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Perceptions of export feasibility in new technology-based firms: do immigrant and non-immigrant entrepreneurs differ?

Daniela Bolzani

University of Bologna, Italy
Department of Management
daniela.bolzani2@unibo.it

Cristina Boari

University of Bologna, Italy
Department of Management
cristina.boari@unibo.it

Abstract

In today's global economy, entrepreneurs/owners of small firms, especially in high-tech sectors, increasingly seek to grow their firms through internationalization. In such small firms, the human capital and characteristics of entrepreneurs play a major role in firm actions and performance outcomes. For example, in small firms the owner alone often decides whether to internationalize. Building on previous literature, we propose that, in the pre-internationalization phase, entrepreneurs evaluate the feasibility of exporting options through the lenses of their personal experiences and characteristics. In this paper we bring new insights on the differences between immigrant and native entrepreneurs regarding their perceptions of export feasibility, expecting that their life experiences have a profound impact on these perceptions. In particular, we expect differences in their perceptions of export feasibility, driven by an interactive model of ?internal? and ?external? antecedents (e.g., international, entrepreneurial and industry experience and perceived government support respectively). Using a unique matched-pair sample of 55 foreign entrepreneurs and 55 native entrepreneurs active in new technology-based firms in Italy, we find that the two groups of entrepreneurs differ in the way they perceive export feasibility. In particular we find that international business skills have a stronger effect on export feasibility for native entrepreneurs than for immigrant ones, while entrepreneurial experience and perceived government financial support have a stronger impact on immigrants' perceptions of feasibility than for native entrepreneurs. We derive important implications for future research and for policy in the area of innovation and immigration.

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*“Experience is not what happens to you;
it’s what you do with what happens to you.”*

Aldous Huxley

INTRODUCTION

As we observe our increasingly globalized world, we know that, besides established multinational enterprises, a growing number of micro, small and medium enterprises are pursuing business operations across borders (Oviatt and McDougall, 1994; Lu and Beamish, 2001; Westhead et al., 2002; Acs et al., 2003). For these firms, especially those active in innovative and technological sectors, internationalization is seen as a part of the overall growth process (Jones, 1999). In such small business realities, the individual entrepreneurs or the managers are key actors in the processes of internationalization (Reid, 1981; Miesenbock, 1988; Madsen and Servais, 1997; Oviatt & McDougall, 2005), which can be viewed as entrepreneurial decisions (Andersson, 2000; Jones and Coviello, 2005). Although numerous studies have analyzed which characteristics of the entrepreneurial team facilitate or support internationalization, research about whether foreign-born or immigrant entrepreneurs have an advantage in starting international operations with their firms is surprisingly scant (Crick et al., 2001; Drori et al., 2006). This research gap is particularly intriguing, considering the increasing participation of immigrant entrepreneurs in OECD countries and their potential contribution for the development of both host and origin countries (Economist, 2008; OECD, 2011).

Extant research dealing with internationalization processes underlines the importance of the ability of decision-makers in exploiting and driving the opportunities arising in international markets (Madsen and Servais, 1997), especially for new and small firms, where human capital might constitute a source of “differential advantage” (Manolova et al., 2002). Entrepreneurs’ individual characteristics and human capital, such as education, knowledge of foreign languages, work experience and international travel experience, are likely to be associated with entrepreneurs’ stock of knowledge and attitudes concerning foreign markets (Reid, 1981). Since the initiation of international activities requires knowledge about foreign

markets, which can be gained through experience with them (Johanson and Vahlne, 1977), an entrepreneur with an international background will have greater capabilities to communicate with, understand and operate in foreign countries (Madsen and Servais, 1997). Immigrant entrepreneurs may have gained, from this point of view, a greater experience in dealing with cross-cultural dimensions and being exposed to international experiences than native entrepreneurs. However, immigrant entrepreneurs might also be faced with constraints in the hosting countries, as described by previous literature on ethnic entrepreneurship (for a review, see Zhou, 2004). On one hand, therefore, there are reasons to believe that immigrant entrepreneurs are better endowed with resources and skills to internationalize. On the other hand, there are reasons to believe that their entrepreneurial actions may be limited due to societal or personal constraints in the host country.

In this paper we intend to understand whether and how immigrant and non-immigrant entrepreneurs active in high-tech industries differ in their evaluation of the feasibility of expanding their activities across borders through exporting. Whereas previous studies have analyzed the differences between exporters' and non-exporters' characteristics and attributes, we study how these are actually perceived by entrepreneurs in the pre-internationalization phase (Tan et al., 2007). In fact, before export initiation takes place, entrepreneurs face a phase of export awareness, where internationalization opportunities are evaluated on the basis of their feasibility (Bilkey, 1978; Reid, 1981). The pre-export phase is significant for small firms (Welch and Wiedersheim-Paul, 1980) needing to leverage their capabilities to accomplish strategic choices (e.g. speed, extent, scope of international activity) and for policy makers needing to offer adequate support policies (Tan et al., 2007).

We investigate whether and how immigrant entrepreneurs' perceptions of export feasibility differ from those of non-immigrants by analyzing a matched pair sample of 55 foreign entrepreneurs and 55 corresponding native ones, active in newly established technological firms in the same region in Italy. Results show that immigrant and non-immigrant entrepreneurs differ in the way they perceive exporting feasibility, in particular related to international business skills, entrepreneurial experience and perceived government support.

The paper is structured as follows. We start with a theoretical overview about decision-makers' characteristics and their influence on the perceived feasibility of exports. We then review the literature regarding migrant entrepreneurs and discuss how migrant status is related to the feasibility of export opportunities. Building on this theoretical background, we present our analytical model and hypotheses. We then illustrate our methodological approach,

describing our sample, data and measures of relevant constructs and variables. After presenting our results, we draw conclusions about the potential implications and limitations of the study.

THEORETICAL BACKGROUND

The pre-internationalization phase: evaluating feasibility of exports

The importance of internationalization for the growth of firms (Lu and Beamish, 2001; Girma et al., 2004) and for the economic development of countries (Yanikkaya, 2003) has been well understood by management and international entrepreneurship researchers, as testified by the increasing number of contributions in the last decade (Jones et al., 2011).

As recognized by several authors, the processes of entrepreneurial internationalization are a joint result of the presence of an opportunity and an entrepreneurial individual who can take advantage of them (Shane & Venkataraman, 2000; Oviatt & McDougall, 2005). To this extent, the characteristics of the entrepreneurs (Reid, 1981; Miesenbock, 1988; Madsen and Servais, 1997; Oviatt & McDougall, 2005) and the cognitive processes that they adopt to analyze and evaluate information (Zahra & George, 2002; Zahra, Korri, & Yu, 2005; Oviatt & McDougall, 2005) are key to the dynamics of international exploitation.

