



The influence of entrepreneurs' immigrant status and time on the perceived likelihood of exporting

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Abstract

We contribute in this paper to the scant literature on the factors and conditions influencing the development of different perceptions of potential international opportunities for immigrant and native entrepreneurs in the pre-internationalization phase. Specifically, we investigate what factors influence the perceived likelihood entrepreneurs have of exporting. Building on entrepreneurial intentions and opportunity-based entrepreneurial processes, we propose a cognitive account of perceived likelihood of exporting based on entrepreneurs' perceptions of the desirability and feasibility of export opportunities. We investigate how the immigrant status (i.e., individual characteristics) and time (i.e., contextual factors) influence the relationship between the desirability and feasibility of exporting, and entrepreneurs' perceived likelihood of exporting. We employ an experimental design on a matched-pair sample of 108 native and immigrant entrepreneurs in domestic technology-based firms. The results are a unique account of the cognitive antecedents of the perceived likelihood of exporting under different temporal conditions, comparing immigrant and native entrepreneurs. We discuss theoretical and practical implications.

Keywords Immigrants · Immigrant entrepreneurs · International entrepreneurship · Cognition · Opportunity evaluation · Export · Time

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Introduction

Part of prior literature on immigrants has approached their entrepreneurial endeavors with a “deficit” lens, often situating them in a necessity and economic adaptation position; differently, other streams of literature have highlighted immigrant entrepreneurs’ competitive advantages and resources compared to the native ones, in particular with respect to internationalization processes (Elo et al. 2018). Taken together, these divergent approaches in prior literature suggest that immigrant and non-immigrant entrepreneurs might have different experiences, resources, and structural positions that could lead to different advantages or disadvantages in business processes and outcomes. In this paper, we are particularly interested in firm outward internationalization, measured in terms of exports. In this domain, for instance, immigrant entrepreneurs might be in the position to leverage knowledge and resources from international networks (e.g., Jiang et al. 2016; Neville et al. 2014; Wang and Liu 2015), but might be at a disadvantage compared to native entrepreneurs because of their lack of business-related knowledge, financial capital, and institutional or governmental assistance from the host country (e.g., Constant and Zimmerman 2006; Hammarstedt 2001; Bolzani and Boari 2018), or because of a language mismatch with the host country or foreign country target (Sui et al. 2015).

Immigrant and native entrepreneurs, being heterogeneous in their cultural and social backgrounds, are likely to evaluate potential exporting opportunities differently (see Madsen and Servais 1997). However, to date it has still to be clarified whether and under what conditions immigrant entrepreneurs develop different perceptions of opportunities to enter foreign markets (e.g., Bolzani and Boari 2018; Elo and Minto-Coy 2018).

In fact, the evaluation of potential opportunities in international entrepreneurship involves intense perceptual and interpretative processes of the environment and of information (see Barreto 2012; Dimov 2007; Williams and Wood 2015), because entrepreneurs are called to envision future opportunities that may occur in distant cultural and institutional settings (Mainela et al. 2014). Intriguingly, entrepreneurs who aim to enter foreign markets first must envision and evaluate future opportunities for growing their firm abroad while living and working in the domestic context. As for all entrepreneurial choices, entrepreneurs have to evaluate in the present whether uncertain market opportunities are attractive enough to them to justify the subsequent allocation and investment of financial and human resources for their exploitation (Haynie et al. 2009; McMullen and Shepherd 2006).

In this paper, we focused on the pre-internationalization phase to investigate what factors influence immigrant and native entrepreneurs’ evaluations of the future likelihood of exporting by proceeding in two analytical steps. First, we built a general model of entrepreneurs’ perceived likelihood of exporting by drawing on established entrepreneurship literature about intentions (Krueger 2000; Krueger et al. 2000) and opportunity-based entrepreneurial processes (e.g., Autio et al. 2013; Haynie et al. 2009; Tumasjan et al. 2013). We theorized that in the pre-export phase entrepreneurs evaluate the likelihood of exporting based on its desirability (i.e., valence) and its feasibility (i.e., ease and practicality; Stevenson and Jarillo 1990). Second, we investigated certain contextual factors that might influence the relationship between desirability and feasibility of exporting and entrepreneurs’ perceived likelihood of

exporting. Specifically, because exporting entails evaluating the desirability and feasibility of international sales opportunities available at a specific point in time—in the near or distant future—we argued that time is a relevant moderating variable in the relationship between the desirability and feasibility of exporting and the perceived likelihood of exporting. We thus were interested in understanding the impact of the temporal context in entrepreneurs' subjective evaluations about international opportunities (Acedo and Jones 2007; Jones and Coviello 2005).

Given the characterization of our research goals, we implemented a research design based on (1) a matched-pair sampling of immigrant and native entrepreneurs, to allow for maximizing differences in entrepreneurs' social distance to international opportunities (e.g., Chaganti et al. 2008); and (2) an experimental manipulation of the temporal distance to international opportunities (e.g., Tumasjan et al. 2013). Our sample comprised a total of 108 owner–managers of 108 (of which, 54 immigrant, and 54 Italian entrepreneurs) domestic new-technology-based firms in Northern Italy. We collected primary data through face-to-face structured interviews, complemented by secondary data. An experimental manipulation of temporal distance with international opportunities was carried out by randomly assigning respondents to the evaluation of an export scenario in the short run (1–2 months) or in the long run (1 year).

Our results confirmed that entrepreneurs' evaluations of the likelihood of exporting are driven by their perceptions of the desirability and feasibility of exporting opportunities. In addition, we found that entrepreneurs' evaluations are influenced by temporal distance and by the entrepreneurs' immigrant status, which influences the relative importance assigned to perceived feasibility in the distant future.

The results of this paper allow a unique comparison of the cognitive antecedents of the perceived likelihood of exporting of immigrant and native entrepreneurs, taking into account the different temporal windows in which opportunities are evaluated. There are several theoretical contributions of this work. First, it generally contributes to the entrepreneurship literature by providing insights on how different entrepreneurs' characteristics and backgrounds, such as migrant status, influence the evaluation of entrepreneurial opportunities (e.g., Grégoire et al. 2015; Wood and McKelvie 2015) and decision-making in often overlooked pre-entry situations (e.g., Autio et al. 2013). Second, it contributes to the literature on immigrant entrepreneurship by identifying time as one important dimension which can influence immigrant entrepreneurs' processes of opportunity evaluation (e.g., Bolívar-Cruz et al. 2014; Sundararajan and Sundararajan 2015; Kushnirovich et al. 2018). Third, it informs international entrepreneurship literature by offering new insights about the individual-level dimension of international entrepreneurial decision-making (Coviello 2015; Zahra 2005; Zahra and George 2002), by analyzing some of the cognitive processes that characterize the evaluation of international opportunities for different entrepreneurs (De Clercq et al. 2012; Nowiński and Rialp 2016). Lastly, it contributes to the understanding of the micro-foundations of international business, by providing details on the cognitive models underlying entry decisions by immigrant and native owner–managers in the pre-internationalization phase (Brouthers and Nakos 2004; Buckley et al. 2011; Hennart and Slangen 2015).

This paper is structured as follows. First, we present the theoretical framework underlying our study and the hypotheses that we tested, introducing desirability and feasibility as antecedents of perceived likelihood of exporting, the moderating effect of

time, and the comparison between immigrant and native entrepreneurs' evaluations. Second, we introduce our research design and methodology. Third, we present our results. In the final section, we discuss the findings and the theoretical and practical implications of our study.

Theoretical framework and development of hypotheses

Viewing international entrepreneurship as the “discovery, enactment, evaluation and exploitation of opportunities—across national borders—to create future goods and services” (Oviatt and McDougall 2005, p. 540) illuminates the moment of international market entry as the final exploitative phase of an opportunity-centered process evolving over time (McMullen and Dimov 2013; Nowiński and Rialp 2016). For this paper, we were interested particularly in international market entry coinciding with exporting, given that previous studies have shown that this is a key activity pursued by newly established small firms (e.g., Bonaccorsi 1992; McDougall and Oviatt 1996). As in other entrepreneurial activities, entrepreneurs evaluate the attractiveness of exporting to decide whether or not to commit resources (e.g., Kaleka and Morgan 2019).

We know that when entrepreneurs evaluate business opportunities, they take a future-oriented stance, thinking about “what will be” if they were to exploit the opportunity they are evaluating (Haynie et al. 2009, p. 338). We therefore posited that the evaluation of exporting opportunities is characterized by entrepreneurs' engagement in intense cognitive and interpretative processes regarding contextual cues, for which they draw on their motivations and knowledge to construct mental representations of possible future exploitation of the evaluated opportunities (e.g., Autio et al. 2013; McMullen and Shepherd 2006; Tumasjan et al. 2013). Because the evaluation of international opportunities involves perceptual and interpretative processing of environmental and informational factors (Barreto 2012; Dimov 2007; Williams and Wood 2015), the mental models entrepreneurs adopt to analyze and evaluate information are pivotal (Johanson and Vahlne 2006; Miočević and Crnjak-Karanović 2011; Zahra et al. 2005). In the following, we present our hypotheses about the relevant factors characterizing these processes in the context of exporting.

