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HOW DO INTRAPRENEURS AND ENTREPRENEURS DIFFER IN THEIR MOTIVATION TO START A NEW VENTURE?

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ABSTRACT

Based on the Theory of Planned Behavior, we investigate how early differences in venturing motivation inform the selection to become an intrapreneur for your employer rather than an independent entrepreneur. Using the combined PSED I & II data in a bivariate probit model with sample selection we analyze the effect of four motivational scales on the probability to self-select into nascent venturing and to be selected by an organization into nascent intrapreneurship. Our estimations address possible selection bias in occupational choice. We find that the same motives that make individuals less likely to start any sort of business make them more likely to be attractive candidates for intrapreneurship. We discuss implications for entrepreneurs, intrapreneurs, researchers, and policy makers.

INTRODUCTION

Entrepreneurial individuals within corporations form an important source of entrepreneurial activity. This group faces the choice to act upon their entrepreneurial ambitions or to continue regular employment. If they decide to start a new venture, and become a nascent venturer (NV), they either do so independently as a nascent entrepreneur (NE), or they stay with their employers as nascent intrapreneurs (NI) (Burgelman, 1983). Douglas and Shepherd (2000) and Levesque, Shepherd, and Douglas (2002) have explored the factors inducing individuals to leave the corporate sector in order to start a new venture as NEs. However, less effort has gone into analyzing the reasons why individuals stay and explore their ideas for a new venture together with their employer (as NIs). In this paper we ask: How do motivational differences between Intrapreneurs and Entrepreneurs inform the venture mode (NI vs. NE) decision?

Our knowledge about what personal motives are important to NIs is relatively underdeveloped compared to what we know about NEs. That is despite the fact that employee participation in corporate venturing efforts is important for both corporate performance (Hornsby, Kuratko, & Zahra, 2002, Antoncic & Hisrich, 2001) and innovation and corporate renewal (Zahra & Covin, 1995). Recent studies have explored motivations for intrapreneurial venturing efforts from the perspective of the employer organization (De Clercq, Castañer & Belausteguigoitia, 2011), or have aimed to design better corporate incentive programs for intrapreneurs (Monsen, Patzelt & Saxon; 2010). However, the influence of individuals' motives remains largely unexplored. This is perhaps surprising given the apparent importance of individual-level characteristics for intrapreneurship (Hornsby et al., 2002). Our study fills this gap by analyzing individual venturing motivation as precursors to the decision to becoming a NE or NI.

Studies on entrepreneurial start-up motivation have made important contributions, e.g. comparing NEs to members of the general public (Carter, Gardner, Shaver & Gatewood, 2003;

Steward & Roth, 2007). These studies identified several key motivations for NVs. The present study builds on these motivation studies and combines them with our knowledge about occupational choice models (Kolvereid, 1996a, 1996b) for entrepreneurs. To this end we conceptualize the start-up decision in terms of two selection processes: self-selection into start-ups and intrapreneurship by individuals, and organizational selection into intrapreneurship by corporate managers. We develop a conceptual framework that incorporates aspects of the Theory of Planned Behavior (TPB). We generate several testable hypotheses about the effects of different types of motivation on selection into nascent venturing activities in general, and nascent intrapreneurship in particular. We then use a sample of PSED data to test these hypotheses, and reveal several novel findings about motivation, nascent venturing and participation in intrapreneurship.

We believe that our study carries several implications for researchers and practitioners. Our study extends the analysis of motivation impacts on entrepreneurship to the novel domain of intrapreneurship. On the practical side, our study may provide useful information for business starters interested in learning more about suitable business entry modes given their particular motivations. Managers might also benefit from our research findings to improve their organizational selection strategies on prospective NIs.

THEORY

Our research builds on Icek Ajzen's Theory of Planned Behavior (TPB) (1985, 1991). Ajzen's work is as an extension of his own earlier theorizing with Martin Fishbein (Fishbein & Ajzen, 1975). Ajzen's Theory of Planned Behavior (TPB) suggests in principle that intentions of individuals largely determine their behavior. Ajzen builds on Anscombe's work on intention (1956) and Bandura's contribution to self-efficacy (1977). While TPB has received broad theoretical and empirical confirmation in various fields, it was not until recently that Carsrud and Braennback (2011) argued that the construct of motivation might present an opportunity to refine the link between intention and entrepreneurial behavior. The authors argue that since TPB has become increasingly popular in the study of entrepreneurial behavior, the field would benefit from research into entrepreneurial motivation to advance our understanding of the conversion of entrepreneurial cognitions and intentions into impactful entrepreneurial actions (Carsrud & Braennback, 2011).

