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FOUNDERS’ IMMIGRANT STATUS, EARLY INTERNATIONALIZATION AND PERFORMANCE IN HIGH TECHNOLOGY INDUSTRIES

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ABSTRACT
This study examines the effect of founders’ immigrant status on the survival and growth of high technology international new ventures. We draw on the behavioral theory of the firm and argue that immigrant entrepreneurs venturing abroad may perform better due to their experiential knowledge and understanding of setting up and running businesses in their country of adoption. Native entrepreneurs, on the other hand, start their businesses in their native countries and may therefore lack tacit understanding and routines about managing international efforts. Therefore, we hypothesized that immigrant-founded international new ventures will (1) have a higher probability of survival and (2) have higher rates of growth than native-founded international new ventures. We test our hypotheses using data from the Kauffman Firm Survey on 134 newly founded international high technology ventures in the U.S. Surprisingly, our results show that international high-tech new ventures with outsider founders are less likely to survive and grow relative to their native-founded counterparts. We speculate that immigrant entrepreneurs tend to be overconfident in their own ability to internationalize successfully.

INTRODUCTION

With the globalization of the world economy, internationalization as a growth strategy is becoming more relevant for established companies and new ventures alike. Although researchers traditionally have focused on large, well-established firms to study internationalization, with the increasing prominence of the international new ventures in the world economy, internationalization of young companies are also receiving more research interest (e.g. Oviatt & McDougall, 1994; Autio, Sapienza, & Almeida, 2000; Zahra, 2005). While much research in international entrepreneurship literature has examined why new ventures internationalize early; very few studies have tried to understand the reasons for the performance differences among early internationalizers (Keupp & Gassmann, 2009). Early internationalization is a risky strategy and not all new ventures might implement it equally successfully. In this study, we examine the role of founders’ immigrant status in the survival and growth of international new ventures in high technology industries.

Immigrant entrepreneurship (IE) research is built on idea that immigrant and native entrepreneurs do not compete on an equal footing (Light, 1979). IE scholars have argued that immigrant entrepreneurs are largely disadvantaged in the mainstream economy relative to native entrepreneurs because immigrant entrepreneurs suffer from the unfamiliarity with local economic, social, legal, and cultural circumstances, limited local information networks, and absence of
effective relations with local governments, nationalistic costumers, and suppliers (Collins & Low, 2010). Building on these arguments, some researchers have empirically examined the influence of founders’ immigrant status on firm performance and found that immigrant-founded ventures often perform worse relative to native-founded new ventures (e.g. Vinogradov & Isaksen, 2008).

While this research has increased our understanding of immigrant entrepreneurs and their ventures, its main focus has been the immigrant entrepreneurs in low-growth industries and on the disadvantages that immigrant entrepreneurs face. In this study, we aim to extend this literature to high technology entrepreneurship and to examine the ways in which the “outsiderness” of founders affects international high-technology new ventures’ performance. The IE literature has primarily tried to understand the drawbacks of outsiderness; especially focusing on how immigrant entrepreneurs face discrimination in the mainstream economy and thus self-select themselves into self-employment, and how their domestic-only ventures were unable to grow (Bates, 1997, Fairlie & Meyer, 1996). In this paper, we take a behavioral theory approach and consider outsiderness not necessarily a disadvantage but as an important factor affecting new venture performance differently depending on firm strategy (i.e. whether the firm is international or domestic-only).

We use the terms “native” or “insider” to refer to a founder born in the country, in which the new venture is started, and “immigrant” or “outsider” to refer to a founder who was born outside that country. “Outsiderness” refers to a set of attributes of an immigrant in the country to which he or she has emigrated, and where the new venture has initially been founded.

The gist of our inquiry is about how outsiderness will affect survival and growth of international new ventures, which we examine through a comparative study of both immigrant- and native-founded new ventures. There are disadvantages to being an outsider, such as lack of local knowledge of and lack of acceptance by the mainstream. Immigrant entrepreneurs have less experiential knowledge, social embeddedness and legitimacy in their adopted country relative to native entrepreneurs (Hart, Acs, & Tracy, 2009, Shane, 2007). However, their experiences with these difficulties of setting up businesses in their adopted country provide immigrant entrepreneurs with a capacity to handle the challenges of new foreign markets. Native entrepreneurs, on the other hand, start their businesses in their native countries and may therefore lack tacit understanding and routines about managing international efforts.