Desirability and feasibility of exporting

Entrepreneurs collect, filter, categorize, and assess information from the environment (Krueger 2000) to evaluate whether available entrepreneurial opportunities represent a personally attractive—that is, personally desirable and feasible—action path (Autio et al. 2013; Haynie et al. 2009; McMullen and Shepherd 2006; Nowiński and Rialp 2016). In fact, given limited resources and capabilities, not all recognized international opportunities are considered feasible and desirable by entrepreneurs, thus not all recognized opportunities lead to internationalization (Oyson III and Whittaker 2015). In this regard, the cognitive processes underlying international opportunity evaluation are first-person, rather than third-person, assessments (Haynie et al. 2009; McMullen and Shepherd 2006) because they are based on entrepreneurs' own perceptions about the self, their organization, and the environment.

Entrepreneurship literature about the role of desirability and feasibility of entrepreneurial endeavors is well established regarding intentions (e.g., Fitzsimmons and Douglas 2011; Krueger 2000; Krueger et al. 2000) and opportunity-centered entrepreneurial processes (e.g., Autio et al. 2013; Haynie et al. 2009; Mitchell and Shepherd 2010; Tumasjan et al. 2013). Building on these studies, we theorized that entrepreneurs evaluate the attractiveness of exporting opportunities on the basis of their desirability (i.e., their valence) and their feasibility (i.e., their practicality; Stevenson and Jarillo 1990). A positive evaluation of the desirability and feasibility of exporting for subsequent market entry through exports (Muzychenko and Liesch 2015; Sommer and Haug 2011) depends on both entrepreneurs' desire and motivation, as well as on their abilities, resources, and knowledge when acting on opportunities (Zahra et al. 2005).

Because initiating an international entry is an uncertain process that can expose entrepreneurs to higher short-term growth potential but also to higher risk of failure (Sapienza et al. 2006), it might not be desirable to all entrepreneurs alike. The desirability of exporting is related to the perceived attractiveness of exporting opportunities in terms of the entrepreneur's expectations and beliefs about the personal value of the expected outcome, such as what is measured by the construct of attitudes (e.g., Fitzsimmons and Douglas 2011; Krueger et al. 2000). Attitudes are object-specific judgments and evaluations (Rohan 2000), and are key antecedents of behavior, either directly or through the mediation of other cognitive or emotional elements (for reviews, see Bagozzi 1992; Olson and Zanna 1993). In the field of international entrepreneurship, decision-makers' attitudes towards internationalization have been recognized as key to understanding the internationalization patterns of ventures (e.g., Calof and Beamish 1995; Madsen and Servais 1997; Sommer 2010), and are equated by some authors to the concept of "global mindset" (e.g., Arora et al. 2004, p. 396, 403; Harveston et al. 2000, p. 95). In light of these considerations, we hypothesized that:

Hypothesis 1: The stronger the entrepreneur's perceived desirability of exporting, the greater the perceived likelihood of exporting.

The feasibility of an entrepreneurial behavior has been linked to its perceived ease of realization and controllability due to the availability of skills, knowledge, or other resources found at a personal level or in the environment (Krueger 2000). Opportunity feasibility is linked to entrepreneurs' opportunity confidence (i.e., the evolving conviction that the entrepreneurs will be able to exploit an opportunity; Dimov 2010). We thus theorized that entrepreneurs' evaluations of opportunities regarding potential sales to international markets are driven by their confidence in their ability to export, confidence that is based on their perceptions of having adequate resources, abilities, or skills. These can include, for example, resources, abilities, and skills acquired from past international experience (e.g., Autio et al. 2000; Johanson and Vahlne 2006) or international networks (e.g., Ellis 2011; Kontinen and Ojala 2011; Nowiński and Rialp 2016). We hypothesized that:

Hypothesis 2: The stronger the entrepreneur's perceived feasibility of exporting, the greater the perceived likelihood of exporting.

The role of time

We investigated time as a key contextual factor that might influence the relationship between desirability and feasibility of exporting, and entrepreneurs' perceived likelihood of exporting. Time is a fundamental yet overlooked dimension in international entrepreneurship (Jones and Coviello 2005; Oviatt and McDougall 2005) and internationalization research (Hurmerinta-Peltomäki 2003; Welch and Paavilainen-Mäntymäki 2014). As summarized by Middleton and colleagues, "time enters internationalization studies explicitly" only rarely but remains implicit in describing internationalization as a process taking place in time (Middleton et al. 2011, p. 136). The literature has proposed several ways to conceptualize time, ranging from linear to cyclical (Hurmerinta-Peltomäki 2003), and based on subjective-objective characteristics (e.g., clock, organic, strategic, and spasmodic, Butler 1995).

We followed a conceptualization of time that allows the existence of objective, measurable time, as imaginable on a horizontal axis measuring time units (e.g., seconds, days, centuries; Hurmerinta et al. 2016), and thus where events can be objectively located as close vs. distant in time from the present (e.g., 1–2 months from now vs. 1 year from now, Tumasjan et al. 2013). Even while doing so, we acknowledged that entrepreneurs' decision-making and actions are based on their subjective considerations of individual and company past, present, and future experience and activities (e.g., Bird and West III 1998; Middleton et al. 2011).

Entrepreneurs who evaluate international opportunities must envision future opportunities situated in distant cultural, political, economic, and institutional environments, which are thus characterized by uncertainty (Mainela et al. 2014). Studies in international business commonly have used the concept of psychic distance as an explanatory factor of international market entry choices (e.g., Beckerman 1956; Johanson and Wiedersheim-Paul 1975; Dow and Karunaratna 2006). In line with recent developments aimed at understanding the "mind processing" of psychic distance; (Evans and Mavondo 2002, p. 516) and the decision makers' context-dependent perceptions, awareness, and understanding (Håkanson et al. 2016; Nebus and Chai 2014); we conjectured that time is a fundamental dimension in understanding the "mental traveling" required for entrepreneurs to evaluate exporting as an opportunity situated in the future.

In this paper, we drew on previous studies that have discussed the opportunity-related time pressure linked to narrow (vs. wide) windows of opportunities. Time pressure is a condition in which an individual internalizes feelings of stress due to the constraint of limited time allowed to complete a task (Ordonez and Benson 1997). Previous literature has consistently shown that time pressure impairs decision effectiveness, either because time constraints limit the amount of information and number of alternatives that the decision maker is able to consider, or because stress then impairs the cognitive processing ability of the decision-maker (e.g., Ahituv et al. 1998).

While opportunity expiration is often indeterminate in time (Janney and Dess 2004), entrepreneurs evaluating opportunities in the short run face a condition of time pressure, which does not allow them to increase their ability to manage the uncertainty surrounding the opportunity and can lead to suboptimal decision making (Perlow et al. 2002; Mitchell and Shepherd 2010). Narrow windows of opportunities thus rush entrepreneurs to assume a time perspective oriented to the present, and to consider

tasks which are more urgent (e.g., related to the current day-to-day business activities) rather than engage in future-oriented planning (Lévesque and Stephan 2020). Conversely, entrepreneurs perceiving wider windows of opportunities (i.e., opportunities located in the distant future) are placed in a situation of time affluence, which can de-emphasize the entrepreneur's focus on the present, while broadening her future perspective (Lévesque and Stephan 2020). Entrepreneurs perceiving wider windows of opportunities are more likely to perceive internationalization as both feasible and desirable, because in the long run they will be more able to pursue additional plans with respect to the activities that need to be fulfilled in the present. Applying these concepts, we proposed that:

Hypothesis 3a: The relationship between perceived desirability of exporting and perceived likelihood of exporting will be stronger in the distant future rather than in the near future.

Hypothesis 3b: The relationship between perceived feasibility of exporting and perceived likelihood of exporting will be stronger in the distant future rather than in the near future.

The role of immigrant status

Based on previous studies, we know that entrepreneurs experience and interpret future exporting opportunities based on their past experiences, current knowledge, and interpretations of the present contextual and situational factors (e.g., Hurmerinta-Peltomäki 2003; Middleton et al. 2011). We thus predicted that entrepreneurs' immigrant status is a relevant source of individual heterogeneity in the subjective interpretation of exporting opportunities located at different moments in the future.

Previous studies have shown that migration is a stressful life event for immigrant entrepreneurs, who might face integration challenges and barriers in the receiving context (Hormiga and Bolívar-Cruz 2014). At the same time, migration exposes foreign-born entrepreneurs to cross-cultural and cross-national experiences, which can impact their ability to recognize, recombine, and implement entrepreneurial opportunities across borders (Jiang et al. 2016; Smans et al. 2014; Vador and Franke 2016). In this regard, we proposed that immigrant and native entrepreneurs might develop different perceptions of the benefits and barriers of exporting either in the close or in the distant future.

As discussed in the previous section, we maintained that for both immigrant and native entrepreneurs, perceptions of the likelihood of exporting would be higher when entrepreneurs face larger windows of opportunity (i.e., evaluate international opportunities in the distant future). However, we added that immigrant status might influence this relationship, so that immigrant and native entrepreneurs could attribute different degrees of importance to either desirability or feasibility aspects when evaluating international opportunities in the near or in the distant future. In particular, we reasoned that (all else equal) immigrant entrepreneurs are at a disadvantage compared with native entrepreneurs in establishing the base for their exporting activities in their host country, due to challenges in terms of language, difficulties in understanding business regulations, and accessing governmental assistance or financial capital (Ashourizadeh et al.

