leave the wage-role behind. Such an explanation may, however, not necessarily result in a positive linear relationship or an inverted U-shaped relationship. Thus, the objective in the present study is to examine age in relation to the second-step entrepreneurial choice.

## 2. Methods

### 2.1. Sample

As part of a larger study targeting 882 venture owners (the population of ventures in the creative sector of a Swedish county in 2012), we distributed a questionnaire via postal mail. Of the 749 venture owners reached, 256 responded, yielding a response rate of 34.2%. A possible nonresponse bias was analyzed by *t*-tests comparing respondents to nonrespondents in terms of entrepreneurial tenure, taken from the register of entrepreneurs. This test indicated no significant differences between the two groups ( $t$ -value =  $-1.30$ ,  $p = n.s.$ ), suggesting that a nonresponse bias is unlikely. To be included in testing the present study's hypotheses, the respondents had to meet two criteria: (1) engaging in wage employment and (2) active engagement in an entrepreneurial venture at the time of data collection. These two criteria were met by 103 respondents, whose average age was 47.7 years, with 51.5% female and 48.5% male. In terms of marital status, 45.6% were married, 31.1% were cohabitating without marriage, 5.8% were in a relationship, and 17.5% were single. Furthermore, 81.6% had children, and 68.0% had earned a university degree. The hybrid entrepreneurship duration on average was 9.7 years, with the average net income from the entrepreneurship venture in 2011 being 322,000 Swedish kronor (SEK) and net income from the employment being 328,000 SEK.

### 2.2. Variables

The dependent binary variable was coded 1 if the individual intended to transition within one year from hybrid- to full-time entrepreneurship, and 0 otherwise. It is important to note that the present study measured the *intention* to transition, rather than the actual transition. As such, there may be a discrepancy between intentions and real actions (Ajzen et al., 2004). To test the assumption that entrepreneurial intention strongly indicates future entrepreneurial action, in 2014 (two years after the initial data collection) we attempted to contact the 103 hybrid entrepreneurs to ask whether they had transitioned to full-time entrepreneurship. We reached 87 of the original respondents. Of these, 26.53% reported that they had transitioned to full-time entrepreneurship, whereas in the first survey, 24.27% of the respondents indicated they would

**Table 1**Means, standard deviations, and correlations<sup>a,b</sup>.

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender	.49	.50	1													
2. Marital status: married	.46	.50	.05	1												
3. Marital status: cohabitant	.31	.47	.10	-.62***	1											
4. Marital status: in a relationship	.06	.24	-.08	-.23*	-.17 <sup>†</sup>	1										
5. Marital status: single	.17	.38	-.14	-.42***	-.31**	-.11	1									
6. Children	.82	.39	.01	.28**	-.01	-.20*	-.24*	1								
7. University degree	.68	.47	-.12	-.08	.01	.08	.04	-.00	1							
8. Unsecure wage employment	.14	.34	.07	.21*	-.08	.02	-.18 <sup>†</sup>	-.03	.15	1						
9. Part of entrepreneurial team	.22	.42	.18 <sup>†</sup>	.12	-.01	.07	-.19 <sup>†</sup>	.07	.02	-.01	1					
10. Involvement in entrepreneur networks	.78	.42	.10	.07	-.04	-.07	.00	-.01	-.07	.01	.01	1				
11. Hybrid entrepreneurship duration	9.71	8.12	.11	.06	-.11	-.01	.07	.12	.02	-.13	.03	.20*	1			
12. Entrepreneurship income divided by total income	.10	.19	.02	.03	.12	.00	-.18 <sup>†</sup>	.06	-.14	.03	-.12	.08	.06	1		
13. Age	47.74	10.72	.03	.16 <sup>†</sup>	-.29**	-.12	.22*	.38***	-.18 <sup>†</sup>	-.09	.08	.10	.45***	-.08	1	
14. Full transition to entrepreneurship	.24	.43	-.10	-.11	.01	.15	.04	-.14	.10	-.03	.14	.03	-.01	-.12	.09	1

Notes:

<sup>†</sup> <.10, \**p* <.05, \*\**p* <.01, \*\*\**p* <.001, respectively (in two-tailed tests); *n*=103.<sup>a</sup> Spearman's correlations.<sup>b</sup> Noncentered means and standard deviations are reported for centered items to simplify interpretation.

transition to full-time entrepreneurship within one year. The similarity between intention and real choice further confirms the validity of our intention measure. Our independent variable, age, was measured using the individuals' age at the time data was collected.

Variables for which we controlled were: *gender* (female=0, male=1); *marital status: married* (no=0, yes=1), *cohabitant* (no=0, yes=1), *in a relationship* (no=0, yes=1), *single* (no=0, yes=1); *children* (no=0, yes=1); *university degree* (no=0, yes=1); *unsecure wage employment* (no=0, yes=1); being part of an *entrepreneurial team* (no=0, yes=1); *hybrid entrepreneurship duration* as equaling the number of years the individual had combined wage employment with the side business; involvement in *entrepreneur networks* (no=0, yes=1), and finally, we also controlled for 2011 *net income from entrepreneurship divided by total income*.

### 3. Results

Because our dependent variable is binary, we conducted logistic regression using Stata 12 software. All the continuous variables were standardized before being included in the research model. Likelihood-ratio tests were used to test the model improvement. Table 1 reports the correlations of the present study's variables. Investigating multicollinearity diagnostics by examining variance inflation factor values indicated no evidence of multicollinearity (mean variance inflation factor value was 1.15).