TPB research, particularly in social psychology, has generated a rich account of how motives influence behavior related to goals such as business success and failure avoidance, all of which are relevant to entrepreneurship research. In order to apply TPB to entrepreneurship, we follow Carter, Gartner, Shaver, & Gatewood (2003) by assuming that the process of starting a new business is an act of will. Citing the early work by Fishbein and Ajzen (1975), Barbara Bird (1988) argued that intentions explain the implementation of entrepreneurial ideas. Krueger and Carsrud (1993) advanced this argument by seeking to explain entrepreneurial behavior with motivation and intentions, while Krueger, Reilly and Carsrud (2000) concluded that intentions as consequences of motivations are the single best predictor of subsequent entrepreneurial actions.

Motivation

The motivation scales most widely used today in the entrepreneurship start-up literature are (1) financial motivation, (2) recognition, (3) independence, and (4) role models (Carter, et al., 2003). The Society of Associated Researchers for International Entrepreneurship [SARIE] (Scheinberg &

MacMillan, 1988) first developed several motivation scales in close accordance to Friberg's study on work incentives (1976). Since then different combinations, extensions or additions to these four basic scales have been applied and refined multiple times (Shane, Kolvereid, Westhead, 1991; Birley & Westhead, 1994). Kuratko, Hornsby and Naffziger (1997) showed that extrinsic rewards, intrinsic rewards, independence and family security motivated entrepreneurs to start and sustain their venture. Their four scales map out in the work of Carter and colleagues (2003) and continue to persist, although in different variations and names. Moreover, the "Work Preference Inventory" (WPI) by Amabile, Hill, Hennessey, & Thige's (1994) captures different dimensions of these four main motivations. Their distinguishing feature as a set of four, is that they include internal as well as external influences, social as well as individual aspects of motivation, and intrinsic as well as extrinsic orientations (Amabile et al, 1994). In choosing this set of four motivation scales, we follow the established literature and build on previous research that used the same theoretical grounding (Carter et al., 2003; Edelman, Brush, Manolova & Greene, 2010). This allows for verification and higher reliability of our work. At the same time, this makes our findings more directly applicable to the earlier studies that we aim to enrich and reconcile.

Several studies have used the TPB approach to link motivation and intentions to the entrepreneurial entry decision (Krueger, 1993; Kolvereid & Isaksen, 2006; Fitzsimmons & Douglas, 2011). However, to date, none of the research on start-up motivation has aimed to explain and test the relationship between venturing motivation and the occupational choice decision to become a NI vs. a NE. This is our objective. Consequently, we define a nascent intrapreneur (NI) (or nascent corporate entrepreneur) as an individual engaged in the process of setting up a new venture for his or her employer (Pinchot, 1985). The literature views corporate intrapreneurship as a subarea of corporate entrepreneurship referring to the intrapreneur as the firm's agent of change, who challenges the status quo and current way of thinking (Kuratko & Audretsch, 2009). The nascent intrapreneur (NI) contrasts with a nascent entrepreneur (NE), who is engaged in setting up a new venture independently of any existing organization (Gatewood et al, 1995; Reynolds, 1997). Both of them are nascent venturers (NVs), the individuals who are in the process of starting a new venture.

Occupational Choice

There are two salient types of selection at work in the models of occupational choice: *self-selection* and *organizational selection*. We use them here to analyze the mechanisms underlying the links between motivational differences and the occupational choice, i.e. to become a nascent venturer and subsequently a NI or a NE. In the case of *self-selection* individuals decide whether they would like to become NVs, i.e. start any sort of venture at all (Parker, 2009). They may choose to self-select into venturing or paid employment for a variety of reasons. The literature we reviewed above suggested four prominent reasons. Further, the economics-based human capital literature suggests that individuals are heterogeneous in terms of their skills and capabilities. They face a menu of income-earning opportunities from a set of occupations that reward specific skills and knowledge differently (Becker, 1964; Davidson & Honig, 2003). This literature suggests moreover that rational decision-makers will condition their occupational choices at least in part on incomes in paid-employment relative to venturing (Hellman, 2007; Monsen, et al., 2010). The human capital literature also highlights the importance of *compensating differentials*, whereby jobs differ in terms of their non-financial attributes, which can compensate for the financial returns they offer (Hellman & Thiele, 2011). For example, nascent venturing might on average promise lower incomes than are available in paid employment (Hamilton, 2000), yet at the same time offer the attractive compensating differential of greater autonomy and flexibility at work which

appeals to independence-minded individuals (Lange, 2012) -- encouraging them to select into that occupation. Considerations of this type fill the extant literature on new venture motivation. We build on this work when we develop hypotheses 1a) - 4a) relating to the decision to become a NV, i.e. starting any sort of business.