2020). For this group of entrepreneurs, exporting is conditional on their assimilation within host country's institutions (e.g., Ashourizadeh et al. 2020; Beckers and Blumberg 2013) and therefore, in the long-term, the desirability of exporting opportunities is the key factor that needs to be established to increase the perceived likelihood of exporting. Similarly, we reasoned that (all else equal) native entrepreneurs are at an advantage compared with immigrant entrepreneurs regarding acculturation to the host country, but at a disadvantage with respect to international experience and international social capital (e.g., Sui et al. 2015). We thus advanced the hypothesis that native entrepreneurs would maintain stronger perceptions of exporting feasibility than immigrant entrepreneurs in the distant future. In sum, we hypothesize that:

Hypothesis 4a: The relationship between perceived desirability of exporting and perceived likelihood of exporting will be stronger, in the distant future, for immigrant entrepreneurs than for native entrepreneurs.

Hypothesis 4b: The relationship between perceived feasibility of exporting and perceived likelihood of exporting will be stronger, in the distant future, for native entrepreneurs than for immigrant entrepreneurs.

Method

Research design

Given that our research investigates relationships characterized by individual-level perceptions and evaluations, we designed an ad-hoc primary data collection process through structured interviews. Our sampling strategy was based on a set of considerations about entrepreneurs and companies which we believed represented an interesting and suitable context for investigating the hypothesized relationships. Similarly to previous studies, we selected entrepreneurs in new technology-based firms (NTBF; e.g., Colombo et al. 2004)¹, because these companies generally are more interested in internationalization as a means for growth (Coviello and Jones 2004; Saxenian 2002), are key for economic development, and increasingly are employing skilled immigrant entrepreneurs (Hart and Acs 2011). We selected companies located in one single region (Emilia-Romagna) in Northern Italy. This region is interesting because its production system is characterized by small and medium-sized enterprises (SMEs) active in innovative industries (Fini et al. 2012) and because it has one of the largest populations of immigrant entrepreneurs in Italy (Emilia-Romagna 2013; IDOS 2013). As pointed out by previous studies, focusing on a specific regional context ensures a high level of internal validity by controlling for the normative environment, contextual munificence, and entrepreneurial opportunities (Autio 1997; Fini et al. 2012).

Given the comparative design of the study in terms of immigrant and native entrepreneurs, we adopted a matched-pair design, which is appropriate for analyzing

¹ NTBFs are defined according to the OECD definition of "technology intensive" industries ranked according to their average R&D intensity. NTBFs can belong to "High-Tech" (R&D intensity above 8.5%) or "Medium-Tech" (R&D intensity between 3.5% and 8.5%) industries (Almus and Nerlinger 1999). For detailed information on the industries selected for our study, see Table A1.

why similar participants have different outcomes (for a similar approach, Chaganti et al. 2008; Schnatterly 2003). The population was identified using the business registers managed at a national level by the Chamber of Commerce system (Unioncamere). We carried out our sampling and data collection in two steps. The first step concerned the selection of firms owned and managed by immigrant entrepreneurs. We obtained a list of firms with at least one foreign-born owner, active in the selected sectors, and founded between 2000 and 2011 ($n = 560$). From this list, we excluded non-independent firms, firms in the process of closing,² and firms for which no online, telephone, and e-mail contact could be found³ ($n = 284$). We then contacted the available companies ($n = 276$) via telephone or e-mail. Given our interest in investigating the perceptions of entrepreneurs in the pre-internationalization stage, we excluded those who already were conducting international activities ($n = 60$). We invited 216 firms to have an in-depth face-to-face interview (the structure of the interview is described later in this section), obtaining a response rate of 32.9% ($n = 71$). During the interviews, we obtained insights regarding the entrepreneurs' biographies and, in particular, about their immigration stories. Because a key issue that emerged was that some entrepreneurs were born abroad due to chance (for example, born to Italian parents temporarily expatriated or assigned abroad for family or work reasons), we included in this study only those foreign-born individuals who met at least one of the following criteria: (a) having at least one foreign-born parent (Arora et al. 2004; Ndofor and Priem 2011); (b) having migrated out of their country of origin at age greater or equal to 10 (that is, after the completion of elementary school; Rusinovic 2008); (c) having a foreign nationality at the time of the interview (Cerdin et al. 2014). Each criterion allowed us to identify foreign-born entrepreneurs who had been exposed to a foreign culture for a significant period of time ($n = 54$) (for an overview of the process, see Table A2).

In the second step of the data collection, we matched these firms with firms owned by native Italian entrepreneurs. Matched-pair samples should be matched with regard to variables that have a strong correlation with the dependent variable to control for extraneous variables and to reduce the error term (Kerlinger and Lee 2000). Based on the literature and the available information, we identified three specific factors that could influence the likelihood of internationalizing: the firm's specific activity (i.e., the good/service produced), the age of the firm, and the age of the entrepreneur. Using the business registers held by the Chamber of Commerce, we matched each foreign-born-owned firm with a native-Italian-owned one with the following characteristics: same industry and activity, year of establishment, age of entrepreneur. Because it was not possible to find a matched-pair for two of the foreign-born-owned companies following these criteria, for our sample, we limited the number of native Italian-owned firms we interviewed firms to 54 (response rate: 49%). The total sample included 108 entrepreneurs and firms.

Primary data were collected during the first 6 months in 2012 by the first author. Data collection entailed face-to-face interviews with the entrepreneurs, mainly on their firms' premises, using an Italian-language structured questionnaire. We decided to

² We retrieved this information from the Telemaco dataset - <https://telemaco.infocamere.it/>.

³ To search for companies' contacts, we used Google, company directories, and individual telephone directories.

carry out face-to-face interviews with our respondents for two reasons. First, we were unable to determine a priori the level of Italian language proficiency in the foreign-born sampled group. Although, ex-post, the level of Italian language fluency displayed by immigrant entrepreneurs during the interviews was high, conducting personal interviews allowed entrepreneurs to comprehend the questions better and allowed us to obtain additional insights regarding our research interests through discussion. Second, we preferred that entrepreneurs discuss their evaluations of potential international opportunities in their natural setting (McMullen and Shepherd 2006).

Following our experimental design, respondents were randomly assigned to the evaluation of questions involving a priming with a potential export opportunity either in the short or in the distant future, as further explained in the section about the measurement of variables. We carefully developed a questionnaire designed to reduce potential sources of common method bias (e.g., obtaining measures from different sources; avoiding asking the respondents to provide retrospective accounts of tested variables; separating the measurement of prediction and criterion variables; using reverse-coded and negatively worded items; Podsakoff et al. 2003), which we pre-tested on a panel of 10 academics and entrepreneurs not involved in the study, in order to obtain feedback on completeness, clarity, and wording. The questionnaire covered a wide range of firm-level and individual-level information. When possible, we collected secondary data on the entrepreneurs and companies (for example, entrepreneurs' curricula vitae and companies' financial statements). All interviewees were owner-managers within the sample companies (i.e., decision-makers about potential international entry). On average, each interview lasted 1.5 h, for a total of more than 160 h of personal contact with entrepreneurs.

Non-response bias was assessed by comparing respondent and non-respondent firms (i.e., companies not interested in participating in the survey) on several variables available through the business registers: namely, age of the firm, industry, legal form, province, equity capital, and age of the entrepreneurs. No significant differences were found between the two groups of firms, with the exception of firm age (mean year of establishment: respondent firms = 2006.27; non-respondent firms = 2005.23; mean difference $p = .038$). However, because the difference between non-responding and responding firms was negligible (i.e., a 1 year difference), we concluded that non-response bias is not an issue in our sample.

Sample description

The 108 firms were active in the production of software and supply of services in informatics (32.4%); production of machineries (27.8%); production of electrical equipment (10.2%); information and communication technology services (9.3%); and production of computers, electronic, electro-medical, and measurement equipment (8.3%). The firms' localization substantially mirrored that of the industrial activities in the region (Table A3). In line with our research design, our sample was composed of young, micro or small firms, presenting small and flat organizations. On average, they had been founded by two partners (standard deviation = $SD = 1.77$) and were 5.7 years old at the time of the interview ($SD = 3.78$). The total available capital (that is, capital raised from personal or external funding) was on average €41,164 ($SD = 91,183$). The yearly sales revenues (t-1) was €561,466 ($SD = 1,713,783$), and they employed around

4 people ($SD = 8,10$). Some (14.8%, $SD = 0.36$) had experienced some form of international business in the past.