In order to empirically examine these ideas, we use both qualitative and quantitative research techniques. First, in order to have a deeper understanding of immigrant versus native-founded high technology ventures, we have conducted semi-structured interviews with five immigrant and five native high-tech entrepreneurs. For our quantitative analysis, we utilize the Kaufmann Firm Survey (KFS), which is a large panel data set of new businesses that were all founded in 2004 in the US. The data set consists of four follow up surveys (of the same firms) taking place in 2006, 2007, 2008, 2009 respectively. Because KFS follows the same cohort of firms over time, it helps comparative study of immigrant and native-founded ventures over time and helps address the problems of reverse causation and survivor bias.

The hypotheses are tested on 134 international ventures, 22 of which are primarily founded by immigrant entrepreneurs and 112 of which are primarily founded by native entrepreneurs. We test the likelihood of survival as a function of founders’ immigrant status by using logistic regression. We have then used OLS regression to test the effect of founders’ immigrant status on firm growth.

We used a comprehensive set of control variables in all analyses to address (a) founder differences...
such as gender, age, education, previous start up and industry experiences of primary founders, (b) firm characteristics such as internet sales, intellectual property, R&D focus, sales focus and firm size, and (c) macro context such as state export intensity and being located in high-tech centers.

Surprisingly, we find that immigrant-founded international new ventures are 1.27 times less likely to survive in the next year relative to native-founded international new ventures. Similarly, the growth of immigrant-founded international new ventures is 1.84 times lower than that of native-founded international new ventures. We speculate that this may be because immigrant entrepreneurs develop “overconfidence” in their abilities to deal with the challenges of new foreign markets. While native entrepreneurs might be more willing to receive new information and learn to evaluate new markets better, immigrant entrepreneurs may become ignorant or blind to the new information as they may think that they already know enough and perform worse as a result. However, further empirical testing and validation is needed to substantiate these arguments.

This study contributes to the literature in three primary ways. First, this study advances international entrepreneurship literature. The central issue in this literature is the causes and consequences of early internationalization. Yet, research in this field has not paid much attention to whether people who have already crossed borders to live and start businesses elsewhere are more successfully operate their businesses once they undertake early internationalizers than are native entrepreneurs. We propose a theoretical model to examine these issues and increase our understanding of the performance consequences of early internationalization.

The second contribution of this study is that it begins to fill an important theoretical gap in the immigrant entrepreneurship literature, which has focused primarily on the disadvantages that outsider entrepreneurs face in dealing with the institutional environment in the adopted country. We illuminate in this study how outsiderness might positively affect performance of international new ventures. This understanding is important not only because our theoretical knowledge of the implications of outsiderness is limited, but also because these implications of outsiderness can be especially critical under conditions of rapid change, such as those faced in high technology industries, where how entrepreneurs interpret and enact their business environments are major determinants of their strategic response and performance (Shane, 2000).

This study also has implications for the broader policy discussion on immigrant contributions to their countries of adoption and to the critical issue of creating high potential ventures that innovate and create new jobs. To the extent that I provide insight into the success of immigrants and natives in creating new international businesses and their impact on high potential venture creation, I provide input to policy makers concerned with both immigration policies and commercial vitality.

**Theory and Hypotheses**

As a theory of decision making, the behavioral theory of the firm is a useful lens to understand how outsiderness (and for that matter insiderness) might affect firm performance in terms of survival and growth both for immigrant and native-founded international high-tech new ventures. The behavioral theory of the firm (Cyert & March, 1963) maintains that when people or firms make decisions, they neither search for all available alternatives nor unfailingly select the best one. Instead, they search for solutions in the areas that are familiar to them, and when they
satisfy, they stop the search (Bromiley, 2005). These satisficing solutions to the past problems then make up routines, or repertoires of action, that firms in turn rely on for further actions. To put it another way, how firms solved their problems in the past has implications for how they solve their problems in the future. In that sense, the theory asserts that firms are routine-based and path dependent. That is, history matters in a firm’s strategic decisions and performance. Given that new ventures themselves do not have much history, the personal history of the founders, their life experiences, knowledge base and relationships become critical in guiding the ways new ventures operate and perform (Bhide, 2000).