To date, different studies have concentrated on the analysis of decision-makers' characteristics and psychological traits in internationalized and non-internationalized firms, trying to find meaningful correlations between managers/entrepreneurs' attributes and internationalization outcomes. In particular, studies have highlighted individual-level experiential characteristics associated to export outcomes, such as age (Andersson et al., 2004; Westhead et al., 2001), entrepreneurial experience (Wright et al., 2007), educational attainment (Kundu and Katz, 2003), international experience (Kuemmerle, 2002; Bloodgood et al., 1996), engagement in foreign travel (Knight and Cavusgil, 1996), number and proficiency of foreign languages spoken (Knight and Cavusgil, 1996), information and contact networks domestically and abroad (Westhead et al., 2001; Zahra et al., 2003; Terjesen et al., 2008; Harris & Wheeler, 2005), international and technological knowledge (Nordman and Melén, 2008) and international start-up experience (Kundu and Katz, 2003). These variables, alone or aggregated (e.g. Ditchl et al., 1990, Reuber and Fischer, 1997, Knight and Cavusgil, 1996) have been suggested or found to positively affect the pace and the degree of internationalization or the performance of international activities.

However, the vast majority of these studies offered a comparison between firms already carrying out international activities, such as “born globals” or early internationalizers, and non-internationalized firms. Extant literature overlooks how entrepreneurs’ or managers’ experience and knowledge influence their perception of prospective internationalization options. Some authors have pointed out the relevance of investigating what happens before the first export action (Wiedersheim-Paul et al., 1978; Madsen and Servais, 1997; Tan et al., 2007), analyzing how entrepreneurs recognize international opportunities and set the stage for their exploitation (cf. Reid, 1981; Bilkey, 1978). However, academic research in this area is relatively scant (Tan et al., 2007). Aiming at filling this gap, in this paper we focus on entrepreneurs that have not yet started any outbound international activity with their firms (e.g. exporting, having an office abroad), to understand how they evaluate their potential ability to undertake such actions.

Internationalization theories postulate that decisions to commit resources into new foreign operations are strongly dependent on the amount of experiential knowledge gained by the firm on foreign markets (Johanson and Vahlne, 1977). The premise for any firm to internationalize is the possession of market-specific knowledge, which might be acquired either through incremental, progressive experience in foreign markets or can be brought to the firm by its human resources, especially its founders or key decision-makers (Madsen and Servais, 1997). It is evident that, for firms without any international experience, the background of the management and of the entrepreneurial team has a strong influence on the decision to internationalize, on the development and sustenance of international effort and on the subsequent performance on international markets (Madsen and Servais, 1997; Leonidou et al., 1998; Jones and Coviello, 2005; Zahra et al., 2005).

The impact of previous experience has been investigated in studies in the field of entrepreneurship, since models rooted in cognitive psychology have predicted that breadth of previous experience has an impact the perceived feasibility of a future intended behavior (e.g. Davidsson, 1991; Krueger, 1993). In this paper we investigate whether and how entrepreneurs perceive potential export opportunities as more feasible, i.e. more easy and practically viable (Stevenson and Jarillo, 1990; Krueger, 2000). In micro, small and medium firms, such aspects are evaluated directly by the decision-makers, taking an individual-level, first-person stance (Haynie et al., 2009). We emphasize perceptions of feasibility for two reasons. First, international opportunities are observed, interpreted and mediated by entrepreneurs “through the lenses of their personal characteristics (e.g., years of international business experience)

and psychological traits (e.g., risk-taking propensity)” (Oviatt and McDougall, 2005). Based on entrepreneurship literature, we know that prior knowledge, generated through people’s idiosyncratic life experiences (Shane, 2000; Krueger, 2007), creates “knowledge corridors” that allow the entrepreneur to recognize certain opportunities (Venkataraman, 1997), influencing his/her cognitive capability to comprehend, extrapolate, interpret and apply new information in ways that those lacking prior knowledge cannot replicate (Roberts, 1991). Second, since ability is needed to make desired outcomes materialize (Davidsson, 1991), perceived feasibility of entrepreneurial behavior drives subsequent intentions to undertake such actions and, ultimately, behavior (Krueger, 1993; Bagozzi, Baumgartner and Yi, 1989; Fitzsimmons and Douglas, 2011). Indeed, “theories focusing on the perception of the environment are fruitful to apply to understanding the first international step in a firm’s international development” (Andersson et al., 2004: 31) and to complement firm-level and industry-level studies.

Immigrant entrepreneurs and internationalization potential

Recognizing the importance of entrepreneurs’ perceptions of their capabilities to export, it is surprising that, to date, studies on the role of founders’ foreign nationality or migrant status as driver of early internationalization are dreadfully scarce (Crick et al., 2001; Yavuz, 2011). Research is scant, fragmented and evolved following different directions in the field of international entrepreneurship/business and in the field of ethnic entrepreneurship (Crick et al., 2001; Drori et al., 2006). Within the stream of literature on internationalization, Reid (1981) recognized migrant status a characteristic “likely to be associated with the exporting decision-maker’s existing stock of knowledge, his attitudes, and effective preferences concerning foreign markets” (p. 105). However, few studies have investigated this characteristic, finding inconsistent results regarding the relationship between ethnic origin and international entry or performance. (e.g. Mayer and Flynn, 1973; McDougall et al., 1994; Leonidou, 1998; Evangelista, 2005; Neville et al., 2012). Literature about ethnic/migrant entrepreneurship, traditionally regarding the development of operations in the domestic market (Crick et al., 2001; Zhou, 2004; Ilhan-Nas et al., 2011), only recently started to provide evidence about transnational business activities of immigrant entrepreneurs (Ilhan-Nas et al., 2011). Transnational entrepreneurs are foreign-born entrepreneurs who engage in activities that require frequent travels abroad, with the success of their business being dependent on the entrepreneurs’ contacts and associates in the home country (Portes et al.,

2002). These studies of research however is mainly focused on “transnational” business activities, i.e. carried out with the country of origin, rather than on international activities at large, and does not offer a comparison with behaviors of native entrepreneurs, since the peculiarities of such activities are at the heart of investigations (e.g. Landolt et al., 1999; Portes et al., 2002; Saxenian, 2002a; Miera, 2008; Sequeira et al., 2009). Furthermore, these studies are mainly focused on traditional, low value-added industries, with few exceptions like Saxenian (2002a) and Hart and Acs (2011).

Understanding how entrepreneurs’ immigrant status affects the internationalization of their ventures is an increasingly important issue, due to the significant economic and social contribution of foreign-born entrepreneurs in developed economies (Echikson et al., 2000; Economist, 2008; Baycan-Levent and Nijkamp, 2009). Self-employed immigrants in 2008, after a decade of increasing presence, represented on average the 12.6% of the total employment in OECD countries (OECD, 2011). Policy makers are aware of their potential contribution to trade opportunities, due to their knowledge of home countries, possession of contact networks and abilities to lower transaction costs (e.g. information barriers, trust) (OECD, 2010; OECD, 2011). It seems therefore particularly important that academic research directs new efforts in the study of this phenomenon.