We call the second selection scheme *organizational-selection*. This decision is no longer only an individual decision, as it requires the consent of others. According to prior literature (Kanter, 1985; Davis, 1999), managers have to select suitable candidates for intrapreneurship and stakeholders such as lenders select which NE to back. Both of these organizational selections are contingent on the individual decision to become a NV. For example, once an organization has decided that a proposed intrapreneurial project offers sufficient expected benefit to the organization to be worth pursuing, it must then select suitable workers to run the project (De Clercq et al., 2011). Several factors affect the selection of suitable intrapreneurs by organizational managers. De Clercq, and colleagues (2011) argue that entrepreneurial initiatives within the organization must be extrinsically rewarding, suggesting that individual motivations for financial success are important because they drive NIs' subsequent actions. To be selected for intrapreneurship by their employers, prospective intrapreneurs must convince their corporate superiors of the sincerity of their motivation. If managers can detect intrinsic motivation amongst their workers, then they may be more willing to pursue an intrapreneurial project that is headed by such a highly motivated person. In short, we would expect that organizations select highly motivated workers to become intrapreneurs. That is precisely what Hamel (1999) describes at Shell, where only the best ideas and people pass the strict selection process for becoming an intrapreneur. We next outline links between the four types of motivation we introduced above and how they a) relate to the general start-up decision and b) how they play a different role in the decision to become a NI or a NE.

Financial Motivation focuses on three aspects: the desires to earn high incomes and to accumulate high levels of wealth, and to attain financial security. We will argue that first, NVs and regular employees and second, NIs and NEs are likely to differ in these motivations in systematic ways, on both self-selection and organizational selection grounds, respectively. Commencing with self-selection on financial motives, evidence suggests that venturing mostly comes with a financial penalty in terms of incomes (Hamilton, 2000) and returns on wealth (Moskowitz & Vissing-Jorgensen, 2002). One might therefore expect that financially motivated individuals would be more likely to select paid-employment than to start their own venture. Also, self-employment generates riskier incomes than paid-employment (Parker, 1997, 1999). Hence, individuals looking for an occupation offering financial security would presumably be more likely to choose paid-employment than any form of start-up (Parker, Belghitar, & Barmby, 2005). In other words, it seems likely that those individuals, who do decided to become NVs, accept the potential financial penalty, often leaving well-paid and secure corporate jobs to realize their visions of work-life balance and self-realization. Understood like this, self-selection via financial motives therefore favors paid-employment rather than NV:

H1a: The more importance an individual assigns to financial motives, the less likely he or she is to self-select into NV.

From the organizational-selection perspective, we can analyze the subsequent decision of the individuals who self-selected into NV, to become NIs or NEs. We expect a slightly different pattern to emerge regarding the importance of financial motivations. First, corporate managers require employees who are highly financially motivated to run intrapreneurial ventures, since corporations

are traditionally concerned with generating financial returns. Accordingly, corporations offer performance-related compensation contracts (Jones & Butler, 1992). These contracts are explicitly designed to appeal to financially motivated workers. Second, strong financial motivations are also needed in intrapreneurial “initiative selling” to convince senior managers of venture profitability and to characterize aspiring NIs as suitable candidates to run an intrapreneurial venture profitably (de Clercq et al., 2011). Third, a desire for financial security can be expected to attract workers who want a share in the upsides from intrapreneurial success but who also value the corporate safety net of support if their venture does not succeed (Shepherd, Covin & Kuratko, 2009). In summary, the same financial motivation that would make self-selection into NV less likely potentially makes organizational selection into NI more likely:

H1b: The more importance a NV assigns to financial motives, the more likely he or she is to be selected into NI.