Whether they are large MNEs or small new ventures, firms face several complexities and uncertainties in entering and operating in foreign markets. Eden & Miller (2004) suggest that costs of internationalization can be categorized into two groups. These are economic and social costs. Economic costs include production, marketing and distribution costs that occur due to geographic distance such as transportation and communications costs, trade barriers, and volatile exchange rates while the social costs, also called liabilities of foreignness, are due to the unfamiliarity with local economic, social, legal, and cultural circumstances, limited local information networks, and absence of effective relations with local governments, nationalistic customers, and suppliers (Eden & Miller, 2004; Miller & Richards, 2002; Zaheer & Mosakowski, 1997).

Given that firms have to incur both economic and social costs when they internationalize, they often need to possess some excess resources so as to deal with the challenges of foreign markets, and insure the reliability of their performance. While large established firms might have more slack resources or excess capacity to deal with these challenges (Acs et al, 1997, Zacharakis, 1997), new ventures that also suffer from “liabilities of newness” (Stinchcombe, 1965) face double liabilities in foreign markets. In particular, both their lack of external legitimacy, internal coordination, and their limited human and financial resources (Singh, Tucker & House, 1986) make it very difficult for new ventures to manage both domestic and foreign markets simultaneously (Etemad, 2004), and, thus, entailing these additional risks.

Although entering new markets involves considerable uncertainty and risk, entrepreneurs differ in their perceptions and in their capacities to manage them. We argue that outsider entrepreneurs may handle this uncertainty and complexity of new foreign markets better due to their experiential knowledge and understanding of setting up and running businesses in their country of adoption. In particular, their exposure to customers, suppliers, competitors, regulators, and business professionals in their country of adoption is likely to provide outsider entrepreneurs with a capacity to deal with the challenges of new foreign markets. Because outsider entrepreneurs learn, or develop a capacity to manage risk and deal with something “foreign” through their experiences in their country of adoption, this tacit knowledge of how to organize and manage international business is likely to be imprinted in the newly developing routines of immigrant-founded new ventures. Because firm behavior is largely routine-based and path-dependent, these operating routines developed in the country of adoption will help outsider founded new ventures manage the challenges of new foreign markets (Eriksson, Johanson, Majkgard, 1997).

Insider entrepreneurs, on the other hand, start to operate their business in their native countries. Although they might try to gain some knowledge about operating internationally through external sources such as reports, documents, or the stories of other entrepreneurs, because of the lack of tacit understanding and routines about managing international efforts, insider-founded
new ventures are at disadvantage relative to outsider founded new ventures who possess greater knowledge of the pressures and challenges of foreign markets through their first hand experiences. If this line of reasoning is true, then outsider-founded international new ventures would better handle the risks of the new markets and have higher probability of survival and a greater degree of growth compared to insider-founded international new ventures. The above arguments lead to following two hypotheses on the interaction effect between founders’ immigrant status and early internationalization strategy on firm survival and growth:

**Hypothesis 1:** Immigrant-founded international new ventures will have a higher probability of survival than native-founded international new ventures in high technology industries.

**Hypothesis 2:** Conditional on survival, immigrant-founded international new ventures will have higher growth rates than native-founded international new ventures in high technology industries.

### Data and Methods

#### Sample

Firm level data to test the hypotheses come from a secondary data source – the Kaufmann Firm Survey (KFS), which is a large panel data set of new businesses founded in the US in 2004. The data set consists of an initial and four annual follow up surveys (of the same firms) in 2005, 2006, 2007, 2008 and 2009, done by the Kaufmann Foundation and the data is now being used in other academic studies (e.g., Coleman & Robb, 2008; Robb & Robinson, 2010). The firms included in the survey come from a randomly chosen sample of new businesses in the Dun & Brad-street (D&B) list, with high-tech firms intentionally oversampled by the Kaufmann Foundation. High technology firms are defined based on the categorization by Hadlock, Hecker & Gannon (1991). This definition considers the industry percentage of R&D employment and classifies the businesses into technology groups based on the following two digits SIC codes: 28: Chemicals and allied products, 35: Industrial machinery and equipments, 36: Electrical and electronic equipment and 38: Instruments and related products. The survey provides detailed information on founder characteristics, including their immigrant status. Moreover, the dataset includes detailed information on firm strategy and financial performance indicators, including firm survival and sales growth.

We limit the data to the set of firms that are present in the sample in 2007 (year 3), at which point early internationalization is measured, which reduces the sample size to 134 firms that are international by year 3, of which 121 have a native-born entrepreneur as their primary founder, while 22 of them have been founded by an immigrant entrepreneur. The percentage of early internationalizers and the percentage of immigrant-founded new ventures in our sample closely match the prior national statistics reported by Small Business Association (2002) and OECD (2001).