Reviewed literature seems to generally find a positive association between migrant status and international/transnational economic behavior. However, drawing on migrant entrepreneurship literature, we posit that the relationship between migrant status and perceived feasibility of internationalization (e.g. export) might not necessarily be straightforwardly positive. On one side, in fact, we have indication that immigrants are a self-selected group of individuals who undertake the risks of migration to improve their lives and earnings (Constant and Zimmerman, 2006) and therefore are “more able and more highly motivated” (Chiswick, 1978) than the native borns. We think that living a migratory experience constitutes a kind of “developmental experience” for them, changing their attitudes and perceptions (see Krueger, 2007). Furthermore, foreign entrepreneurs, moving between home and host cultural environment, might develop cross-cultural competencies (Muzychenko, 2008), i.e. “an individual’s effectiveness in drawing upon a set of knowledge, skills, and personal attributes in order to work successfully with people from different national cultural backgrounds at home or abroad” (Johnson et al., 2006: 530). These competencies can increase their capacity to discover or create internationalization opportunities and their perceived level of self-efficacy (Muzychenko, 2008). Even more,

immigrants seem to be able to leverage their international networks to obtain resources and find markets (Saxenian, 2002b; Portes et al., 2002; Miera, 2008; Kloosterman et al., 2008). On the other side, migrant entrepreneurship literature points out several disadvantages faced by immigrants, for example discrimination, confining to low earning sectors, limited upward career potential (es. Bonacich & Modell, 1980; Waldinger, 1986; Clark & Drinkwater, 2000; Kloosterman, 2000).

In summary, the migrant status seems to be related to both positive and negative outcomes for entrepreneurship (Hart and Acs, 2011; Neville et al., 2012). Furthermore, country-level differences in business environment, sector-level distribution of firms, specificities of immigration trends, migration policies, characteristics of immigrants relative to natives (OECD, 2011) might also influence findings of empirical research. These ambiguous results provide strong motivation for more fine-grained research.

Hypotheses development

We face the questions of how immigrant and non-immigrant entrepreneurs, exposed to different types of experience – and derived knowledge - perceive the feasibility of potential export opportunities. To do this, we adopt an individual-level approach, focusing on the perceptions of entrepreneurs. Understanding the antecedents to internationalization is relevant since existing studies of market and industry entry have shown that the *ex-ante* possession of certain resources and capabilities referred to the new entered domains is then related to subsequent positive performance (Dimov and de Holan, 2010).

Building on extant entrepreneurship literature (Shapero, 1982; Davidsson, 1991; Krueger, 1993; Krueger, 2000), we propose a model rooted in cognitive psychology. Perceived feasibility of a determined behavior is linked to its perceived ease of realization, due to the availability of skills, knowledge or other resources, found at personal level, at team/organizational level and from the external environment. The concept of perceived feasibility can be equated to the one of self-efficacy (Bandura, 1997) or perceived behavioral control (Ajzen, 1991; Ajzen, 2002), which have been empirically shown to have a strong impact in entrepreneurial decisions (e.g. Zhao et al., 2005; Fitzimmons and Douglas, 2011).

There are different factors that individuals may perceive as facilitating or impeding performance of a target behavior. Some of these factors, like skills, capacities, perceived ease or self-confidence, are internal to the individual. Others, such as environmental/social impediments, luck or other people's control over the behavior, are external to the individual

(Ajzen, 1987). Taken together, these elements drive people's expectations regarding the degree to which they are capable of performing a target behavior, thanks to their resources or their control over external obstacles (Ajzen, 2002).

“Internal” antecedents to perceived feasibility

In this first section we set hypotheses related to whether experiences lived by entrepreneurs can generate a positive perception of their feasibility of exporting.

We start from entrepreneurs' international skills and exposure to foreign environment. In literature, this element has received the greatest attention, since numerous authors have found that higher levels of international management experience, either measured as the degree of overseas experience (e.g. time spent abroad for work, study, travel) or by the number and density of contacts abroad, was positively associated with patterns of firms' internationalization, such as the enhancement of the awareness of emergent opportunities (McDougall et al., 1994; Westhead et al., 2001), the likelihood of becoming involved in exporting (Ditchl et al., 1990), the pace of internationalization (Zahra et al., 2000), the degree of internationalization (Bloodgood et al., 1996; Reuber and Fischer, 1997) or export performance (Kundu and Katz, 2000). We are interested in investigating whether having an international background and international-related skills is influencing entrepreneurs' perception of internationalization feasibility. In fact, learning and ability is not generated by experience *per se*, but by the elaboration of such experience and the consequent change of beliefs and point of views held by people (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 2010). Studies in the field of entrepreneurship have shown that gained skills and experiences, either general or specific to entrepreneurship, increase the perceptions of entrepreneurs of being prepared and sufficiently capable of carrying out entrepreneurial activities (Krueger, 1993; Krueger, 2007). When considering export activities, a greater experience in international business/environments grants a better understanding of foreign markets and reduces the psychic distance to specific product markets, thus helping in identifying opportunities and in developing a sense of efficacy towards them (Madsen and Servais, 1997; Manolova et al., 2002; Toften and Olsen, 2003; Sousa et al., 2008). Coming to immigrant entrepreneurs, we posit that experiences like being born abroad, being grown-up in a family of foreign origin and having migrated, expose these individuals to diverse cultural environments and increases their competence to communicate with, understand and operate in foreign cultures (Madsen and Servais, 1997). Through these experiences immigrant

entrepreneurs can develop a global mindset (Arora et al., 2004; Nummela et al., 2004), gain practical skills and access resources from international networks (Madsen and Servais, 1997; Saxenian, 2002b) which facilitate their international opportunity recognition and exploitation processes. We therefore hypothesize that:

Hypothesis 1: The influence of entrepreneurs' international business skills on perceived feasibility of exporting will be moderated by the migrant status of the entrepreneur, such that international business skills will have a stronger positive effect on the perceived feasibility of exporting for immigrant entrepreneurs than for non-immigrant entrepreneurs

Extant literature has suggested that previous entrepreneurial experience might provide episodic knowledge such as managerial experience, reputation, access to finance institutions and broader social/business networks (Wright et al., 2007). Such experience enhances entrepreneurs' opportunity-spotting capacities, their ability to assess their skills (Minniti and Bygrave, 2001) and their ability to cope with the complexity of international operations (McDougall et al., 2003). At a perceptual level, in fact, breadth of entrepreneurial experience has been found positively associated with the perceived feasibility of entrepreneurial intentions (Krueger, 1993). Concerning immigrant entrepreneurs, previous literature has found that immigrants might be "pushed" into self-employment. They may take the decision to become an entrepreneur due to barriers on the waged labor market (Bonacich e Modell, 1980; Waldinger, 1986; Clark e Drinkwater, 2000) or to exploit resources within ethnic enclaves and networks (Bonacich, 1973; Ward, 1983). Recently, Portes et al. (2002) found that transnational business activities were mostly carried out by individuals with the oldest immigration arrival in the host country. We therefore put forward that the longer the entrepreneurial experience of immigrants, the higher their understanding of host countries opportunities, use of networks and potential opportunities to break-out (Ram and Hillin, 1994). We hypothesize that:

Hypothesis 2: The influence of entrepreneurs' entrepreneurial experience on perceived feasibility of exporting will be moderated by the migrant status of the entrepreneur, such that entrepreneurial experience will have a stronger positive effect on the perceived feasibility of exporting for immigrant entrepreneurs than for non-immigrant entrepreneurs

We next analyze the level of technical industrial skills gained through continuative experience in the sector of reference, with the product/service or with clients or suppliers. Drawing upon extant technical knowledge, entrepreneurs may be able to identify resources and opportunities in foreign markets (Westhead et al., 2001; McDougall et al., 2003), since they benefit of detailed knowledge of task environment, and therefore have an enhanced perception of feasibility of such an opportunity. Regarding immigrant entrepreneurs, since industry-related experience is assumed to be gained primarily through experience in the domestic market (Madsen and Servais, 1997), we think that the discrimination on the labor and goods market does not help them in obtaining the same level of technical experience than their native counterparts. We postulate the following:

Hypothesis 3: The influence of entrepreneurs' industry experience on perceived feasibility of exporting will be moderated by the migrant status of the entrepreneur, such that technical industry experience will have a weaker positive effect on the perceived feasibility of exporting for immigrant entrepreneurs than for non-immigrant entrepreneurs

“External” antecedents to perceived feasibility

Exporting is not entirely depending on the individual entrepreneur or on the firm, but also on external barriers and challenges (Sharkley et al., 1989; Leonidou, 2004). Literature evidences the importance of external environment for supporting entrepreneurial activities (Fini et al., 2012). In particular, we focus on the role of government's intervention (Lerner, 1999). The perception of government support can positively influence the control that individual have over their ability to implement an entrepreneurial behavior (Fini et al., 2012). In the context of government support, we distinguish two forms of assistance that may trigger entrepreneurs' capacity to internationalize: financial incentives and regulation. With regard to financial support, subsidies might be directed at sustaining international activities, such as in the case of support to commercial activities, participation to trade fairs and missions, guaranteeing loans or developing trade agreements (Denis and Depelteau, 1985; Leonidou, 2004), or at generally sustain firms' innovative activities, such as R&D grants, new product development or feasibility study grants (Görg et al., 2008; Girma et al., 2009). With regard to regulation, restrictions can be put on exports or foreign direct investments procedures both from national and international governmental

bodies, such as entry restrictions, price and exchange controls or special tax rates (Leonidou, 2004).

Small business owners have been found lacking trust in government support and poorly utilizing government assistance in different contexts (e.g. Leonidou, 1995; Crick et al., 2001). We hypothesize that for immigrant entrepreneurs, who faced the hardships of migration and bureaucratic patterns to settle in the host country, the perceptions of government support may be more important, if compared with native entrepreneurs, to develop a sense of feasibility in entrepreneurial behaviors (Crick et al., 2001; Saxenian, 2002a; Yavuz, 2011). The lack of strong roots or embeddedness in their host countries (Portes, 1995) might limit their access to resources or legitimacy (Yavuz, 2011). We therefore posit that for immigrant entrepreneurs the perception of available regulatory support will generate a higher sense of self-efficacy if compared with native entrepreneurs. Considering the two different types of government support above identified, we hypothesize that:

Hypothesis 4: The influence of entrepreneurs' perceived financial government support on perceived feasibility of exporting will be moderated by the migrant status of the entrepreneur, such that perceived government support will have a stronger positive effect on the perceived feasibility of exporting for immigrant entrepreneurs than for non-immigrant entrepreneurs

Hypothesis 5: The influence of entrepreneurs' perceived regulatory support on perceived feasibility of exporting will be moderated by the migrant status of the entrepreneur, such that perceived institutional support will have a stronger positive effect on the perceived feasibility of exporting for immigrant entrepreneurs than for non-immigrant entrepreneurs

Analytical model

We model our theoretical framework and hypotheses is represented in Fig. 1.

Insert Fig. 1 about here

METHOD

Sample and data collection

Data for this study were obtained from a primary data collection carried out through face-to-face structured interviews with selected entrepreneurs in new technology-based firms (Colombo and Grilli, 2005) in the Region Emilia-Romagna, in the North of Italy, from December 2011 to July 2012. In order to provide a meaningful and interesting context for our analysis, we selected firms active in technological and innovative industries (a detailed list of the analyzed sectors is found in Tab. 1), for two reasons. First, these firms are potentially more interested in internationalization as a means of growth (e.g. Coviello and Jones, 2004; Saxenian, 2002a; Wadhwa et al., 2008; Hart and Acs, 2011; Levent et al., 2007). Second, studies regarding the entrepreneurial outcomes of immigrants rarely regard high-tech sectors, which however are primary for economic development (Hart and Acs, 2011).

Insert Tab. 1 about here

The selection of a specific regional context is indicated to control for normative environment, contextual munificence and entrepreneurial opportunities, thus ensuring a high level of internal validity (Autio, 1997). The chosen Region is particularly interesting for two motives. First, the territory of Emilia-Romagna counts one of the higher presence of immigrants in Italy (2010 incidence on total population: 11.3%, Caritas Migrantes, 2011) and, in turn, of their entrepreneurial activities (Regione Emilia-Romagna, 2011). Second, the economy of the Region is characterized by a production system of small and medium enterprises, especially active in high-tech and innovative industries (Fini et al., 2009). We can further add that the Italian context provides a relatively unexplored area of research, which might be of interest due to relatively recent changes in European migratory trends and in immigration policies (Mahroum, 2001; Baycan-Levent and Nijkamp, 2009; OECD, 2011).

The population was identified from the official business registers managed at national level by Unioncamere – the Italian Chamber of Commerce system - and provided by the local Chambers of Commerce. The sampling and data collection was carried out in two steps. We first required a full list of firms owned by at least one foreign-born entrepreneur, which consisted of a population of 561 firms. Firms which were controlled by more than 50% of their capital by other companies and firms for which no contact (e-mail or telephone) was available (in total 364) were excluded. Given that our interest is in the pre-internationalization

stage, we contacted the remaining firms and excluded those that in the previous year had carried out an international activity, i.e. exporting more than 10% of their annual sales or having a commercial/productive subsidiary abroad (62 firms). After these operation of cleaning and selection of the appropriate sample, the population of interest was composed of 135 firms. We asked to these firms to have an in-depth interview with us, reaching 71 firms with at least a foreign-born partner (response rate: 53%). During the interviews with entrepreneurs, we realized that they were characterized by very different familiar backgrounds and immigration patterns (e.g. being born abroad from Italian expatriates and having returned back to Italy shortly after; having lived abroad for longer time with their families, also in different countries; or having migrated to Italy after school or after some years of work experience in the country of origin). Therefore, we set up the following restrictive criteria to define immigrant entrepreneur for the present study:

- a) having one foreign-born parent
- b) having migrate out of the country of origin at an age ≥ 10 (i.e. after primary school)
- c) having at present a foreign nationality

These criteria satisfy the definition of an foreign-born person that has been exposed to a foreign culture for a sufficient time or because of strong ethnic affiliation. Following these criteria, we identify 55 immigrant entrepreneurs, owners/partners of 54 firms (one firm has two foreign partners). As a second step of data collection, we matched these firms with high- and medium- tech firms owned only by native Italian entrepreneurs, by: sector of activity, year of establishment and age of entrepreneur. Our immigrant sample was thus matched with corresponding pairs of 55 Italian entrepreneurs. Totally we count 110 entrepreneurs and 108 firms.