Independence Motivation considers greater independence in life and flexibility of working arrangements. The body of research relating to these motivations shows that both employees and entrepreneurs value independence and autonomy (e.g. Plant & Ren, 2010). Freedom from subordination to authority seems to cross occupational boundaries. However, venturing is unusual in offering such high levels of autonomy in practice (Lange, 2012; Van Gelderen & Jansen, 2006). A substantial body of evidence now shows that a desire for independence and job autonomy motivates NVs even more than financial returns (Taylor, 1996; Benz & Frey, 2008). Such findings come from NVs’ responses to survey questions about their start-up motivation, but are also consistent with evidence that venturers start independent “hobby” businesses – a common reason stated in the PSED survey, for example (Reynolds & Curtin, 2011). This leads us to hypothesize:

H2a: The more importance an individual assigns to independence motives, the more likely he or she is to self-select into NV.

Independence motivation could also impact the organizational-selection of NIs. From the perspective of the organization, the individuals with high independence motivation might not fit the corporate mold quite that well to begin with. They might pose a risk to the coherent organizational structure of the enterprise and might stir up several negative emotions by disrupting established lines of command with their ideas for change (Rindova, Barry, Ketchen Jr., 2009). Managers might be more inclined to let individuals with strong independence motives seek their own luck outside the borders of an established organization.

H2b: The more importance a NV assigns to independence, the less likely he or she is to be selected into NI

Recognition Motives are another compensating differential related to one’s work. This subsection focuses on three aspects of motivations for social recognition: the desires to achieve and to be recognized for one’s achievements; to be respected by one’s friends; and to attain a higher position in society (i.e. social status). Jobs generally differ in the ease with which they enable workers to satisfy their internal “need for achievement” (McClelland, 1961). NVs, however have been shown to care less about others opinion on their occupational choice (Carter et al., 2003). Cater and her colleagues concluded, that personal reasons matter more for NVs and societal recognition is not as important. Davidson’s “rebel theory” of entrepreneurship (Davidson, 2006) would back such logic, arguing that NVs seek to be different and start new businesses for themselves, rather than for reasons relating to others. Summarizing the above we hypothesize:

H3a: The more importance an individual assigns to recognition by others, the less likely he or she is to self-select into becoming a NV.

Compared to regular employees who do not practice either intrapreneurship or entrepreneurship, both NIs and NEs enjoy greater external visibility and higher social status (Parker and van Praag, 2010). Organizations might be able to capitalize on these known status effects. Selecting amongst the group of NVs, those individuals who are motivated strongly by social recognition, managers might find a strong incentive for NVs to keep them within the company. Once again, external stakeholders have no reasons to be interested in such motivations for NEs, since they are primarily interested in satisfactory financial performance of a NE venture. In contrast, social recognition can be an important compensating differential to attract workers into NI. For instance, firms lacking the resources to offer financial incentives to prospective NIs, may select workers into this role who are strongly motivated by social recognition. These could be willing to forgo financial returns in order to enjoy the social recognition amongst their former peers. It is helpful that for NVs who are highly motivated by peer recognition and their friends' respect, their reference group of former co-workers is immediately aware of their achievement. Organizations understanding these social dynamics would select individuals interested in starting their own venture that are highly motivated by social status, to become NIs.

H3b: The more importance a NV assigns to recognition by others, the more likely he or she is to be selected into NI.

Role Models predispose individuals to select into occupations (Scherer, Adams, Carley, & Wiebe, 1989; Katz, 1992). Role models provide strong influence on off-springs' career selection, because they exemplify potential career choices (Miers, Rickaby, & Pollard, 2007). In the family business context, Mungai and Velamuri (2011) showed how success and failure of a parental role model can elicit positive and negative responses to the career choice of self-employment. While comparative studies on such outcomes are rare, Carter et al. (2003) found evidence that, if anything, role models seem to matter more for non-entrepreneurs than for NVs. They explained these differences with non-entrepreneurs' higher needs for public validation of their behavior. Non-entrepreneurs cared more about the others' opinion than NVs (Carter et al., 2003). We would add to that reasoning that sentiments of neglect, especially of business parents investing more time into their business than their family, might leave role model followers rather with a negative impression of the venturing activity. Following this logic, we argue that

H4a: The more importance an individual assigns to role models, the less likely he or she is to self-select into becoming a NV.