The entrepreneurs in the sample were mainly males (77%, $SD = 0.42$) and, on average, 41.1 years old ($SD = 8.56$). On average, the interviewed entrepreneurs had a high degree of education (15 years, corresponding to a completed secondary degree and some years of post-secondary education; $SD = 3.33$). They had worked, on average, for 12.55 years ($SD = 7.92$) before opening the present firm, of which 2.77 years they had worked specifically as entrepreneurs ($SD = 5.13$). Some (23%) of the sample owned at least one other firm ($SD = 0.42$). With regard to international experience, nearly half (46.3%) of the entrepreneurs reported previous work experience within a firm that was engaged in international activities (e.g., export, import, or FDIs; $SD = 0.50$) and nearly all (94.4%) had traveled internationally at least once in their lives for any reason (e.g., tourism, study, work; $SD = 0.23$). The immigrant entrepreneurs in the sample came from 26 countries, representing a fragmented variety of countries of origin (Table 1), but mostly (68.5%) from emerging and developing economies (i.e., non-OECD

Table 1 Immigrant entrepreneurs' countries of origin

Country	N	%
Albania	5	9.27%
Argentina	6	11.11%
Belgium	2	3.70%
Bolivia	1	1.85%
Brazil	1	1.85%
Cameroun	1	1.85%
Czech Republic	1	1.85%
China	1	1.85%
Colombia	1	1.85%
France	5	9.27%
Germany	2	3.70%
Greece	1	1.85%
Ivory Coast	1	1.85%
Libya	1	1.85%
Moldova	2	3.70%
Morocco	6	11.11%
Pakistan	2	3.70%
Peru	1	1.85%
Poland	3	5.57%
Rumania	1	1.85%
Russia	2	3.70%
Sweden	1	1.85%
Taiwan	1	1.85%
Tunisia	1	1.85%
United Kingdom	3	5.57%
USA	2	3.70%
Total	54	100.00%

countries). On average, they migrated to Italy when they were 19 years old ($SD = 10.38$). The majority of them completed their studies in their home countries (51.5%). A total of 48.1% had worked in their country of origin, but generally only for a short time.

We carried out a comparative analysis between several key characteristics of immigrant and native entrepreneurs and their firms and found no significant differences (see Table 2 and Table 3). Overall, these descriptive statistics confirmed that our matching-pair strategy was highly effective in locating highly similar pairs of immigrant and native entrepreneurs.

Variables and measures

Dependent variable Our dependent variable was the *perceived likelihood of exporting*. In line with previous studies on internationalization behaviors for immigrant-owned firms (e.g., Neville et al. 2014; Sui et al. 2015), we approached internationalization in the form of exporting and asked entrepreneurs to evaluate the likelihood of exporting at least 10% of their annual turnover (Ditchl et al. 1990). Specifically, following Krueger et al. (2000), we asked them to estimate the probability that the firm would start exporting at least 10% of the annual sales revenues (scale 0%–100%) in one of the two temporal experimental conditions that we explain below.

Independent variables We measured *perceived desirability* of exporting as attitudes towards exporting in one of two temporal experimental conditions. We used a 5-item measure of attitudes measured on a 7-point Likert scale, referring to instrumental (i.e., useful-useless; wise-unwise), experiential (i.e., enjoyable-unenjoyable; pleasant-unpleasant), and overall evaluative (positive-negative) evaluation of exporting at least 10% of the annual turnover, as suggested by Ajzen (1991, 2002). The Cronbach alpha (α) was 0.94.

We measured *perceived feasibility* of exporting through a measure of perceived behavioral control, which was derived in part from self-efficacy (Bandura 1997), i.e.,

Table 2 Respondents' characteristics: immigrant vs. native entrepreneurs

	Natives			Immigrants			Mean difference <i>p</i> value
	N	Mean	SD	N	Mean	SD	
Male	54	.81	.39	54	.72	.45	.258
Age	54	41.59	8.26	54	40.70	8.91	.592
Years of education	54	14.44	3.46	54	15.39	3.16	.142
Years of work experience	54	12.81	8.97	54	12.29	6.77	.729
Years of work in Italy	54	12.81	8.97	54	9.72	7.00	.048
Portfolio entrepren.	54	.18	.39	54	.28	.45	.258
Years abroad ^a	54	1.62	3.61	54	1.69	3.37	.911
Foreign language	54	.91	.29	54	.98	.14	.096

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

Table 3 Firms' characteristics: immigrant- vs. native-owned firms

	Native-owned			Immigrant-owned			Mean difference <i>p</i> value
	N	Mean	SD	N	Mean	SD	
Age of the firm	54	6.12	3.67	54	5.33	3.85	.273
Sales revenues 2011 ^a	54	835,074.80	2,314,731	51	271,763.70	71,832.27	.092
N. of employees 2011	54	4.24	9.62	54	3.54	6.28	.654
N. of partners 2011	54	2.24	1.54	54	2.53	1.97	.387
Total capital	54	33,611.11	44,771.19	54	48,716.89	121,099.30	.392
Previous internationaliz.	54	.19	.39	54	.11	.32	.283

^a Information retrieved from the income statements deposited at the Chamber of Commerce, which are not available for unlimited liability companies ($n = 3$)

the subject's perception of self/group ability to perform a certain behavior (Krueger 2000); and in part from the controllability of the behavior, i.e., the extent to which the performance of the behavior is or is not determined by the subject or their group (Ajzen 1991). Specifically, the variable was measured with a three-item, 7-point Likert scale regarding entrepreneurs' perceived control over exporting at least 10% of the annual turnover. The items were adapted from items proposed by Ajzen (2002) and were worded as follows: "How much control do you perceive as having over exporting?"; "How difficult would it be for you and your company to export?" and "How much of the export decision depend only on you as entrepreneur?". The alpha (α) was 0.75.

As detailed in the research design section, in our study we defined *immigrant entrepreneur* a foreign-born individual who had been exposed to their culture of origin for a significant period of time and started-managed a business in the host country.

Moderator variable We tested how *time* moderates the relationship between the desirability and feasibility of exporting, and the perceived likelihood of exporting, through an experimental manipulation. Each respondent (foreign-born and the native matched-pair) was randomly assigned to a condition of either short time (1–2 months) or long time (1 year; Tumasjan et al. 2013) for the evaluation of the likelihood of engaging in international entry by exporting at least 10% of annual turnover. As a manipulation check, our questionnaire included a question that asked participants to evaluate the extent to which the assigned temporal condition for exporting (i.e., 1–2 months or 1 year) was perceived as near or distant in time for them and their firm, measured on a scale from 1 (very close) to 5 (very distant). We conducted a *t-test* between the two experimental groups and confirmed that the participants assigned to the condition of short time perceived it as very close (mean = 1.11), differently from the ones assigned to the condition of long time, which perceived it as distant (mean = 4.34, $p < 0.001$).

Control variables The literature shows that the evaluation of opportunities is influenced by previous experience (Baron and Ensley 2006; Chandra et al. 2009; Haynie et al. 2009; Mitchell and Shepherd 2010). We thus included several control variables to

account for previous internationalization and entrepreneurial experience, at both individual and firm level. With regard to international experience, we controlled for the number of years that the entrepreneurs spent abroad for any reason (travel, study, work), excluding living and travels in the country of origin for immigrants (e.g., Takeuchi et al. 2005), and whether the firm experienced any international activity in the past (dummy variable being 1 if yes, 0 otherwise; e.g., Zahra et al. 2000). With regard to entrepreneurial experience, we controlled for whether the entrepreneurs came from an entrepreneurial family background (dummy variable being 1 if yes, 0 otherwise; e.g., Westhead et al. 2001). In addition, accounting for general experience, we controlled for the age of both the entrepreneurs and the firm (e.g., Andersson et al. 2004). Several studies have explored stimuli for entering international markets, and we followed them in adding controls regarding the perceived structure of local (vs. international) competition in the firm's field of activity (percentage of competitors localized in the same region; Oviatt and McDougall 2005). As a measure of performance and resources available to the company, we controlled for firm size (sales revenues; Bonaccorsi 1992). Lastly, we accounted for firms' industries by using a dummy variable (being 1 for firms in high-tech industries and 0 for firms in medium-tech industries).

Descriptive statistics and pairwise correlations of all variables are reported in Table 4.

Empirical model

We analyze the hypothesized about the relationship between desirability, feasibility, and time on likelihood of exporting using OLS regressions. Comparisons between coefficients of relevant variables between immigrant and native entrepreneurs were carried out through a split-sample test approach (Chow 1960).

Results

The results for the empirical estimations are presented in Table 5. We entered the variables in four steps: Model 1 included the control variables; Model 2 included the main effects of perceived feasibility and perceived desirability; Models 3 and 4 added the moderating effects of temporal distance on perceived desirability and feasibility respectively; Model 5 displayed the full model including all variables. The same models were run for the full sample and for the two split samples of immigrant (Models 1mig, 2mig, 3mig, 4mig, 5mig) and native (Models 1nat, 2nat, 3nat, 4nat, 5nat) entrepreneurs.