Primary data were collected from December 2011 to July 2012 by the same researcher, following a pre-tested semi-structured questionnaire that was administered face-to-face, with interviews lasting on average 1.5 hours. These data were complemented by secondary data regarding firms and entrepreneurs collected in August-September 2012.

Measures

To measure the variables for the present study, we used items previously used in literature. Summary of constructs, literature sources, measures and their reliability are reported in Tab. 2.

The dependent variable, *perceived feasibility of exporting* is measured with 4 items measuring self-efficacy and controllability of behavior as proposed by Ajzen (2002). With regard to

antecedents to perceived feasibility of exporting, *international business skills* were measured with the scale by Manolova et al. (2002), which collects items related to international work experience and personal networks, ICT, marketing and international education skills. *Entrepreneurial experience* was calculated as the number of years that the respondent spent working as entrepreneur or self-employed during his/her career. *Industry experience* was measured as the number of years that the respondent spent working in the same industry of the present activity. The perception of *financial government support* was operationalized with scales from Fini et al. (2012) regarding evaluation of different sources of public funding/support. The perception of *regulatory support* was measured as in Manolova et al. (2002) as subjective evaluation of different types of regulations. We measure *immigrant status* of the entrepreneur with a dummy variable being 1 for immigrant entrepreneurs and 0 for non-immigrant entrepreneurs, given our above definition.

Insert Tab. 2 about here

We add to the analysis controls, both at individual level, and at firm level, keeping into account the relatively small size of the sample. At individual level we have identified the following variables as potentially relevant for our investigation: age of the entrepreneur (Westhead et al., 2001; Andersson et al., 2004) and years of education (Mayer and Flynn, 1973; Reid, 1983; Cooper et al., 1994; Kundu and Katz, 2003). At firm level we control for: firm age (Andersson et al., 2004; Giarratana and Torrìsi, 2010) and size (number of employees) (Bonaccorsi, 1992; Katsikeas and Morgan, 1994).

Concerning collection of data at individual level, the questionnaire was designed with care in order to reduce potential sources of common method bias (Podsakoff et al., 2003) and was pre-tested on a panel of 10 academics and entrepreneurs not involved in the study.

Data description

The 108 firms in the sample are active in the high-tech (71%) and machinery (29%) sectors, with a uniform distribution in the territory of Emilia-Romagna Region. Given our research design, the majority of firms are newly established micro and small firms, characterized by flat organizations. As reported in Tab. 3, the average year of establishment is 2006 (standard deviation [SD] 3.76) and the number of partners is 2.4 (SD 1.77). Only 10 firms out of 108 have managers to support the partners of the company in the management of the business,

mainly dedicated to the administrative, commercial and productive function. The turnover of the firms is on average € 566,865 (SD 1,721,185).

Insert Tab. 3 about here

The main characteristics of respondents are reported in Tab. 4. The entrepreneurs in the sample are on average 41 years old, mainly males (77%). The majority of them are married (73%) and have children (62%). On average, the interviewed entrepreneurs have a high degree of education (14.8 years, corresponding to a completed secondary degree and some years of post-secondary education). Only 33% of them have attended professional courses, mostly in the administration/management or technical field. On average they have worked in Italy for 11 years (SD 8.17) before opening the present firm. The 24% of the sample owns at least another firm (portfolio entrepreneur). Regarding experiences within an international domain, around a 47% of the interviewed entrepreneurs reported a previous work experience within a firm having international activities (e.g. export, import or FDIs) and 94% of them have traveled at least once in their life for any reason (tourism, study, work). The 94% of them speaks at least one foreign language.

Insert Tab. 4 about here

The foreign entrepreneurs in the sample (n = 55) were born in a wide range of countries (see Tab. 5) and on average migrated to Italy when they were adult (19 years old). The majority of them therefore completed their studies in the home country and the 47% of them had at least one work experience in their country of origin. A comparison between the two groups of Italian and immigrant entrepreneurs in terms of key demographic characteristics and experiences does not show significant differences, as shown in Tab. 6, except for the number of years of work in Italy.

Insert Tab. 6 about here

Results

We investigate our hypothesis with a hierarchical regression, as recommended for the investigations of interaction effects (Cohen and Cohen, 1983). After verifying that pairwise

correlations are in the expected direction, as reported in Tab. 7, results of our regression are reported in Tab. 8.

Insert Tab. 7 and 8 about here

Model 1 is a baseline model reporting the effect of control variables on the perceived feasibility of exporting. In Model 2 we add the main effects, while in Model 3 we add the interaction terms after having centered the independent variables to increase interpretability of results (Cohen and Cohen, 1983; Aiken and West, 1991). The increase in R^2 at each stage of the model means that the added variables give an explanatory contribution over and above the previous ones. We test our hypotheses in Model 3. This model has an R^2 of 0.34 ($p < 0.001$), significantly higher than the one of Model 2 (main effects model) (ΔR^2 0.12, $p = 0.008$), suggesting that moderation effects of migrant status are indeed present.

Hypothesis 1 stated that, for immigrant entrepreneurs, the impact of international business skills on perceived feasibility of exporting will be stronger than for native entrepreneurs. However, we find that the relationship is significant ($p < 0.05$) but with the opposite effect. This is better visible in Fig. 2, where we plotted the relationship between the perceived international business skills and feasibility of exporting. For native entrepreneurs, international business skills have a stronger effect on perceptions of export feasibility. In Hypothesis 2 we test whether the entrepreneurial experience for migrants has a stronger effect on perceived feasibility of exporting and, indeed, our results show strong support for this ($\beta_{mig} = 0.19$, $p < 0.01$), as also represented in Fig. 3. We do not find, instead, support for Hypothesis 3, related to the impact of technical industry experience ($\beta_{mig} = -0.06$, n.s.). Regarding hypotheses on the external antecedents to perceived feasibility, we find support for Hp. 4 ($\beta_{mig} = 0.29$, $p < 0.05$), as graphically depicted in Fig. 4, but not for Hp. 5 ($\beta_{mig} = 0.15$, n.s.).

Analysis to detect multicollinearity does not reveal problems (all VIFs ranging between 1.15 and 2.96).

DISCUSSION

This study contributes to the theoretical understanding about the micro-foundations of internationalization in newly established high-tech firms (Chandra et al., 2009; Jones et al., 2011). In particular, using a cognitive perspective (Ajzen, 2002; Krueger, 1993), we shed

light on the perceptions of feasibility preceding exporting decisions, observable in the pre-internationalization phase, that characterize immigrant entrepreneurs and native entrepreneurs. We find some differences in the enactment of exporting feasibility in these two groups, in particular related to international business skills, entrepreneurial experience and perceived government support.