From the organizational perspective, there is evidence that favorable role models predispose individuals to select into particular occupations in paid employment (Dryler, 1998). Role models, especially ones working within the same organization, are visible and likely known to aspiring NIs. Senior managers responsible for selecting NIs to run intrapreneurial projects would know the role model and its potential influence on prospective candidates. To the extent that these role models have been successful (possibly having been intrapreneurs themselves in the past) and are respected by senior managers and individuals aspiring to be NIs alike, those managers may have more confidence in a given individual becoming a NI, if they are highly motivated to follow that known and successful role model. Hence, there seem to be cases, where we might expect moderate organizational selection on role model motivation amongst NIs.

H4b: The more importance a NV assigns to role models, the more likely he or she is to be selected into NI.

METHODS

In order to test our hypotheses, we need data on prospective start-up motivations for NIs, NEs (who together form the group of NVs) and non-venturers. The Panel Study of Entrepreneurial Dynamics (PSED) in its first version provides a non-venturing comparison group. The recent release of the second version enables us to test the second selection between NIs and NEs.

Data and Sample

The PSED I and PSED II each consist of two surveys. In a first screener telephone interview conducted between 1998 & 1999 (PSED I) and October 2005 and January 2006 (PSED II) 31,261 (31,845) American adults at least 18 years old were interviewed and 1,494 (1,214) individuals reported to be engaged in starting up a new business. A detailed mail questionnaire (trained telephone surveyors) followed up with this group of nascent venturers. This first complete round, representative of the entire adult founder population in the US is known as 'Wave 1' in the PSED I documentation and 'Wave A' in the PSED II. A complete description of the research design and methodologies is freely available at www.psed.isr.umich.edu. The combination of 'Wave 1' and 'Wave A' makes up our sample. With the measures we introduce below, we identify 2,030 individuals as nascent venturers (NVs), out of which 486 individuals are nascent intrapreneurs (NIs) and 1,544 nascent entrepreneurs (NEs). The control group of non-venturing individuals contains 431 individuals. Table 1 gives an overview of the descriptive statistics.

Measures

In this section we introduce our binary selection variables of interest: nascent venturers (NVs) and nascent intrapreneurs (NIs), our four explanatory variables: Financial motivation (FIN), Independence (INDE), Recognition (RECO), and Role models (ROLE), some model identification variables as well as several socio-demographic covariates.

Nascent Venturers (NVs). Following established PSED constructs, NEs and NIs in our study are termed NVs, if they are a) involved in the firm creation process, b) engaged in some start-up activity in the past 12 months. They c) expect to own all or part of the new firm, and d) would not have seen their initiative to be an operating business yet (Davidsson, 2006; Parker, 2011). We specify $NV=1$, if the individual self-selects into any kind of start-up activity and 0 otherwise.

Nascent Intrapreneurs (NIs) are in the process of setting up a new venture together with an employer. Empirically, we distinguish NEs and NIs by the locus of their venturing action outside the borders of an existing organization (NE) or dependently within the organization (NI). The PSED data captures this difference in the question: "Are you, alone or with others, currently trying to start a new business or a new venture for your employer, an effort that is part of your normal work?" We specify $NI=1$, if a NV is selected into nascent intrapreneurship by the company, and $NI=0$, if he or she starts their business as an independent NE.

Motivation Variables. We use the established measures of the four core motivational scales developed out of the PSED data (Carter et al, 2003). While Carter and her colleagues (2003) have used six categories, the newer and larger PSED II data asked fewer questions, but still allows us

to reconstruct and cross validate the four main scales with their measures. Our analysis provides confidence that the established scales hold also with new data. In our application, the four scales show comparably high internal validity as well as sufficient convergent and discriminate validity. We briefly define and discuss the four scales.

We construct *Financial Motivation* out of three Likert type (1=not at all, 5=very much) questions in close proximity to the WPI and direct theoretical applicability towards the TPB: “To what extent is the following reason important to you in establishing this new business: (1) to earn a larger personal income, (2) to build great wealth, (3) to have financial security. This measure follows the legacy of Scheinberg and MacMillan (1988) and Birley and Westhead (1994) both of whom have conceptualized financial success similarly and shown it to be an important motivator in early venturing endeavors. We found factor loadings for this measure at the .74 level and higher and Cronbach’s alpha was .78. *Independence Motivation* combines two questions: the extent to which (1) greater flexibility in life and (2) the freedom to adapt the work approach were important to respondents. Independence explains in how far a NI or NE values self-control and being in charge of his or her own time. This is consistent with earlier conceptualizations used by Shane (2005). Factor loadings were at least .77 and Cronbach’s alpha was .61. *Recognition Motivation* combines the extent to which (1) achieving and to be recognized, (2) respect from friends and (3) a higher position in society was motivating. Recognition measures the external approval by friends and societies (Birley & Westhead 1994) as well as their recognition (Shane, Locke, & Collins, 2003). Loadings were at least .68 and Cronbach’s alpha was .74. *Role Model Motivation* is a single item scale noting the importance of following the example of a person one admires. This question captures an individual’s desire to emulate the example of others (Carter et al., 2003). The factor loading for this measure was .915.