Given that primary founders’ immigrant status is time invariant, the use of panel models is problematic to test our hypotheses. Therefore, we constructed a cross-sectional data set so that we took 2007 (year 3) as the base year at which early internationalization is measured for the first time. We also took advantage of the panel structure of the data and measure control variables in year 2006 (year 2) in alternative analyses. We measured firm survival and growth in 2008 (year 4),
one year following the base year. By examining a large number of new ventures (both successful and unsuccessful) over time, we address the issue of reverse causation and survivor bias. Moreover, we included a comprehensive set of control variables, helping us eliminate various alternative explanations.

**Dependent Variables**

The dependent variables of this study are: 1) Firm survival, 3) Firm growth. The first dependent variable in this stage is firm survival, which is a dummy variable to the following questions asked in year 2008 (year 4): “Did your company permanently close operations”? Yes=1, No=0 (reverse coded to indicate firm survival). This operationalization of firm survival excludes firm exits due to mergers or acquisitions, or temporary closures. Although mergers or acquisitions, or temporary closures implies the discontinuity of the firm, only closing permanently captures permanent exit that is more likely to be due to underperformance. This conceptualization and measurement is also consistent with extant research on firm failure (Thornhill & Amit, 2003). The second dependent variable is firm growth, which is the percentage of change in the total sales volume. It is calculated as: \( \frac{\text{Sales Volume}_{2008} - \text{Sales Volume}_{2007}}{\text{Sales Volume}_{2007}} \). This measurement of firm growth is also consistent with the current literature (Fernhaber & Li, 2009).

**Independent Variable**

The independent variable is primary founders’ immigrant status, which is measured as a dummy variable to the following question in year 3 (2007): Were you born in the U.S.? Yes=1, No=0. This definition of immigrant as a non-U.S born person is also consistent with the prior literature (e.g. Hart, Acs& Tracy, 2009; Wadhwa et al., 2007). A primary founder, who was not born in the U.S. is classified as an immigrant and coded as “1” (and “0” otherwise). For new ventures with more than one founder, the primary founder is defined as the founder who has the largest equity share of the company. If founders have equal equity shares, then primary owner is designated as the one who is more involved with the day to day operations. Some studies use the mere existence of an immigrant in the founding team to classify the new venture as an immigrant versus a native-founded company (e.g. Chaganti, Watts, Chaganti & Zimmerman-Treichel, 2008). While founders are the most influential people in new ventures, and this classification might have some value, because not all founders might be equally active or influential in directing the venture, by taking a more conservative approach, we choose to use the existence of immigrants as the “primary founder” to classify the new venture as an immigrant- versus a native-founded.

**Control Variables**

We incorporated a comprehensive set of control variables at individual-, firm- and environmental level that have been found to affect firm strategy and performance. At the individual level, prior studies indicate that the founders’ demographic characteristics namely gender (Orser, Riding, & Townsend, 2004; Reavley et. al, 2005) and age (Bonte, Falck & Heblich, 2009) influence new venture performance such that younger male entrepreneurs are more likely to achieve higher performance. Founders’ education is also known to positively affect new venture performance (Shane, 2007). I also control for the founders’ previous industry experience. Studies show that previous start up experience positively influences performance as entrepreneurs learn not only from their past mistakes (Shane, 2007). Finally, I control for previous work experience
since these experiences are shown to help entrepreneurs gain expertise about their industry, develop social networks, and get deeper understanding about their customers and competitors and positively affect firm performance (Dencker, Gruber & Shah, 2009).

At the firm level, we control for main industrial activity (i.e. whether the firm is providing a product or a service) (Westhead et. al, 1995), internet sales (Madsen & Servais, 1997), the existence of intellectual property (Andersson et al., 2004), firm size (Andersen et. al., 2004; Westhead, Wright & Ucbasaran, 2001) and prior performance (Bromiley, 2005) that are known to be positively related to new venture performance. We also control for the mobility of firm resources. Although very few studies documented an empirical relationship between the mobility of resources and new venture performance, recent theoretical work (e.g. Sapienza et al, 2006) suggests that firm resource mobility might especially affect resource constrained new ventures in their ability to pursue a successful early internationalization strategy. We also control whether the venture is getting VC financing or not. Prior studies show a consistent positive effect of VC financing on new venture performance. Many studies attributed this positive effect to the financial, managerial, and reputational resources that VCs provide to new ventures (Shane 2002). Other studies, on the other hand, have argued that VC firms tend to invest in better quality ventures in the market place to start with (Bhide, 2008). Therefore, we control for VC financing to capture both apriori quality of the venture as well as the additional effect of VCs, both of which might have implications for firm performance.