In light of these results, we discuss our hypotheses. Hypothesis 1 predicted a positive relationship between entrepreneurs' perceived desirability of exporting and the perceived likelihood of exporting. This hypothesis was supported, albeit marginally, by Model 2 ($\beta = .05, p < .10$). Similarly, Hypothesis 2 predicted a positive relationship between entrepreneurs' perceived feasibility of exporting and the perceived likelihood of exporting, and found strong support as shown in Model 2 ($\beta = .02, p < .001$). Our results also show that the moderating variable of time is significant:

Table 4 Descriptive statistics and pairwise correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Perceived likelihood of export	0.19	0.26	1.000									
2 Entrepreneur age	41.15	8.56	0.0209	1.000								
3 Years abroad	1.65	3.46	0.3518*	0.2616*	1.000							
4 Entrepreneurial family	0.42	0.50	-0.1432	0.0509	0.0986	1.000						
5 Firm age	5.73	3.77	-0.2048*	0.2091*	-0.0557	-0.1082	1.000					
6 Firm local competition	60.54	37.17	-0.1564	-0.1450	-0.1264	0.1462	0.0424	1.000				
7 Firm previous internationalization	0.14	0.36	0.0503	0.2374*	0.2271*	0.1152	0.0855	0.0107	1.000			
8 Sales revenues (ln) (t-1)	11.07	3.35	0.0892	0.0946	0.0106	0.1653	0.3453*	0.1573	0.1161	1.000		
9 Time	0.5	0.5	0.2352*	-0.0043	0.2643*	0.0749	-0.0074	0.0853	0.0521	0.0881	1.000	
10 Perceived desirability	5.194	1.80	0.3505*	0.0927	0.2140*	-0.0545	0.0927	-0.2553*	0.1952*	-0.1262	0.0361	1.000
11 Perceived feasibility	2.96	1.64	0.4506*	0.2055*	0.2324*	0.0762	0.0505	-0.0516	0.2076*	0.1755	0.1396	0.3534*

N = 108

*p < 0.05

Table 5 Results from OLS estimations

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1mig	Model 2mig	Model 3mig	Model 4mig	Model 5mig	Model 1nat	Model 2nat	Model 3nat	Model 4nat	Model 5nat
Entrepreneur age	-0.00 (0.003)	-0.00 (0.003)	-0.00 (0.003)	-0.00 (0.003)	-0.00 (0.003)	-0.00 (0.004)	-0.00 (0.003)	-0.00 (0.003)	-0.00 (0.004)	-0.00 (0.003)	-0.00 (0.005)	-0.00 (0.005)	-0.01 (0.005)	-0.00 (0.004)	-0.00 (0.004)
Years abroad	0.02** (0.007)	0.02** (0.007)	0.02* (0.006)	0.01* (0.007)	0.01* (0.006)	0.02 (0.011)	0.01 (0.010)	0.01 (0.009)	0.01 (0.010)	0.01 (0.009)	0.03* (0.012)	0.02* (0.011)	0.02* (0.011)	0.02 (0.010)	0.02 (0.010)
Entrepreneurial family	-0.13** (0.048)	-0.13** (0.043)	-0.13** (0.042)	-0.13** (0.042)	-0.13** (0.041)	-0.08 (0.067)	-0.16* (0.065)	-0.18** (0.063)	-0.16* (0.066)	-0.19** (0.063)	-0.17* (0.082)	-0.09 (0.078)	-0.09 (0.078)	-0.08 (0.072)	-0.09 (0.073)
Firm age	-0.02** (0.007)	-0.02** (0.006)	-0.02** (0.006)	-0.02** (0.006)	-0.02** (0.006)	-0.02* (0.009)	-0.03** (0.009)	-0.03** (0.008)	-0.03** (0.009)	-0.03** (0.008)	-0.02 (0.011)	-0.01 (0.010)	-0.01 (0.010)	-0.01 (0.010)	-0.01 (0.010)
Firm local competition	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)
Firm previous international.	-0.00 (0.067)	-0.06 (0.061)	-0.06 (0.060)	-0.04 (0.060)	-0.04 (0.060)	-0.02 (0.100)	-0.11 (0.095)	-0.13 (0.090)	-0.11 (0.098)	-0.15 (0.094)	0.00 (0.102)	-0.03 (0.094)	-0.02 (0.093)	0.00 (0.087)	0.00 (0.088)
Sales revenues (ln) (t-1)	0.02* (0.008)	0.02* (0.007)	0.01* (0.007)	0.02* (0.007)	0.02* (0.007)	0.01 (0.009)	0.02* (0.008)	0.02* (0.007)	0.02* (0.008)	0.02* (0.008)	0.03# (0.018)	0.01 (0.017)	0.01 (0.017)	0.01 (0.016)	0.02 (0.017)
High-tech	-0.05 (0.050)	-0.06 (0.045)	-0.07 (0.044)	-0.06 (0.044)	-0.06 (0.044)	-0.05 (0.074)	-0.07 (0.066)	-0.08 (0.063)	-0.07 (0.067)	-0.09 (0.063)	-0.02 (0.080)	-0.04 (0.073)	-0.05 (0.073)	-0.03 (0.067)	-0.03 (0.069)
Time	0.08# (0.047)	0.06 (0.042)	-0.20 (0.121)	-0.11 (0.083)	-0.25* (0.124)	0.08 (0.064)	0.06 (0.059)	-0.35# (0.176)	0.06 (0.121)	-0.30 (0.183)	0.09 (0.076)	0.06 (0.069)	-0.15 (0.192)	-0.28* (0.132)	-0.25 (0.184)
Perceived desirability (Des)	0.02# (0.001)	0.00 (0.001)	0.00 (0.001)	0.03* (0.001)	0.01 (0.001)	0.02 (0.001)	0.02 (0.001)	-0.01 (0.001)	0.02 (0.001)	-0.02 (0.001)	0.03 (0.001)	0.03 (0.001)	0.00 (0.001)	0.02 (0.001)	0.03 (0.001)

Table 5 (continued)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1mig	Model 2mig	Model 3mig	Model 4mig	Model 5mig	Model 1nat	Model 2nat	Model 3nat	Model 4nat	Model 5nat
Perceived feasibility (Feas)	(0.013)	(0.016)	(0.012)	(0.017)	(0.020)	(0.022)	(0.020)	(0.022)	(0.020)	(0.023)	(0.021)	(0.028)	(0.028)	(0.019)	(0.028)
	0.05***	0.06***	0.02	0.03	0.07***	0.07***	0.07***	0.07**	0.07*	0.10***	0.06*	0.06*	0.06*	0.01	0.01
Des*Time	(0.014)	(0.014)	(0.019)	(0.020)	(0.022)	(0.021)	(0.022)	(0.021)	(0.035)	(0.034)	(0.024)	(0.024)	(0.024)	(0.028)	(0.031)
	0.05*	0.05*	0.06*	0.04	0.08*	0.08*	0.08*	0.08*	0.09*	0.09*	0.04	0.04	0.04	0.11**	-0.01
Feas*Time	(0.023)	(0.023)	(0.025)	(0.027)	(0.024)	(0.032)	(0.023)	(0.032)	-0.00	(0.034)	(0.037)	(0.037)	(0.037)	0.11**	0.11*
					0.05#				(0.041)	(0.040)				(0.037)	(0.043)
Constant	0.22	0.02	0.20	0.07	0.18	0.21	0.06	0.24	0.06	0.25	0.10	-0.03	0.18	0.12	0.09
	(0.149)	(0.151)	(0.167)	(0.149)	(0.165)	(0.199)	(0.208)	(0.211)	(0.211)	(0.211)	(0.278)	(0.273)	(0.324)	(0.255)	(0.305)
Observations	108	108	108	108	108	54	54	54	54	54	54	54	54	54	54
R-squared	0.28	0.44	0.47	0.48	0.49	0.24	0.42	0.49	0.42	0.50	0.35	0.49	0.51	0.58	0.58

Standard errors in parentheses

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, # $p < 0.10$

temporal distance from the opportunity increased entrepreneurs' evaluations of the likelihood of exporting ($\beta = .08, p < .10$), in line with previous studies that have shown that wider windows of entrepreneurial opportunities—characterized by low time pressures and increased ability to manage uncertainty—have a positive effect on the likelihood that decision-makers will invest in the opportunity (e.g., Mitchell and Shepherd 2010). Hypothesis 3a predicted a stronger influence of the perceived desirability of exporting in the distant future, which was not supported by results ($\beta = .05, p < .05$), shown in Model 3. Hypothesis 3b predicted a stronger influence of the perceived feasibility of exporting in the distant future, and we found a significant positive interaction effect ($\beta = .06, p < .05$), as shown in Model 4.

Hypotheses 4a and 4b proposed a comparison between immigrant and native entrepreneurs with regard to the role of perceived feasibility and desirability in the distant (vs. the near) future. We carried out a split-sample test to check whether the significant main effects regression coefficients of the two groups were equal. While we found no support for Hypothesis 4a, we reject equality of coefficients for the interaction term between perceived feasibility of export and time, providing support to Hypothesis 4b.

Robustness checks

As a robustness check, given that the dependent variable was measured as a percentage, we ran the same models presented above by using a fractional logit model (Papke and Wooldridge 1996). The results confirm the findings (Table A4); however, it has to be noted that the coefficients of the moderating effects are more complicated to be interpreted due to the non-linear nature of this model (Bowen 2012).

As an additional analysis, we investigated the effects of considering the country of origin of immigrant entrepreneurs in our regressions. We created the dummy variable *non-OECD*, being 1 if the immigrant was born in a non-OECD country, and 0 otherwise. This variable was highly correlated to the variable defining the *immigrant entrepreneur* ($r = .75$). Using this variable as a control in our regressions did not change the results presented above (results available upon request). In addition, no statistical difference in coefficients were found through split-sample analyses of non-OECD and OECD entrepreneurs, possibly because of lack of power due to the small size of the considered sample ($n = 54$). We discuss how these limitations can offer opportunities for further research.

Discussion and conclusion

Despite increasing scholarly interest in the domain of immigrant entrepreneurship, whether and under what conditions immigrant entrepreneurs develop different perceptions of opportunities to enter foreign markets, which to date remains a neglected area of empirical research (e.g., Bolzani and Boari 2018; Elo and Minto-Coy 2018). In this paper, we specifically aimed at understanding what factors influence immigrant and native entrepreneurs' evaluations of the future likelihood of exporting in the pre-internationalization phase.