Control Variables. We control for a range of demographic and socio-demographic characteristics that the literature has shown to affect motivation. Our control variables for venture start-up motivation are gender (Gatewood, Shaver & Gartner, 1995; Carter, 1997; Fischer, Reuber & Dyke 1993), age (Delmar & Davidsson, 2000; Reynolds, 1997) education (Rotefoss & Kolvereid, 2005; Bates, 1995) and different sort of work experience (Parker, 2011).

Estimation Methodology and Identification

Our aim is to estimate the effects of personal motivation on the self-selection into nascent venturing and conditional on that, on the organizational selection into NI or NE. We specified the binary variables NV and NI above, to reflect the data structure of the PSED, which allows analyses of the two selection equations in the form that NIs can only be observed if NV=1. Hence, the appropriate empirical model is a bivariate probit model with sample selection:

$$NV_i = \alpha_0 + (X_i Y_i) \begin{pmatrix} \alpha_1 \\ \alpha_2 \end{pmatrix} + \epsilon_{2i} \quad NI_i = \beta_0 + (Y_i) \begin{pmatrix} \beta_1 \\ \beta_2 \end{pmatrix} + \epsilon_{2i}$$

To correctly identify the model, we need not only three non-overlapping subsamples (control group, NIs, and NEs – recall that NIs and NEs combined make up the group of NVs), but also a group of identification variables X_i that influence the NV self-selection, without impacting the NI/NE organizational selection. The exclusion restrictions on the NI equation are crucial for the correct estimation of the complete model, since the (over-)identifying restrictions enable the estimation of the above parameters with the method of Full Information Maximum Likelihood (FIML). As FIML exploits the full data structure, it is most efficient in simultaneously estimating

the coefficients of interest (α s & β s). The next section explains our theoretical rational and empirical derivation of our identification variables X_i .

Our identification strategy employs four binary variables that influence the self-selection into NV: being a household head, being married, working fulltime, and having entrepreneurial parents. We reason that the first three variables are associated with responsibilities that would not increase the risk-taking likelihood of the individual to start a new venture, usually a time and energy consuming activity. It is possible that e.g. with marriage and fulltime work, individuals gain access to more resources, which in turn actually positively affect the venturing decision. However, the more important theoretical proposition is that these identification variables influence the NV decision (either way), but there is no a priori reason why they would have an association with the organizational selection into NI/NE. The same applies to the variable having entrepreneurial parents. Evidence suggests that parental influence affects the venturing decision (Mungai & Velamuri, 2011), but there is no evidence that it would influence the NI/NE decision. Empirically testing these arguments, we chose one of the four variables to just-identify the model and included the remaining three in the NV equation, but not in the NI equation. We then tested the three over-identifying restrictions with a likelihood ratio test that would not reject the Null-Hypothesis of acceptable exclusion restrictions. Doing this for all four variables replacing the just-identifier, rendered $\chi^2(4)$ ratio statistics ranging from 4.22 to 5.40, none of which are close to standard significance levels. Yet, testing the same variables in the NV equation produced highly significant results ($\chi^2(4) > 12.07$), suggesting that we are justified in using these variables for identification.

RESULTS

Results for the NV self-selection motivation parameters appear in the first four lines of the left half of table 2. Hypothesis 1a) stated that the more importance an individual assigns to financial motives, the less likely he or she is to self-select into NV. We did not find evidence for this assertion. Hypothesis 2a), increased importance of independence leading to higher likelihood of starting any kind of business, produced marginally significant confirmatory results at the 10% significance level. Hypothesis 3a) and 4a), however, returned highly significant evidence of negative effects of assigned importance to recognition motivation and role model motivation, on the likelihood of self-selecting into becoming a NV. These last two significant findings combined with the marginally significant evidence of independence motivation give a first impression on the impact of personal motivation on the self-selection into nascent venturing.