Regarding international business skills, we find that their influence on the perceived feasibility of exporting is weaker in immigrant entrepreneurs than for native ones. This result is contrary to our expectations, since we posited that immigrants would have a stronger international background in terms of available resources and networks than native entrepreneurs (Hatzigeorgiou, 2010; Saxenian, 2002b). We speculate that these results can be explained by the different migratory patterns that characterize Italy – and other southern European countries - and differentiate it from existing (scarce) literature on transnational entrepreneurs. Italy became a country of immigration during the 1980s-1990s, receiving mostly unskilled workers or refugees (Fassman and Munz, 1992; Fullin and Reynieri, 2010). The immigration policies are mainly aiming at preventing illegal flows of immigration, legalizing illegal workers and facilitating family reunifications (Zimmerman et al., 2000; Mahroum, 2001). Considering that the entrepreneurs in our sample are first-generation ones, we could compare our results with the ones by Westhead et al. (2001), who found that entrepreneurs from immigrant parents in the UK were less likely to be exporters. Their explanation was based on the “enclave” argument, i.e. positing that immigrant entrepreneurs, especially first-generation ones, tend to concentrate in domestic-level ethnic markets (Zhou, 2004). Regarding entrepreneurial experience, we find that it has a stronger effect on perceived feasibility of future exports for migrants than for natives. These results are in line with Portes et al. (2002), who found that immigrants who had a longer residence track in the US were more likely to be involved in transnational entrepreneurial activities, i.e. setting up a business dealing between US and their country of origin. With regard to perceived government support, it is interesting to see that the availability of funding opportunities has a stronger positive effect on feasibility of future exports for migrant than for native entrepreneurs. This is interesting, since it looks that policies targeted at supporting exports could be better welcomed by immigrant entrepreneurs, who therefore do not look suspicious or reluctant towards these forms of support.

We think that this study can contribute to empirical evidence about the growingly important phenomenon of immigrant entrepreneurship and on its effects on economic outcomes, such as

international trade. Given the scant availability of data on immigrant entrepreneurs and the difficulties to obtain firm-level and individual-level in many countries (Saxenian, 2002b; OECD, 2010; OECD, 2011), we think that the design of the data collection can offer new useful insights. We think that the results found in this study in the Italian context may be interesting for countries with similar migratory patterns, especially in the South of Europe, and may contribute to the discussion about immigration policies (Mahroum, 2001).

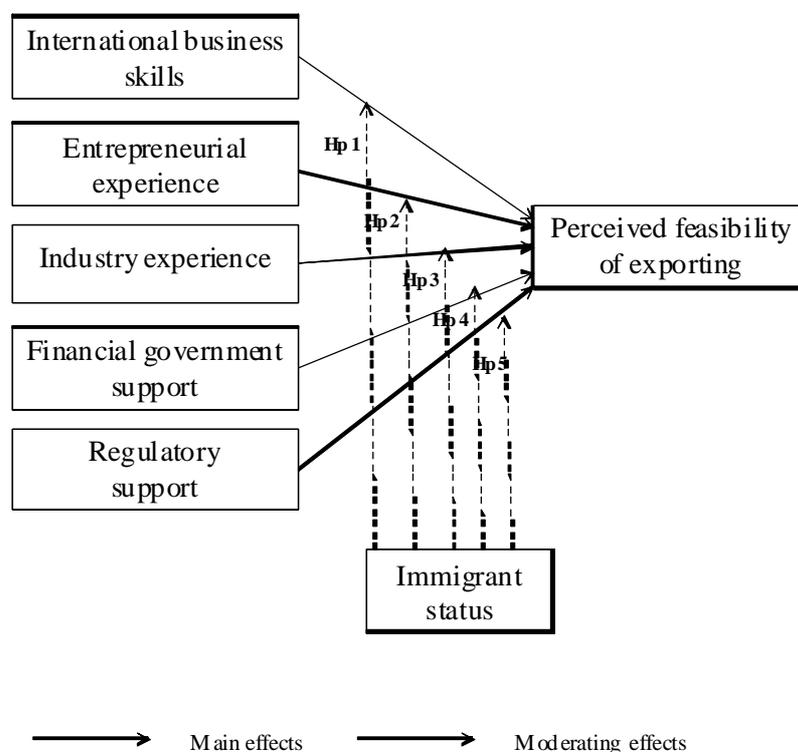
We do not imply that the variables selected in this study are the only ones that contribute to the propensity to export, but we think that they have the advantage of being visible and relatively easy to assess by entrepreneurs, advisors and policy makers (Cooper et al., 1994). In particular, some of the experiential factors that were investigated might be improved or sustained by public policy interventions - like training, advice, mobility programs and so on.

We acknowledge that perceived feasibility of entrepreneurial choices, such as internationalization choices, is very important to develop for the subsequent intentions towards the behavior. However, intentions are also built based on the perceived desirability of a certain behavior. Future work should therefore be directed at understanding whether immigrant and non-immigrant entrepreneurs differ also on the base of their perceived desirability of exporting. The consideration of desirability aspects regard elements like attitudes, subjective norms or values (Krueger, 2000). We find our approach justified by the importance of disentangling the different experiential elements that influence feasibility, in the same way other authors have only dealt with desirability (e.g. Wiklund et al., 2003).

We hope that results from this study will provide academics, practitioners and policy-makers with additional insights about the key experiential factors and environmental supports associated with the prospective intention of new and small independent firms to export sales abroad. Given that management characteristics cannot be changed in the short run (Zou and Stan, 1998), the different perceptions of immigrants and native entrepreneurs regarding their capabilities to “go international” could be of interest for firms, e.g. considering to set up a “nationally diverse” management team, or for policy makers willing to target firms with the higher perceptions of efficacy towards internationalization.

ANNEXES

Fig. 1 – Analytical model



Tab. 1 - Sectors investigated

| ATECO classification code | Description of activity | Summary |
|---------------------------|--|-----------|
| 21 | Production of pharmaceuticals | High-Tech |
| 26 | Production of computers, electronic and optical products; electro-medical equipments, measurement equipments and watches | High-Tech |
| 27 | Production of electrical equipments and non-electrical equipments for domestic purposes | High-Tech |
| 28 | Production of machineries | Machinery |
| 30 | Production of transport devices and machines | Machinery |
| 32.5 | Production of medical and dental instruments and supplies | High-Tech |
| 43.21 | Installing of electrical and electronical plants and equipments | High-Tech |
| 62 | Production of software, informatics consultancy and connected activities | High-Tech |
| 63 | ICT services and other informatics services | High-Tech |

Tab. 2 – Summary of constructs and variables

| Construct | Literature source * | Measure | α |
|--|----------------------------|--------------------------------------|----------------------------|
| Perceived feasibility of exporting | Ajzen, 2002 | 4-item scale (7-points Likert scale) | 0.78 |
| International business skills (a) | Manolova et al., 2002 | 4-item scale (7-points Likert scale) | 0.57 |
| Entrepreneurial experience | - | 1 item (objective, continuous) | - |
| Technical industry experience | - | 1 item (objective, continuous) | - |
| Perceived financial government support | Fini et al., 2012 | 3 item scale (7-points Likert scale) | 0.95 |
| Perceived institutional support | Manolova et al., 2002 | 2-item scale (7-points Likert scale) | 0.85 |

* literature source reported only for multi-item scales

(a) The original scale proposed by Manolova et al. (2004) is composed by 5 items. Since in our sample a factor analysis with principal components revealed 2 factors underlying the scale, for our analysis we decided to use only those items loading on the same factor (4 out of 5). We also run separate regression analysis with the full scale (5 items) and we find no substantial differences in results.