Finally, at the environmental level, prior research shows that industry characteristics, particularly R&D activities and hence innovativeness of industries- have important effects on new venture performance (Shrader, Oviatt & McDougall, 2000). Industries differ in their innovativeness even within high technology industries. Therefore, we control whether a high-tech venture is operating in a technology generating industry. Technology generating industries are defined as those that have above average R&D spending and R&D employment within high technology industries. We also control whether a new venture is located in a high-tech center or not. Prior research shows that locating in high-tech centers provide firms with access to resources and knowledge through agglomeration economies and enhances firm performance (Chung & Alcácer, 2010). We measure this variable as a dummy variable such that if a new venture and a high-tech center are located in an area under the same 2 digit zip code, then we assigned a value of 1 to that new venture and 0 otherwise. There are twenty-two high-tech centers in fourteen different states in the U.S. We have utilized U.S. States Postal Service website to identify and match the zip codes of high-tech centers with the zip codes of new ventures in our sample.

Results

We use probit to test our first hypothesis and OLS to test our second hypothesis. H1 predicted that founders’ immigrant status would positively affect firm survival and H2 predicted that founders’ immigrant status would positively affect firm growth. Neither hypothesis is supported. Instead, it was found that founders’ immigrant status significantly and negatively affects firm survival (See Table 1) and firm growth (See Table 2).
We set out to understand more fully the effects on a new venture of its having a native (insider) versus immigrant (outsider) founder. In particular, I wanted to shed light on the effects of founders on the performance of high technology international new ventures. Drawing on the behavioral theory of the firm, we argued that the outsiders have some disadvantages in their adoptive country setting but some advantages if or when their new ventures go abroad. We predicted among early internationalized firms those with immigrant founders do better in terms of survival and growth. However, we found no evidence that immigrant status has a positive effect on either firm survival or firm growth. Surprisingly, we found that immigrant-founded international ventures have greater mortality and lower growth than native-founded international new ventures. We now reflect on possible reasons for our results.

Founders’ immigrant status had a significant effect on the performance of international new ventures. However, it did so in ways that I did not anticipate. We expected that among firms that internationalized early those led by an immigrant founder would be more likely to survive (Hypotheses 1) and would likely grow at a faster rate (Hypotheses 2). However, the opposite was found in both cases. One potential explanation might be overconfidence. Immigrant entrepreneurs may develop overconfidence in their abilities to deal with the challenges of new foreign markets, and may take unwarranted risks. They may overestimate the knowledge they have gained from their prior experience of moving into a new country, and assume that this prior knowledge is completely transferable to any other new country they move into. While native entrepreneurs may be acting more cautiously and making their evaluations more objectively, given the experience that they have had, immigrant entrepreneurs might be overconfident in what they can achieve and systematically overestimate their chances in new markets. Moreover, while native entrepreneurs might be more willing to receive new information and learn to evaluate their environments better, immigrant entrepreneurs may discount new information or not seek it out, as they think they already know enough. This explanation might help interpret the overall results of the study that although immigrant-founded new ventures are more likely to go abroad early, they perform worse than their native counterparts, who take their time to plan and strategize. An immigrant entrepreneur we interviewed reflected this confidence:

“As an immigrant, I came with eight dollars in my pocket. The first thing you learn is, it’s not about money. If you learn how to create something from nothing, how can you ever fail, because you can always make something from nothing. So once you learn how to make something from nothing, the world is your oyster.”

Another explanation might be that the pressure to succeed induces immigrants to internationalize quickly. Therefore, they may want to start businesses that grow big quickly to show the world that they are successful. This pressure might cause immigrant entrepreneurs to undertake growth strategies such as early internationalization prematurely, without careful analysis. A native entrepreneur explained the pressure that his immigrant co-founder faces:

“…People from other countries that are coming here [are in] a circle where there is some competition. I think that’s different than me as an entrepreneur here. I don’t know that [I] have as much of that pressure to succeed. [Immigrant entrepreneurs] put it on themselves. I think it starts with [their] goals. If you create these goals and you fixate on the goals, then
there is that pressure that comes with it. I think for me living here I was more under the situ-

ation of, I’m going to give this a try. I kind of hope it works; if not, I can go get another job. [I
never thought] this is my only avenue to success.”