Our second set of results, testing the hypotheses with respect to organizational selection on individual motivation appears in the right half of table 2. Hypothesis 1b) stated that more importance assigned to financial motivation by the NV, would make organizational selection into NI more likely. With the significant positive coefficient (.10), we find evidence for this assertion. Hypothesis 2b) suggested negative influence of more independence motivation, but was not supported. Hypothesis 3b) in turn, received marginal support, providing evidence that the more NVs are motivated by external recognition, the more likely they are to start a business together with their employer. Finally, Hypothesis 4b) proposing higher NI start-up likelihood with increasing importance assigned to role models did not return significant evidence. Even in the fully specified model including all covariates, these results hold.

In five of our eight hypotheses we find significant effects which partly explain the role of individual motivation in the general decision to become a NV and in the organizationally

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influenced decision to become a NI. Since all effects (apart from H1a) point into the hypothesized direction, our results combine to credible evidence that the same individual motivation that influence the self-selection into nascent venturing and subsequently impact the selection into NE, play an opposite role in the organizational selection of NIs.

DISCUSSION AND CONCLUSION

This article analyzed how NIs and NEs differ in their motivation, and how these motivational differences can help to explain the start-up decision as NI or NE. Our analysis emphasized the two-folded importance of motivations first as a precursor to the general venturing decision and subsequently as a factor determining NI vs. NE status. We highlight differences in motivation between these two decisions through focusing on the two salient selections at play: self-selection and organizational selection.

Our paper makes two principle contributions to the literature on start-up motivation. First, our theorizing on individual and organizational selection offers a coherent framework to conceptualize the motivational mechanisms at work in the complex start-up decision. Theoretically separating the occupational choice process into individual and organizational selection, allows us to conceptualize the complex decision to start a new venture as a NI or a NE from multiple perspectives in the same study. Such classification makes selection influences from different origins not only salient for the first time. It also allows us to understand their effects on different phases in the decision to become a NI or NE. Thus, our analysis fuses the individual and organizational level in temporal sequence. If we want to do justice to the complexity of motivations in the nascent start-up process, we think such simultaneous inclusion of different levels and mechanisms needs to continue.

Second, our research recognizes that the same venturing motives that stimulate general venturing have the reversed effect on becoming a NI. This finding helps to understand earlier research that might have appeared contradictory. Since we can now separate the two groups of nascent venturers based on their motivation to start a new enterprise, studies producing conflicting findings (e.g. Carter et al., 2003 and Stewart & Roth, 2007) are possibly liable to the exclusive use of one, or the undifferentiated use of both venturing groups. Our work also confirms earlier findings, e.g. those of Parker (2011) who concluded, “unobserved attributes that predispose people against engaging in any type of start-up effort [...] also predispose them to favor nascent intrapreneurship” (pg 13). We analyzed motivation as one of these unobserved attributes. Building on Parker (2011), our study help explaining the asymmetry between NIs and NEs, but at the same time highlights similarities between NIs and the non-venturing control group. Indeed, NI motivation to start a new venture might be closer in spirit to employees’ motivation to work for someone else.

For practitioners it is attractive how early we can tell NEs and NIs apart based on their start-up motivations. This should proof to be very helpful for corporate managers, deciding whether to ‘commission’ a project in-house or spin off an independent venture. It is also good advice for prospective NIs or NEs, considering their own start-up ambitions and for youngsters interested in entrepreneurship as a career.

Our work has its limitations. For once, scholars might define motivation more broadly and use finer measures as opposed to aggregate scales. Moreover, other unobserved factors might

have influenced the outcome of the study. First, interpretation of questions might differ between NEs and NIs. If we accept that entrepreneurs are more confident in their abilities and probability to succeed (Townsend, Busenitz & Arthur, 2010) they might have anticipated higher chances of realization with the presented goal-motivations. While the TPB explicitly accounts for this fact theoretically with the concept of perceived behavioral control, future studies would need to test that caveat to our findings empirically. More precisely, another study disentangling the over-confidence construct amongst NEs and NIs might help the interpretation of our results. Second, even though our findings are representative of the entire population of entrepreneurs and intrapreneurs in the United States, several differences exist in other cultures (Scheinberg and MacMillan, 1988). In contrast to other studies having studied general entrepreneurial motivation, our application of current econometric methodology to issues such as selection bias (Parker, 2011) positively distinguishes our work from several earlier efforts. Improving upon earlier cross-sectional studies, our use of prospective start-up motivations has also made a more sophisticated analysis possible that overcomes the challenge of retrospection (Golden, 1992). Still, by virtue of size and scope, our study could not test mediation, moderation or other interactive relationships, leaving many opportunities for interested scholars.