Tab. 3 –Firms descriptive

| | N | Mean | SD | Median | Min | Max |
|----------------------|----------|-------------|-----------|---------------|------------|------------|
| Year of foundation | 108 | 2006 | 3.76 | 2007 | 2000 | 2011 |
| Turnover 2011 | 104 | 566,865 | 1,721,185 | 116,853 | 0 | 13,652,727 |
| N. of employees 2011 | 107 | 3.93 | 8.13 | 1 | 0 | 43 |
| N. of partners 2011 | 108 | 2.39 | 1.77 | 2 | 1 | 10 |

Tab. 4 – Respondents characteristics

| | N | Mean | SD | Median | Min | Max |
|------------------------|----------|-------------|-----------|---------------|------------|------------|
| Male | 110 | 0.77 | 0.42 | 1 | 0 | 1 |
| Age | 110 | 41.18 | 8.57 | 40 | 26 | 63 |
| Years of education | 110 | 14.82 | 3.3 | 14.5 | 8 | 21 |
| Years of work in Italy | 110 | 11.39 | 8.17 | 10 | 0 | 34 |

Tab. 5 – Immigrant respondents’ countries of origin

| Country | N. | % |
|----------------|-----------|---------------|
| Albania | 5 | 9.0% |
| Argentina | 6 | 10.9% |
| Belgium | 2 | 3.6% |
| Bolivia | 1 | 1.8% |
| Brazil | 1 | 1.8% |
| Cameroun | 1 | 1.8% |
| Check Republic | 1 | 1.8% |
| China | 1 | 1.8% |
| Colombia | 1 | 1.8% |
| France | 5 | 9.0% |
| Germany | 2 | 3.6% |
| Greece | 1 | 1.8% |
| Ivory Coast | 1 | 1.8% |
| Libya | 1 | 1.8% |
| Moldova | 2 | 3.6% |
| Morocco | 7 | 12.7% |
| Pakistan | 2 | 3.6% |
| Peru | 1 | 1.8% |
| Poland | 3 | 5.5% |
| Romania | 1 | 1.8% |
| Russia | 2 | 3.6% |
| Sweden | 1 | 1.8% |
| Taiwan | 1 | 1.8% |
| Tunisia | 1 | 1.8% |
| United Kingdom | 3 | 5.5% |
| USA | 2 | 3.6% |
| Total | 55 | 100.0% |

Tab. 6– Respondents characteristics: immigrant vs. non-immigrant comparison

| | Italian nationals | | | Foreign nationals | | | Difference signif. ^b |
|---------------------------|--------------------------|-------------|-----------|--------------------------|-------------|-----------|--|
| | N | Mean | SD | N | Mean | SD | |
| Male | 55 | 0.81 | 0.05 | 55 | 0.73 | 0.06 | n.s. |
| Age | 55 | 41.78 | 1.11 | 55 | 40.58 | 1.20 | n.s. |
| Years of education | 55 | 14.36 | 0.47 | 55 | 15.29 | 0.43 | n.s. |
| Years of work in Italy | 55 | 13.01 | 1.22 | 55 | 9.78 | 0.93 | ** |
| Portfolio entrepren. | 55 | 0.20 | 0.05 | 55 | 0.27 | 0.06 | n.s. |
| Years abroad ^a | 55 | 1.63 | 0.48 | 55 | 1.67 | 0.45 | n.s. |
| Foreign language | 55 | 0.91 | 0.04 | 55 | 0.98 | 0.02 | n.s. |

^a Years spent abroad for any reason (travel, study, work) excluding travels to the country of origin for immigrants

^b n.s.: t-test non significant; **: t-test significant at 0.01

Tab. 7 – Correlation Table

| | Mean | S.D. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---------------------------------|-------|------|---------|---------|----------|---------|---------|---------|---------|---------|----------|----------|----|
| 1 Feasibility of exporting | 3.05 | 1.55 | 1 | | | | | | | | | | |
| 2 Age of entrepreneur | 41.18 | 8.57 | 0.2290* | 1 | | | | | | | | | |
| 3 Years of education | 14.83 | 3.37 | 0.1343 | -0.1791 | 1 | | | | | | | | |
| 4 Age of firm | 4.77 | 3.77 | -0.0085 | 0.2254* | -0.2225* | 1 | | | | | | | |
| 5 Size of firm (n. employees) | 3.93 | 8.13 | 0.2007* | 0.2134* | -0.0939 | 0.0249 | 1 | | | | | | |
| 6 International business skills | 0.00 | 1.52 | 0.2770* | 0.1594 | 0.3008* | -0.1398 | -0.0021 | 1 | | | | | |
| 7 Industrial experience | 0.00 | 8.09 | 0.1278 | 0.4634* | -0.2329* | 0.0093 | -0.0032 | 0.0463 | 1 | | | | |
| 8 Entrepreneurial experience | 0.00 | 5.52 | 0.0553 | 0.3403* | -0.088 | -0.1224 | 0.0941 | 0.0495 | 0.4800* | 1 | | | |
| 9 Public funding support | 0.00 | 1.75 | 0.1678 | -0.0736 | 0.0698 | -0.0869 | -0.105 | -0.1387 | 0.0942 | -0.0171 | 1 | | |
| 10 Regulatory support | 0.00 | 1.43 | 0.0407 | -0.0181 | -0.0608 | 0.0383 | -0.0762 | -0.0262 | -0.0236 | -0.1032 | 0.1828 | 1 | |
| 11 Immigrant status | 0.50 | 0.50 | -0.1324 | -0.0703 | 0.1383 | -0.0913 | -0.0394 | 0.2303* | -0.1873 | -0.1158 | -0.2030* | -0.2198* | 1 |