Both “overconfidence” and “pressure for success” explanations are only anecdotal, and further
empirical testing and validation is needed to substantiate these explanations.

As the last step, we compared several characteristics of immigrant versus native-founded
international new ventures. Table 3 presents results from the t-tests on these differences on some
of the key dimensions. Immigrant founders of international new ventures tend to be younger,
more educated and have less previous work experience than native founders of international new
ventures. In addition, international new ventures with immigrant founders are more likely to get
VC financing and to be located in high-tech centers and in states with higher export intensity.
My observations from my qualitative analysis together with these findings seems to suggest that
because of the higher pressure for success, immigrant entrepreneurs tend to start ventures with
greater growth potential relative to native entrepreneurs. Because greater growth potential is often
go together with greater risks, the nature of the business (i.e., high risk-high return) might be the
reason for the higher failure rates for immigrant-founded international new ventures relative to
native counterparts. Also, findings suggest that immigrant founders tend to have greater previous
start up experiences although this difference is not significant. Finally, there is no difference
between immigrant and native-founded international new ventures in terms of their total assets,
resource mobility, intellectual property, internet sales, or their focus on R&D or sales activities. It
is also important to note that the variance within the immigrant group is larger than the variance
within the native group for each of the variables.

Limitations

Both the limitations and the findings of the study present avenues for future research. First,
the data for this study come from high-tech new ventures that are started in the US. It is important
to note that the U.S. provides a more stringent context to test the hypotheses of this study because
it is a country known as “the country of immigrants”, and to be receptive of highly skilled immi-
grant entrepreneurs. Therefore, we expect that the findings should hold more strongly in other
countries where the distinction between immigrant and native entrepreneurs is more salient.
Second, in order to get a better understanding of early internationalization by immigrant versus
native-founded firms, it is important to examine which countries they enter, and the psychic dis-
tance across these countries. Do native and immigrant entrepreneurs systematically differ in their
country choices? My field interviews indicate that new ventures with native founders are attracted
to countries with strong institutions. Does this observation hold in larger samples? What are the
performance implications of these decisions? Finally, this study makes no differentiation between
immigrant entrepreneurs’ home countries, the number of years they have spent in the U.S. or
whether they got their latest training in the US or not. Because these characteristics might create
significant variance within the group of immigrant entrepreneurs, future research should examine
these differences among immigrant entrepreneurs and their implications for new venture perfor-
mance. How do highly skilled immigrant entrepreneurs vary in their personal network structures
in their adopted country, and how does this affect their ventures’ early internationalization or
performance?
Theoretical Implications

Despite these limitations, this research has a number of theoretical implications. First, while most research in immigrant entrepreneurship literature has emphasized the disadvantages that outsiders face in their adopted country due to institutional pressures, this study contributes to the literature by shedding light on the cognitive aspects of the outsiderness of immigrant entrepreneurs. Disadvantages and advantages of outsiderness provide insights into the performance of insider versus outsider founded new ventures. The existing body of empirical studies in this literature focuses mainly on the performance of international new ventures without considering their founders. A sole examination of international ventures may not capture the entirety of differences between outsider and insider founded new venture performance, and therefore confines the identification of the true impact of founders’ immigrant status on firm performance. This study found that independent of their founders, there is no main effect of early internationalization strategy on firm performance. This finding not only demonstrates that outsider status is not a sole advantage or disadvantage in and of itself, but also indicates that it is important to consider firm strategy in this relationship. Moreover, given the surprising result that outsider founded international new ventures have a lower rate of survival and growth relative to insider founded international new ventures, more research is needed to understand the dynamics of success for insider and outsider founded new ventures. This study therefore calls for a more comprehensive examination of the impact of outsider status on firm performance.

Practical Implications

This study provides a better understanding about who are more likely to become international entrepreneurs and how their ventures perform when they are domestic-only versus international. The results revealed that outsider entrepreneurs are more likely to start international new ventures but their ventures do not necessarily perform better than those new ventures founded by insider entrepreneurs. Based on this finding outsider and insider entrepreneurs might gain a better insight into how to go about early internationalization strategy including the differential forces that motivate or discourage their crossing borders very early on. Specifically, for outsider entrepreneurs, findings suggest that their global mind sets and lack of embeddedness encourage them to quickly internationalize, but findings also suggest that it might be a premature strategy and it may be important for outsider entrepreneurs to take more time and plan more before venturing abroad. For, insider entrepreneurs, findings suggest that their domestic mindsets and ties to local social context may it difficult for them to look outside for opportunities. This suggests that insider entrepreneurs should be aware of these forces and they should try to overcome them or maybe team up with immigrant entrepreneurs initially.