To shed light on this issue, we took an individual-level, psychology-informed stance to exporting opportunity evaluation by entrepreneurs. Drawing on established literature about entrepreneurial intentions (Krueger 2000; Krueger et al. 2000) and opportunity-based entrepreneurial processes (e.g., Autio et al. 2013; Haynie et al. 2009; Tumasjan et al. 2013), we presented a theoretical and empirical account of the factors that influence how entrepreneurs evaluate the likelihood of exporting, keeping into account the impact of time, and examined how these evaluations differ between immigrant and native entrepreneurs. We theorized and supported that the likelihood of exporting was evaluated by entrepreneurs based on their perceptions of feasibility and desirability of exporting opportunities (cf. Stevenson and Jarillo 1990). In addition, we hypothesized that these main antecedents had different effects depending on the temporal context for exporting, and according to the entrepreneurs' immigrant status. Our findings show that perceived feasibility of exporting has a stronger effect on the perceived likelihood of exporting in the distant future (i.e., when entrepreneurs face wider windows of opportunities). We qualified this moderation effect by adding that feasibility has a greater influence on the perceived likelihood of exporting in the distant future for native than for immigrant entrepreneurs. This study makes several contributions to theory and practice. From a scholarly perspective, it contributes to entrepreneurship literature in several ways. First, it adds to scant knowledge on the evaluation of entrepreneurial opportunities (Grégoire et al. 2015; Wood and McKelvie 2015) by showing the relevance of individual characteristics such as the entrepreneur's immigrant status (Aliaga-Isla and Rialp 2013; Bolívar-Cruz et al. 2014; Kloosterman 2010; Vantor and Franke 2016), and by providing insights into the role of time as a contextual factor that influences entrepreneurs' cognitive processes (e.g., Tumasjan et al. 2013; Lévesque and Stephan 2020). Second, it provides insights into often overlooked pre-entry entrepreneurial situations (e.g., Autio et al. 2013). Given that opportunity evaluation precedes entrepreneurial actions (McMullen and Shepherd 2006; Wood and Williams 2014), examining how evaluations of internationalization are formed helps us better understand decision-making processes, which, in turn, facilitates the design of effective interventions (Krueger 2000).

This paper also contributes to the literature on immigrant entrepreneurship, moving beyond previous studies which focused on the human or social resources lacked or possessed by immigrant entrepreneurs with respect to native ones. Looking to the psychological mechanisms in international opportunity evaluation, it shows important contextual factors – such as time – as one important dimension which can influence these processes (e.g., Bolívar-Cruz et al. 2014; Sundararajan and Sundararajan 2015; Kushnirovich et al. 2018).

This work provides a meaningful contribution to the field of international entrepreneurship. In fact, this paper provides an account of whether entrepreneurs' heterogeneity, such as their immigrant status, has an influence on their evaluations of internationalization opportunities. We thus move beyond previous studies on the international outcomes of immigrant entrepreneurs by highlighting the cognitive dimension underlying their evaluations of international opportunities rather than only focusing on their social networks and international experience (e.g., Chen and Tan 2009; Mustafa and Chen 2010). Thanks to this approach, this paper answers the call for more research on the psychological dimension of international entrepreneurship (e.g., Coviello 2015; Zahra et al. 2005). By showing that perceived desirability and feasibility of exporting

are key cognitive elements driving entrepreneurs' evaluations of their likelihood of exporting, we extend previous research that has found desirability and feasibility are key to internationalization intentions (e.g., Sommer 2010), thus shedding light on the antecedents of the "internationalization event" (Jones and Coviello 2005). In addition, we illuminate the importance of time as a moderator in international decision-making processes (Jones and Coviello 2005; Oviatt and McDougall 2005; Hurmerinta-Peltomäki 2003).

Finally, this study contributes to the international business literature. First, it proposes a psychology-informed view in analyzing heterogeneity in individual-level decision-making processes with regard to opportunities (Williams and Wood 2015; Hennart and Slangen 2015). In this way, it responds to calls for studying what happens before international entry (Brouthers and Nakos 2004; Buckley et al. 2011; Tan et al. 2007). In addition, by studying the moderation effect of time on the evaluation of international opportunities, it can provide insights about decision makers' perceptions of distance (Nebus and Chai 2014).

Our research findings are of interest for managers, entrepreneurs, and other actors who interact with them, such as consultants, advisors, suppliers, investors, bankers, and employees. These subjects can benefit from a better understanding of how future international entrepreneurial opportunities are mentally construed depending on the immigrant status of the entrepreneur and on the temporal distance of the opportunities. Thanks to this better understanding, they may anticipate more effectively how different entrepreneurs evaluate prospective opportunities to internationalize, assessing to what extent entrepreneurs consider practical elements (feasibility) or valence considerations (desirability), and implement more effectively and quickly forms of ad-hoc support or advice to entrepreneurs.

From a policy perspective, both the promotion of exports among micro and small innovative firms, and the support to immigrant entrepreneurs are of primary interest for economic development (e.g., European Union 2010; OECD 2019; United Nations 2018). Immigrant entrepreneurs are increasingly seen as *primus motor* for the development of their countries of origin, for instance by sustaining exporting, investments, technology transfer, and development of skills, but at the same time maintaining and developing ties with the host country (e.g., United Nations 2018). Because efficient internationalization policies need to target those entrepreneurs with greater internationalization potential (Wright et al. 2007), it is important to identify what factors influence entrepreneurs' evaluations of exporting opportunities and under what conditions entrepreneurs evaluate exporting as more likely. This study informs policymakers, who, in order to support exporting intentions, have to promote perceptions of both feasibility—such as the development of skills and resources to start and sustain exports (e.g., international networks, cooperative arrangements, availability of qualified personnel, training)—and desirability—such as promoting values and role models conducive to international activities, and attaching utilitarian or emotional benefits to internationalization. However, this study suggests that policies should be modelled in such a way to account for the effects of entrepreneurs' individual

characteristics, namely immigrant status, as a condition determining heterogeneous perceptions of opportunities; and contextual characteristics, namely time as a form of distance influencing entrepreneurs' evaluations. This holds important implications for policymaking both aiming at sustaining economic development in the immigrant entrepreneurs' countries of origin, especially in developing or emerging countries, and in the countries of residence.

This study presents some limitations. First, on a methodological side, data were collected with a specific sampling strategy that grants the internal consistency of results but does not make them immediately generalizable to a larger population. In addition, the cross-sectional design employed in the study does not allow for establishing arguments for causality, although our proposed analytical framework rests on a solid theoretical background. We thus invite future studies to replicate our results in different contexts and with larger samples, possibly following a longitudinal design from the pre-internationalization stage to international entry and growth. Second, due to the variety of immigrant entrepreneurs' countries of origin in our study and the limited sample size, we are not able to provide a fine-grained understanding about the impact of country- or culture-specific patterns of exporting opportunity evaluation. We therefore invite additional studies to specifically investigate the relevance of the country of origin (e.g., emerging vs. non-emerging economies) in influencing decision-making in international entrepreneurship. In addition, we invite to approach this issue through a multi-level approach, for instance considering individual, firm-, and other contextual-level elements which might influence this relationship (e.g., comparing perceptions by different groups of immigrant entrepreneurs and local entrepreneurs; or internationally experienced vs. non-experienced entrepreneurs); and multi-sited approach, for instance considering the complexities of transnational personal and firm arrangements by immigrant entrepreneurs (e.g., Bolzani et al. 2020). Finally, although we investigated time and tried to adopt a time-conscious research approach (Hurmerinta-Peltomäki 2003), this paper is not able to offer a true processual approach to decision-making regarding exporting, but rather adopts a "variance" approach (Welch and Paavilainen-Mäntymäki 2014) focusing on the perceived likelihood of exporting as an outcome variable in the pre-internationalization stage. We therefore invite future studies to adopt explicitly time-conscious research designs, which can further advance our knowledge of immigrant entrepreneurship (e.g., Lévesque and Stephan 2020).

Notwithstanding these limits, we think that this work is theoretically relevant—advancing our understanding of exporting decision-making for immigrant and non-immigrant entrepreneurs—and practically valuable—by pointing out which elements could be stimulated by policymakers to support exporting for different entrepreneurs.

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Appendices

Table A1 Industries investigated

Extended description of activity	Summary description
Production of pharmaceuticals	High-Tech
Production of computers, electronic and optical products; electro-medical equipments, measurement equipments and watches	High-Tech
Production of electrical equipments and non-electrical equipments for domestic purposes	High-Tech
Production of machineries	Medium-Tech
Production of transport devices and machines	Medium-Tech
Production of medical and dental instruments and supplies	High-Tech
Installing of electrical and electronical plants and equipments	High-Tech
Production of software, informatics consultancy and connected activities	High-Tech
ICT services and other informatics services	High-Tech

Table A2 Summary of the sample selection process for immigrant-owned firms

1) Full population established by at least a foreign-born partner in high-tech and machinery sector, period 2000–2011	n = 560
2) Non-independent companies to be excluded	n = 53
3) Firms starting a failure process to be excluded	n = 37
Subtotal A) Independent active firms	n = 470
4) Companies with no contact to be excluded	n = 194 (*)
5) Companies already active on international markets to be excluded	n = 60
Subtotal B) Independent, active, non-international companies to be included	n = 216
6) Companies not reachable through any contact (4 rounds of contacts)	n = 69
7) Companies where the foreign-born partner is not active	n = 7
8) Companies not interested in the project	n = 65
Subtotal C) Independent, active, non-international companies interviewed	n = 71
9) Companies owned by foreign-born but not immigrant entrepreneurs	n = 17
Total D) Final sample of independent, active, non-international, immigrant-owned companies	n = 54

(*) This number reflects a documented problem in the management of the Italian business official directories, where many inactive, failed or closed firms do not officially close their position at the Chamber of Commerce. To this extent, the regulation D.P.R. 247/2004 established a procedure to allow the default deletion from the business directories after three years of missing documentation. This problem might be further exacerbated by the peculiarity of the selected sample (foreign-born entrepreneurs), for different reasons (e.g., individuals who opened a firm just as a means of obtaining a work visa for Italy and do not carry out any “real” activity or left the country; individuals whose firms failed or closed down and were not aware that they have to close their position at the Chamber of Commerce; etc.). Because it was not possible to find these firms in any manner, we do not consider these firms in the calculation of our response rate.