N = 110

* p < 0.05

Tab. 8– Results from hierarchical regression

| VARIABLES | Model 1 | Model 2 | Model 3 |
|-------------------------------------|------------------|-------------------|--------------------|
| Age of entrepreneur | 0.04* (0.018) | 0.03 (0.021) | 0.03 (0.021) |
| Year of education | 0.09# (0.045) | 0.04 (0.048) | 0.04 (0.047) |
| Age of firm | -0.01 (0.041) | 0.01 (0.041) | 0.00 (0.039) |
| Size of firm (employees) | 0.03# (0.018) | 0.04* (0.018) | 0.03# (0.018) |
| International business skills | | 0.31** (0.107) | 0.61*** (0.151) |
| Industrial experience | | 0.01 (0.022) | 0.03 (0.027) |
| Entrepreneurial experience | | -0.02 (0.032) | -0.08# (0.040) |
| Public funding support | | 0.17* (0.085) | 0.03 (0.105) |
| Regulatory support | | -0.00 (0.103) | -0.03 (0.130) |
| Immigrant status (MIG) | | -0.44 (0.305) | -0.48# (0.290) |
| International business skills x MIG | | | -0.50* (0.197) |
| Industrial experience x MIG | | | -0.06 (0.040) |
| Entrepreneurial experience x MIG | | | 0.14* (0.060) |
| Public funding support x MIG | | | 0.29# (0.168) |
| Regulatory support x MIG | | | 0.16 (0.203) |
| Constant | -0.00 (1.082) | 1.35 (1.175) | 1.36 (1.177) |
| Observations | 107 | 107 | 107 |
| R-squared | 0.11** | 0.22** | 0.34*** |
| Delta R-squared | - | 0.114* | 0.121** |
| Adj. R-squared | 0.07 | 0.14 | 0.24 |

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, # p<0.1

Fig. 2 – Effects of interaction between international business skills and immigrant status on perceived feasibility of exporting

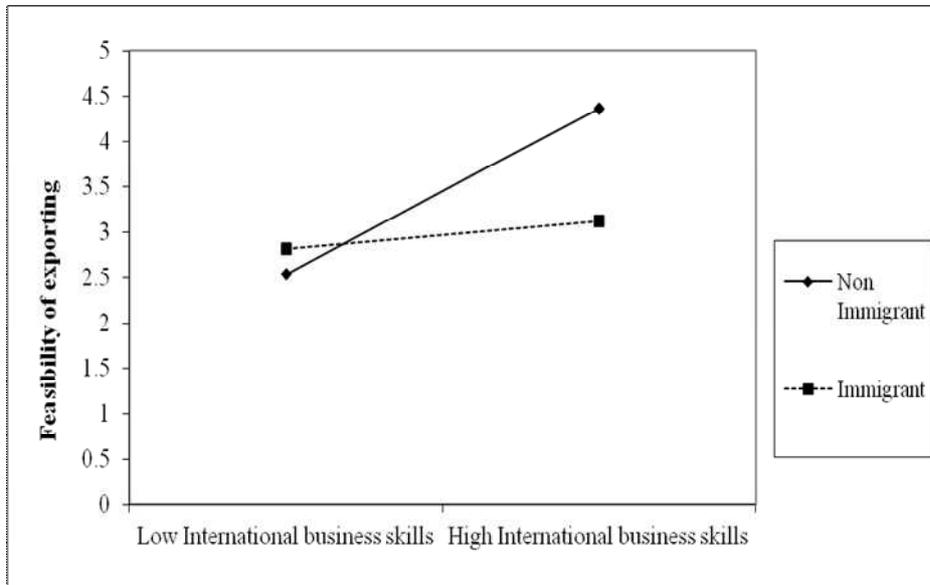


Fig. 3 – Effects of interaction between entrepreneurial experience and migrant status on perceived feasibility of exporting

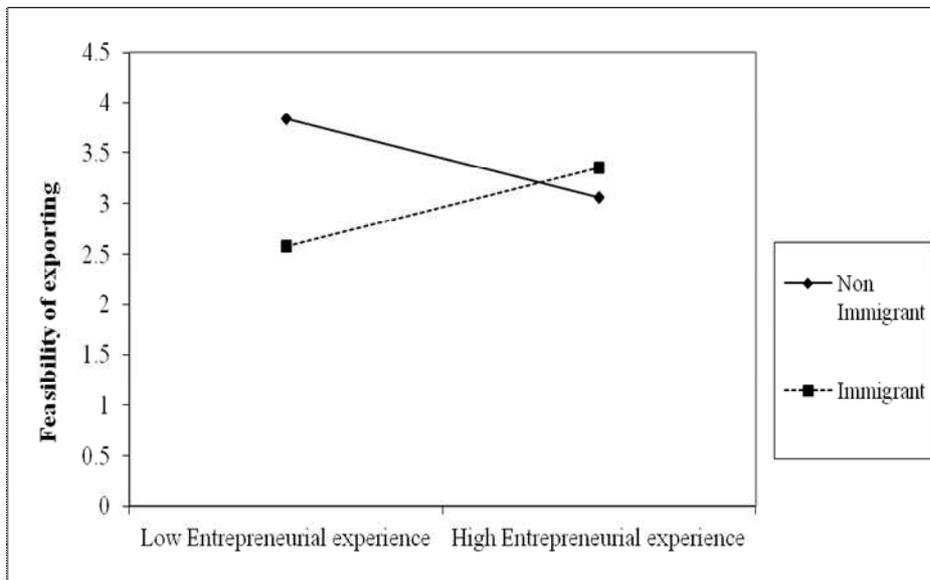
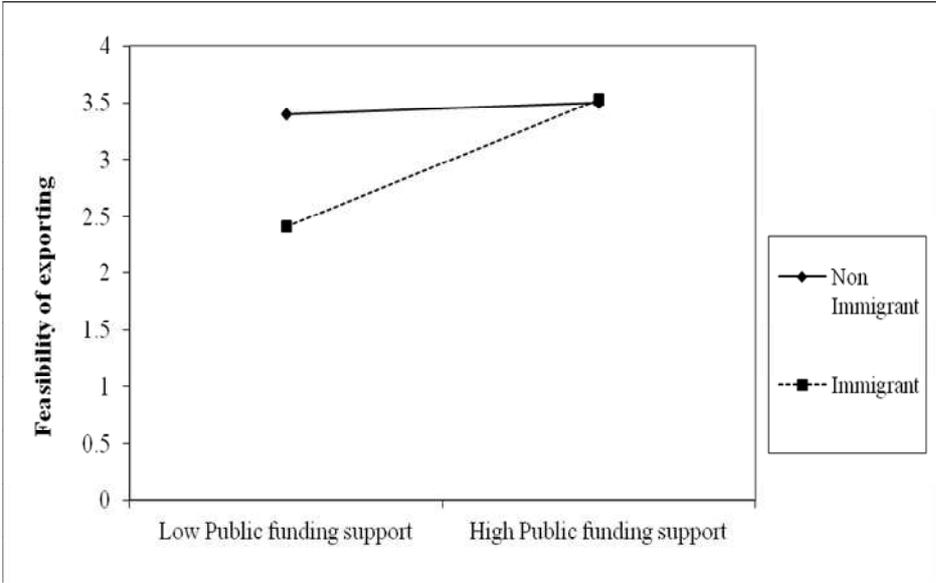


Fig. 4 – Effects of interaction between perceived public funding support and migrant status on perceived feasibility of exporting



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