The findings have also important implications for policy makers. Given that, the competitiveness of the U.S. firms depends on their ability to tap international markets (Hart et al., 2009), these results may have implications for devising training and export stimulation programs targeting immigrant and native-founded high technology ventures to encourage international efforts by these firms. Moreover, policy makers might start various initiatives to address the impediments to the success of immigrant and native-founded new ventures face in international markets, and these initiatives might also include financial institutions including export credit agencies, export promotion agencies and other stakeholders to consider their respective roles in supporting the success of high technology new ventures in international markets.
Conclusions

This study emphasizes the role of founders’ immigrant status on new venture strategy and performance by drawing on the behavioral theory of the firm. It provides evidence for the effect of founders’ outsider status on the early internationalization, survival and growth of U.S. high-technology new ventures. Outsiderness has traditionally been considered as a disadvantage due to outsider entrepreneurs’ limited access to resources and markets relative to insider entrepreneurs in the country of adoption. However, I find that outsiderness in terms of having an immigrant founder also opens up new horizons to the new venture, and drives early internationalization although it does not lead to better performance, with new international ventures with immigrant entrepreneurs not performing as well as those with native-born entrepreneurs.

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References


Table 1: Test of H1 - Probit Estimate of Firm Survival for International New Ventures

| Variables                  | Coefficient (Controls Only) | St. Deviation (Controls Only) | Coefficient (full model) | St. Deviation (full model) | z     | p>|z|  |
|----------------------------|-----------------------------|------------------------------|--------------------------|----------------------------|-------|------|
| Immigrant Status           | -1.277**                    | 0.495                        | -2.58                    | 0.010                      |       |      |
| Education                  | 0.197***                    | 0.089                        | 0.283***                 | 0.105                      | 2.70  | 0.007|
| Prev. Industry Experience  | 0.005                       | 0.014                        | -0.004                   | 0.014                      | -0.33 | 0.745|
| Prev. Startup Experience   | -0.019                      | 0.054                        | -0.035                   | 0.056                      | -0.63 | 0.527|
| Intellectual Property      | -0.587                      | 0.379                        | -0.802*                  | 0.431                      | -1.86 | 0.063|
| Log(Total Assets $)        | 0.186**                     | 0.076                        | 0.220***                 | 0.082                      | 2.67  | 0.008|
| Technology Generator Industry | -0.540                    | 0.432                        | -0.759                   | 0.472                      | -1.61 | 0.108|
| Past Performance (ROA_3)   | -0.074                      | 0.073                        | -0.099                   | 0.067                      | -1.49 | 0.136|
| High -Tech Center          | 0.039                       | 0.361                        | 0.133                    | 0.379                      | 0.35  | 0.726|
| Constant (α)               | -1.790*                     | 1.036                        | -2.149**                 | 1.021                      | -2.10 | 0.035|
| Log Likelihood             | -31.926                     | -28.419                      |                         |                            |       |      |
| N                          | 131                         |                               |                          |                            |       |      |

MfxDy/dx = -0.21 sd=0.12 z=-1.77 p=0.076

*p<0.05, **p<0.01, ***p<0.001 two-tailed test.
Table 2: Test of H2 - Ordinary Least Square (OLS) Estimate of Firm Growth for International New Ventures