As we continue to understand the independent and corporate venturing process in further detail, we should carefully distinguish amongst NEs and NIs. Our results put forward questions regarding further differences between NEs and NIs, for example, in how they go about different steps in the venturing process and whether their efforts are prone to the same obstacles or lead to similar performance. Research in this direction would not only serve the research community, but also play a pivotal role in enhancing the productivity of our economies.

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Table 1 Statistics and Mean Comparison for both equations

	MEAN		N	p	MEAN		N	p
	NV	non-NV			NI	NE		
Financial Motivation	3.48	4.08	2103	0.00	3.62	3.44	1750	0.08
Independence Motivation	3.88	4.19	2105	0.00	3.88	3.89	1752	0.16
Recognition Motivation	2.24	3.40	2103	0.00	2.39	2.19	1749	0.02
Role Model Motivation	2.20	3.13	2104	0.00	2.38	2.14	1752	0.00
Age_18_24	0.08	0.13	2449	0.00	0.12	0.06	2006	0.00
Age_25_34	0.21	0.24	2449	0.53	0.20	0.21	2006	0.64
Age_35_44	0.26	0.28	2449	0.57	0.25	0.27	2006	0.80
Age_45_54	0.27	0.23	2449	0.01	0.27	0.27	2006	0.70
Postgraduate Studies	0.13	0.10	2446	0.03	0.11	0.14	2003	0.37
College Degree	0.25	0.23	2446	0.02	0.24	0.26	2003	0.07
High School	0.20	0.19	2446	0.35	0.25	0.18	2003	0.00
Female	0.41	0.55	2474	0.00	0.31	0.45	2030	0.00
Household Income (ln)	10.81	10.58	2219	0.00	10.79	10.82	1831	0.36
Specific Industry Experience	9.29	14.52	2044	0.00	10.23	8.97	1601	0.20
General Work Experience	20.32	17.78	2445	0.00	19.42	20.68	2004	0.04
Years as Supervisor	10.32	7.40	2425	0.00	9.93	10.47	1997	0.27
Household Head	0.93	0.88	2471	0.00	0.91	0.93	2027	0.11
Married	0.51	0.50	2453	0.01	0.47	0.52	2010	0.00
Working Fulltime	0.63	0.68	2460	0.71	0.66	0.62	2017	0.18
Entrepreneurial Parents	0.53	0.43	2439	0.00	0.50	0.55	2002	0.26

Table 2 Probit model with sample selection

	NV			NI		
	Coef.	Std. Err.	p	Coef.	Std. Err.	p
Financial Motivation	0.03	0.08	0.75	0.10	0.05	0.02
Independence Motivation	0.14	0.08	0.10	-0.06	0.04	0.16
Recognition Motivation	-0.43	0.08	0.00	0.08	0.05	0.09
Role Model Motivation	-0.12	0.05	0.01	0.02	0.03	0.49
Age_18_24	0.40	0.42	0.34	0.41	0.23	0.07
Age_25_34	0.58	0.32	0.07	0.09	0.18	0.60
Age_35_44	0.61	0.27	0.03	0.15	0.15	0.31
Age_45_54	0.32	0.24	0.19	0.15	0.13	0.23
Postgraduate Studies	0.12	0.21	0.56	-0.03	0.13	0.84
College Degree	-0.05	0.15	0.74	0.06	0.10	0.57
High School	-0.23	0.17	0.18	0.14	0.10	0.17
Female	0.02	0.13	0.90	-0.22	0.08	0.01
Household Income (ln)	0.01	0.10	0.94	-0.04	0.05	0.48
Specific Industry Experience	-0.03	0.01	0.00	0.01	0.00	0.01
General Work Experience	0.01	0.01	0.19	-0.01	0.01	0.23
Years as Supervisor	0.02	0.01	0.06	0.00	0.01	0.62
Household Head	0.29	0.22	0.18			
Married	-0.40	0.13	0.00			
Working Fulltime	-0.10	0.14	0.49			
Entrepreneurial Parents	0.35	0.12	0.00			
Constant	7.53	1.16	0.00	-0.54	0.57	0.35

N=1586

censored obs=284

uncensored obs=1302

Wald chi2(17) = 97.73

Log pseudolikelihood = -985.7862

Prob > chi2 = 0.0000