Table 2 includes the results for logistic regression. Model 1 reports the main effect of age on intended transition to full-time entrepreneurship and shows a positive and significant relationship ( $\beta=.86, p <.05$ ). A likelihood-ratio test showed that Model 2 differed statistically significantly from a baseline model in which only the controls are included ( $\Delta R^2=.04, LR \chi^2=5.19, p <.05$ ), explaining 11% of the variation in transition intentions (as evidenced by the  $R^2$ ). Next, in Model 2, we evaluated a possible nonlinear effect of age on transition intentions. This model showed that age is nonlinearly associated with transition intentions ( $\beta=.58, p <.05$ ). The likelihood-ratio test showed that Model 2 was statistically significantly different from Model 1 ( $\Delta R^2=.04, LR \chi^2=4.18, p <.05$ ), which explained 15% of the variation in transition intentions, providing *prima facie* evidence of a nonlinear effect.

The nonlinear specification of age implies that age interacts with itself; therefore its marginal effect on transition intentions always depends on the actual level of age. Because the coefficients alone are not sufficient to draw conclusions (Brambor et al., 2006), we plotted the relationship in Fig. 2 and computed the marginal effect of age at the full range of values of the standardized age variable at .2 intervals. The marginal effects suggest that the nonlinear effect on transition intentions is statistically significant at different levels of age after the standardized value of age is larger than -1.4 (0 value

**Table 2**

Results of logistic regression analysis, dependent variable: intention to transition from hybrid entrepreneurship to full-time entrepreneurship.

	Model 1	Model 2
<i>Direct effect</i>		
Age	.86* (.39)	.76† (.39)
<i>Curvilinear effect</i>		
Age × age		.58* (.29)
<i>Log-likelihood</i>		
LR $\chi^2$ (degrees of freedom)	–57.08 12.68 (12)	–48.65 16.86 (13)
$\Delta$ McFadden pseudo $R^2$		.04*
McFadden pseudo $R^2$	.11	.15

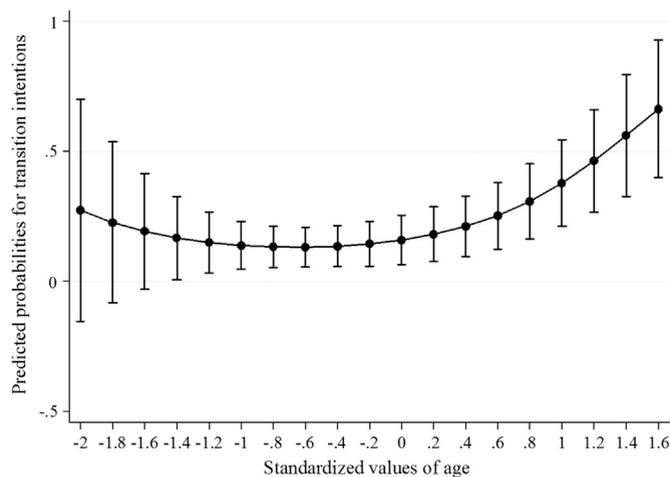
Notes:

Logit coefficients and standard errors (in parentheses) are reported.

The following controls were included in all models: gender, married, cohabitant, in a relationship, single, has children, university degree, unsecure wage employment, part of an entrepreneurial team, hybrid entrepreneurship duration, involvement in entrepreneur networks, net income from entrepreneurship divided by total income. None of these control variables were significant at .05 level.

We also tested 12 different models, where each control variable, one at a time, acted as a possible moderator on the curvilinear relationship between age and intention. We found that only one control variable, marital status: cohabitant (no=0, yes=1), significantly moderated this relationship ( $\beta = -1.42$ ,  $p < .05$ ).

†  $< .10$ , \* $p < .05$ , respectively (in two-tailed tests);  $n = 103$ .



**Fig. 2.** Curvilinear effect of age on intention to transition to full-time entrepreneurship. Note that the Y-axis reports predicted probabilities. Vertical lines around the curve represent 95% confidence intervals.

represents the mean value in the data), confirming the nonlinear relationship.

#### 4. Discussion

The results demonstrate that younger and older hybrid entrepreneurs tend to be the individuals who find it most attractive to leave wage employment for full-time entrepreneurship. These results are particularly interesting, because they contrast with prior results on the first-step entrepreneurial choice, where entrepreneurial activity has been found to increase almost linearly with age for individuals who prefer to employ only themselves (self-employers), whereas for those who aspire to hire workers (owner-managers) the relationship is an inverted U-shaped, in which younger and older people are individuals who are least likely to engage in entrepreneurial activities (Kautonen et al., 2014). In other words, the effect of the individual's age may be opposite from one another in the first-step and second-step entrepreneurial choices.

Typically, economic reasons have been used to explain factors predicting the first-step entrepreneurial choice. We suggest that a possible explanation for the contrasting effects of age in the second-step entrepreneurial choice can be drawn from identity theory (Burke, 1991). The second-step entrepreneurial choice covers two professional roles: the employee role

and the entrepreneurial role. The entrepreneurial choice will be affected by the individual's identification with and activation of the entrepreneurial role, which is based on the meanings and expectations the person attaches to the role and takes on meaning in relation to other roles, such as the wage employee role. Thus, the present study suggests that the likelihood of making that second-step decision may not be merely economic. Rather, the second-step decision may build on how likely hybrid entrepreneurs are to consider themselves entrepreneurs—with one foot in wage employment and one in entrepreneurship—and value occupying such a role to the extent that they leave their wage employment behind.

To conclude, the present study provides several insights. First, it shows the relevance of distinguishing between first-step and second-step entrepreneurial choices. Second, it indicates that the effects of age may be opposite in first-step and second-step entrepreneurial choices. Third, it sheds light on how entrepreneurial identity, which has received only limited scholarly attention (Cardon et al., 2009; Hoang and Gimeno, 2010), may be a concept with unrealized research potential to explain how positive factors may pull the individual toward full-time entrepreneurship.

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