| Instruments | Coefficient (Controls Only) | St. Deviation (Controls Only) | Coefficient (full model) | St. Deviation (full model) | T (full model) | p>|t| (full model) |
|-------------|-----------------------------|-------------------------------|--------------------------|----------------------------|---------------|-----------------|
| Immigrant Status | Male | 1.213 | 2.095 | 1.344 | 2.115 | 0.64 | 0.527 |
| | Education | -0.615 | 0.403 | -0.495 | 0.369 | -1.34 | 0.183 |
| | Prev. Industry Experience | -0.037 | 0.046 | -0.038 | 0.046 | -0.82 | 0.414 |
| | Prev. Startup Experience | 0.086 | 0.168 | 0.082 | 0.180 | 0.46 | 0.648 |
| | Internet Sales | 0.473 | 0.877 | 0.335 | 0.858 | 0.39 | 0.697 |
| | Intellectual Property | 2.472 | 1.757 | 2.339 | 1.710 | 1.37 | 0.175 |
| | Log(Total Assets_2 $) | 0.553 | 0.522 | 0.632 | 0.550 | 1.15 | 0.254 |
| | VC Funded | 3.345* | 1.970 | 3.869* | 1.974 | 1.96 | 0.054 |
| | Technology Generator Industry | 1.043 | 0.972 | 1.045 | 0.954 | 1.10 | 0.277 |
| | R&D Focus | -4.040 | 3.349 | -4.118 | 3.367 | -1.22 | 0.225 |
| | Sales Focus | 1.710 | 2.080 | 1.819 | 2.090 | 0.87 | 0.387 |
| | Log ( Sales_2 $) | -1.855* | 1.087 | -1.966* | 1.128 | -1.74 | 0.085 |
| | High -Tech Center | -0.766 | 1.067 | -0.712 | 1.067 | -0.67 | 0.507 |
| | Constant (a) | 21.596** | 10.808 | 21.436** | 10.732 | 2.00 | 0.049 |

F Statistics | 0.61 | 0.61 |
R2 | 0.24 | 0.25 |
N | 92 | 92 |

Mfxdy/dx= -1.840  sd=1.189  z=-1.55  p=0.122

*p <0.05, **p<0.01, ***p<0.001. two-tailed test.

Table 3: Comparison of the Means of Key Variables for Immigrant vs. Native-Founded International New Ventures

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Immigrant-Founded</th>
<th>Native-Founded</th>
<th>t-statistics</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.869</td>
<td>0.889</td>
<td>0.264</td>
<td>0.792</td>
</tr>
<tr>
<td></td>
<td>(0.072)</td>
<td>(0.291)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>44.434</td>
<td>48.949</td>
<td>2.003</td>
<td>0.047**</td>
</tr>
<tr>
<td></td>
<td>(1.838)</td>
<td>(0.931)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>6.852</td>
<td>6.750</td>
<td>-4.583</td>
<td>0.000***</td>
</tr>
<tr>
<td></td>
<td>(0.318)</td>
<td>(0.173)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Work Exp.</td>
<td>12.609</td>
<td>17.342</td>
<td>1.766</td>
<td>0.079*</td>
</tr>
<tr>
<td></td>
<td>(1.769)</td>
<td>(1.133)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Startup Exp.</td>
<td>1.652</td>
<td>1.453</td>
<td>-0.404</td>
<td>0.687</td>
</tr>
<tr>
<td></td>
<td>(0.415)</td>
<td>(0.202)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet Sales</td>
<td>0.391</td>
<td>0.479</td>
<td>0.764</td>
<td>0.446</td>
</tr>
<tr>
<td></td>
<td>(0.104)</td>
<td>(0.046)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual Property</td>
<td>0.478</td>
<td>0.427</td>
<td>-0.447</td>
<td>0.655</td>
</tr>
<tr>
<td></td>
<td>(0.106)</td>
<td>(0.046)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D Focus</td>
<td>0.319</td>
<td>0.262</td>
<td>-0.578</td>
<td>0.565</td>
</tr>
<tr>
<td></td>
<td>(0.088)</td>
<td>(0.040)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Focus</td>
<td>0.398</td>
<td>0.618</td>
<td>0.326</td>
<td>0.745</td>
</tr>
<tr>
<td></td>
<td>(0.073)</td>
<td>(0.301)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VC Funded</td>
<td>0.235</td>
<td>0.032</td>
<td>-3.276</td>
<td>0.001**</td>
</tr>
<tr>
<td></td>
<td>(0.106)</td>
<td>(0.018)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource Mobility</td>
<td>0.795</td>
<td>0.726</td>
<td>-1.026</td>
<td>0.307</td>
</tr>
<tr>
<td></td>
<td>(0.060)</td>
<td>(0.023)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Assets ($)</td>
<td>12.109</td>
<td>12.381</td>
<td>0.616</td>
<td>0.539</td>
</tr>
<tr>
<td></td>
<td>(0.423)</td>
<td>(0.173)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High -Tech Center</td>
<td>0.681</td>
<td>0.351</td>
<td>-2.956</td>
<td>0.004**</td>
</tr>
<tr>
<td></td>
<td>(0.102)</td>
<td>(0.046)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p <0.10, **p<0.05 (standard deviations are in parentheses). two-tailed test.