Table A3 Localization of firms

Province	Sample		Regional population ^a	
	N.	% on total	N.	% on total
Piacenza	6	5.6%	23,818	6.2%
Parma	13	12.0%	38,525	10.1%
Reggio Emilia	11	10.2%	43,695	11.4%
Modena	19	17.6%	59,990	15.7%
Bologna	27	25.0%	89,139	23.3%
Ferrara	6	5.6%	26,202	6.9%
Ravenna	0	0.0%	30,923	8.1%
Forli-Cesena	7	6.5%	35,280	9.2%
Rimini	19	17.6%	34,614	9.1%
Total	108	100.0%	382,186	100.0%

^a Source: ISTAT, Asia archives (2010)

Table A4 Robustness check - results from fractional logit estimations

	Model 1	Model 2	Model 3	Model 4	Model 5	1mig	2mig	3mig	4mig	5mig	Inat	Model 2nat	Model 3nat	Model 4nat	Model 5nat	
Entrepreneur age	-0.01 (0.022)	-0.01 (0.020)	-0.02 (0.021)	-0.01 (0.020)	-0.02 (0.021)	-0.00 (0.029)	-0.02 (0.026)	-0.02 (0.024)	-0.03 (0.031)	-0.02 (0.027)	-0.02 (0.038)	-0.03 (0.039)	-0.03 (0.037)	-0.04 (0.036)	-0.04 (0.035)	
Years abroad	0.12*** (0.033)	0.09*** (0.028)	0.09*** (0.027)	0.09*** (0.029)	0.09*** (0.028)	0.09* (0.037)	0.08# (0.046)	0.04 (0.037)	0.08# (0.045)	0.04 (0.036)	0.18 (0.114)	0.22# (0.122)	0.23# (0.122)	0.27# (0.141)	0.27# (0.141)	
Entrepreneurial family	-0.98** (0.344)	-1.15*** (0.317)	-1.16*** (0.319)	-1.18*** (0.323)	-1.19*** (0.323)	-0.64 (0.457)	-1.31** (0.417)	-1.39*** (0.400)	-1.29*** (0.407)	-1.35*** (0.403)	-1.44* (0.616)	-1.44* (0.616)	-0.95 (0.616)	-0.96 (0.618)	-1.06# (0.603)	-1.05# (0.604)
Firm age	-0.17** (0.054)	-0.17** (0.052)	-0.17** (0.052)	-0.16** (0.051)	-0.16** (0.051)	-0.19* (0.078)	-0.20** (0.071)	-0.20** (0.065)	-0.20** (0.066)	-0.20*** (0.060)	-0.15# (0.084)	-0.09 (0.087)	-0.09 (0.087)	-0.08 (0.084)	-0.05 (0.089)	-0.05 (0.089)
Firm local competition	-0.01* (0.004)	-0.01# (0.004)	-0.01# (0.004)	-0.01* (0.004)	-0.01* (0.004)	-0.01 (0.006)	-0.01 (0.006)	-0.01# (0.006)	-0.01 (0.007)	-0.01# (0.006)	-0.01 (0.007)	-0.01 (0.007)	-0.01 (0.007)	-0.01 (0.007)	-0.01 (0.007)	-0.01 (0.007)
Firm previous international.	-0.07 (0.530)	-0.29 (0.429)	-0.33 (0.450)	-0.23 (0.461)	-0.27 (0.475)	-0.26 (0.607)	-0.89# (0.510)	-1.19* (0.596)	-0.94# (0.549)	-1.20* (0.529)	0.11 (0.805)	0.25 (0.673)	0.25 (0.673)	0.25 (0.673)	0.46 (0.681)	0.46 (0.681)
Sales revenues (ln) (t-1)	0.14** (0.051)	0.12** (0.041)	0.11** (0.042)	0.12** (0.042)	0.12** (0.043)	0.10* (0.043)	0.13** (0.049)	0.13** (0.046)	0.14** (0.051)	0.14** (0.044)	0.32# (0.187)	0.14 (0.162)	0.14 (0.164)	0.19 (0.135)	0.19 (0.137)	
High-tech	-0.37 (0.350)	-0.60# (0.314)	-0.65* (0.307)	-0.58# (0.327)	-0.63* (0.316)	-0.33 (0.489)	-0.42 (0.410)	-0.64 (0.424)	-0.44 (0.384)	-0.68# (0.393)	-0.28 (0.535)	-0.54 (0.479)	-0.55 (0.484)	-0.40 (0.438)	-0.39 (0.489)	
Time	0.72* (0.350)	0.70# (0.359)	-1.12 (1.611)	-0.24 (0.814)	-1.69 (1.559)	0.73# (0.435)	0.60 (0.523)	-4.34* (2.183)	1.36 (1.486)	-3.69 (2.560)	0.74 (0.590)	0.74 (0.594)	0.30 (2.820)	-3.08* (1.495)	-2.86 (2.410)	-2.86 (2.410)
		0.29* (0.13)	0.13 (0.27#)	0.13 (0.27#)	0.13 (0.27#)	0.28 (0.11)	0.28 (0.11)	-0.06 (0.29)	0.29 (0.11)	-0.11 (0.29)	0.28# (0.11)	0.28# (0.11)	0.23 (0.19)	0.19 (0.22)	0.19 (0.22)	

Table A4 (continued)

	Model 1	Model 2	Model 3	Model 4	Model 5	1mig	2mig	3mig	4mig	5mig	1nat	2nat	3nat	4nat	5nat
Perceived desirability (Des)		(0.147)	(0.243)	(0.146)	(0.218)		(0.367)	(0.324)	(0.398)	(0.356)		(0.167)	(0.419)	(0.154)	(0.292)
Perceived feasibility (Feas)		0.45***	0.44***	0.30#	0.31#		0.54***	0.56***	0.74#	0.84**		0.61**	0.61**	0.15	0.14
Des x Time		(0.095)	(0.099)	(0.177)	(0.164)		(0.1136)	(0.121)	(0.383)	(0.281)		(0.196)	(0.204)	(0.226)	(0.226)
Feas x Time		0.32	(0.274)	0.27	0.23		0.88*	(0.391)	-0.27	0.96*		0.08	(0.464)	0.92**	-0.05
Constant	-1.41	-3.67**	-2.42	-3.15*	-2.17	-1.40	-3.41	-1.31	-3.71	-1.33	-3.18	-4.86*	-4.48	-2.93	-3.14
Observations	108	108	108	108	108	54	54	54	54	54	54	54	54	54	54

Standard errors in parentheses.

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

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References

- Acedo, F. J., & Jones, M. V. (2007). Speed of internationalization and entrepreneurial cognition: Insights and a comparison between international new ventures, exporters and domestic firms. *Journal of World Business, 42*, 236–252.
- Ahitev, N., Igbaria, M., & Sella, A. (1998). The effects of time pressure and completeness of information on decision making. *Journal of Management Information Systems, 15*(2), 153–172.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179–211.
- Ajzen, I. (2002). Constructing a TpB Questionnaire: Conceptual and Methodological Considerations. Available at <https://pdfs.semanticscholar.org/0574/b20bd58130dd5a961f1a2db10fd1fcbae95d.pdf>
- Aliaga-Isla, R., & Rialp, A. (2013). Systematic review of immigrant entrepreneurship literature: Previous findings and ways forward. *Entrepreneurship and Regional Development, 25*(9–10), 819–844.
- Almus, M., & Nerlinger, E. A. (1999). Growth of new technology-based firms - which factors matter. *Small Business Economics, 13*(2), 141–154.
- Andersson, S., Gabrielsson, J., & Wictor, I. (2004). International activities in small firms: Examining factors influencing the internationalization and export growth of small firms. *Canadian Journal of Administrative Sciences/Revue Canadienne Des Sciences de L'administration, 21*(1), 22–34.
- Ashourizadeh, S., Li, J., & Wickström, K. A. (2020). Immigrants entrepreneurial networks and export: A Comparative study. *International Entrepreneurship and Management Journal, 1*–28. In print.
- Arora, A., Jaju, A., Kefalas, A. G., & Perenich, T. (2004). An exploratory analysis of global managerial mindsets: A case of U.S. textile and apparel industry. *Journal of International Management, 10*, 393–411. <https://doi.org/10.1016/j.intman.2004.05.001>.
- Autio, E. (1997). New, technology-based firms in innovation networks symplectic and generative impacts. *Research Policy, 26*, 263–281.
- Autio, E., Dahlander, L., & Frederiksen, L. (2013). Information exposure, opportunity evaluation and entrepreneurial action: An investigation of an online user community. *Academy of Management Journal, 56*(5), 1348–1371. <https://doi.org/10.2139/ssrn.2229393>.
- Autio, E., Sapienza, H. J., & Almeida, J. G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal, 43*(5), 909–924. <https://doi.org/10.2307/1556419>.
- Bagozzi, R. P. (1992). The self-regulation of attitudes, intentions, and behavior. *Social Psychology Quarterly, 55*(2), 178–204.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Baron, R. A., & Ensley, M. D. (2006). Opportunity recognition as the detection of meaningful patterns: Evidence from comparisons of novice and experienced entrepreneurs. *Management Science, 52*(9), 1331–1344.
- Barreto, I. (2012). Solving the entrepreneurial puzzle: The role of entrepreneurial interpretation in opportunity formation and related processes. *Journal of Management Studies, 49*(2), 356–380. <https://doi.org/10.1111/j.1467-6486.2011.01023.x>.
- Beckerman, W. (1956). Distance and the pattern of intra-European trade. *The Review of Economics and Statistics, 38*(1), 31–40.

- Beckers, P., & Blumberg, B. F. (2013). Immigrant entrepreneurship on the move: A longitudinal analysis of first-and second-generation immigrant entrepreneurship in the Netherlands. *Entrepreneurship & Regional Development*, 25(7–8), 654–691.
- Bird, B. J., & West III, G. P. (1998). Time and entrepreneurship. *Entrepreneurship Theory and Practice*, 22(2), 5–9.
- Bolívar-Cruz, A., Batista-Canino, R. M., & Hormiga, E. (2014). Differences in the perception and exploitation of entrepreneurial opportunities by immigrants. *Journal of Business Venturing Insights*, 1–2, 31–36. <https://doi.org/10.1016/j.jbvi.2014.09.005>.
- Bolzani, D., & Boari, C. (2018). Evaluations of export feasibility by immigrant and non-immigrant entrepreneurs in new technology-based firms. *Journal of International Entrepreneurship*, 26(2), 176–209.
- Bolzani, D., Marabello, S., & Honig, B. (2020). Exploring the multi-level processes of legitimacy in transnational social enterprises. *Journal of Business Venturing*, 35(3), 105941.
- Bonaccorsi, A. (1992). On the relationship between firm size and export intensity. *Journal of International Business Studies*, 23(4), 605–635.
- Bowen, H. P. (2012). Testing moderating hypotheses in limited dependent variable and other nonlinear models: Secondary versus total interactions. *Journal of Management*, 38(3), 860–889.
- Brouthers, K. D., & Nakos, G. (2004). SME entry mode choice and performance: A transaction cost perspective. *Entrepreneurship Theory and Practice*, 28(3), 229–247. <https://doi.org/10.1111/j.1540-6520.2004.00041.x>.
- Buckley, P. J., Devinney, T. M., & Louviere, J. J. (2011). Do managers behave the way theory suggests? A choice-theoretic examination of foreign direct investment location decision-making. *Journal of International Business Studies*, 38(7), 1069–1094.
- Butler, R. (1995). Time in organizations: Its experience, explanations and effects. *Organization Studies*, 16(6), 925–950.
- Calof, J. L., & Beamish, P. W. (1995). Adapting to foreign markets: Explaining internationalization. *International Business Review*, 4(2), 115–131.
- Cerdin, J. L., Diné, M. A., & Brewster, C. (2014). Qualified immigrants' success: Exploring the motivation to migrate and to integrate. *Journal of International Business Studies*, 45(2), 151–168.
- Chaganti, R. S. C., Watts, A. D., Chaganti, R., & Zimmerman-Treichel, M. (2008). Ethnic-immigrants in founding teams: Effects on prospector strategy and performance in new internet ventures. *Journal of Business Venturing*, 23, 113–139. <https://doi.org/10.1016/j.jbusvent.2006.07.004>.
- Chandra, Y., Styles, C., & Wilkinson, I. (2009). The recognition of first time international entrepreneurial opportunities. *International Marketing Review*, 26(1), 30–61. <https://doi.org/10.1108/02651330910933195>.
- Chen, W., & Tan, J. (2009). Understanding transnational entrepreneurship through a network lens: Theoretical and methodological considerations. *Entrepreneurship Theory and Practice*, 33(5), 1079–1091.
- Chow, G. C. (1960). Tests of equality between sets of coefficients in two linear regressions. *Econometrica: Journal of the Econometric Society*, 28, 591–605.
- Colombo, M. G., Del Mastro, M., & Grilli, L. (2004). Entrepreneurs' human capital and the start-up size of new technology-based firms. *International Journal of Industrial Organization*, 22, 1183–1211.
- Constant, A., & Zimmerman, K. (2006). The making of entrepreneurs in Germany: Are native men and immigrants alike? *Small Business Economics*, 26(3), 279–300.
- Coviello, N. E. (2015). Re-thinking research on born globals. *Journal of International Business Studies*, 46(1), 17–26. <https://doi.org/10.1057/jibs.2014.59>.
- Coviello, N. E., & Jones, M. V. (2004). Methodological issues in international entrepreneurship research. *Journal of Business Venturing*, 19, 485–508. <https://doi.org/10.1016/j.jbusvent.2003.06.001>.
- De Clercq, D., Sapienza, H. J., Yavuz, R. I., & Zhou, L. (2012). Learning and knowledge in early internationalization research: Past accomplishments and future directions. *Journal of Business Venturing*, 27(1), 143–165. <https://doi.org/10.1016/j.jbusvent.2011.09.003>.
- Dimov, D. (2007). From opportunity insight to opportunity intention: The importance of person-situation learning match. *Entrepreneurship: Theory and Practice*, 31(4), 561–583. <https://doi.org/10.1111/j.1540-6520.2007.00188.x>.
- Dimov, D. (2010). Nascent entrepreneurs and venture emergence: Opportunity confidence, human capital, and early planning. *Journal of Management Studies*, 47(6), 1123–1153. <https://doi.org/10.1111/j.1467-6486.2009.00874.x>.

- Ditchl, E., Koeglmayr, H. G., & Mueller, S. (1990). International orientation as a precondition for export success. *Journal of International Business Studies*, 21(1), 23–40.
- Dow, D., & Karunaratna, A. (2006). Developing a multidimensional instrument to measure psychic distance stimuli. *Journal of International Business Studies*, 37(5), 578–602.
- Ellis, P. D. (2011). Social ties and international entrepreneurship: Opportunities and constraints affecting firm internationalization. *Journal of International Business Studies*, 42(1), 99–127. <https://doi.org/10.1057/jibs.2010.20>.
- Elo, M., & Minto-Coy, I. (2018). *Diaspora networks in international business*. Heidelberg: Springer.
- Emilia-Romagna, R. (2013). *L'immigrazione straniera in Emilia-Romagna*. In *Edizione 2013*. Bologna: Osservatorio regionale sul fenomeno migratorio.
- Elo, M., Sandberg, S., Servais, P., Basco, R., Cruz, A. D., Riddle, L., & Täube, F. (2018). Advancing the views on migrant and diaspora entrepreneurs in international entrepreneurship. *Journal of International Entrepreneurship*, 16(2), 119–133.
- European Union. (2010). *Internationalization of European SMEs*. Brussels: Entrepreneurship Unit, Directorate-General for Enterprise and Industry.
- Evans, J., & Mavondo, F. (2002). Psychic distance and organizational performance: An empirical examination of international retailing operations. *Journal of International Business Studies*, 33(3), 515–532.
- Fini, R., Grimaldi, R., Marzocchi, G. L., & Sobrero, M. (2012). The determinants of corporate entrepreneurial intention within small and newly established firms. *Entrepreneurship Theory and Practice*, 36, 387–414. <https://doi.org/10.1111/j.1540-6520.2010.00411.x>.
- Fitzsimmons, J. R., & Douglas, E. J. (2011). Interaction between feasibility and desirability in the formation of entrepreneurial intentions. *Journal of Business Venturing*, 26(4), 431–440. <https://doi.org/10.1016/j.jbusvent.2010.01.001>.
- Grégoire, D. A., Cornelissen, J., Dimov, D., & van Burg, E. (2015). The mind in the middle: Taking stock of affect and cognition research in entrepreneurship. *International Journal of Management Reviews*, 17, 125–142. <https://doi.org/10.1111/ijmr.12060>.
- Håkanson, L., Ambos, B., Schuster, A., & Leicht-Deobald, U. (2016). The psychology of psychic distance : Antecedents of asymmetric. *Journal of World Business*, 51, 308–318. <https://doi.org/10.1016/j.jwb.2015.11.005>.
- Hammarstedt, M. (2001). Immigrant self-employment in Sweden-its variation and some possible determinants. *Entrepreneurship and Regional Development*, 13(2), 147–161.
- Hart, D. M., & Acs, Z. J. (2011). High-tech immigrant entrepreneurship in the United States. *Economic Development Quarterly*, 25(2), 116–129. <https://doi.org/10.1177/0891242410394336>.
- Harveston, P. D., Kedia, B. L., & Davis, P. S. (2000). Internationalization of born global and gradual globalizing firms: The impact of the manager. *Advances in Competitiveness Research*, 8(1), 92–99.
- Haynie, J. M., Shepherd, D. A., & McMullen, J. S. (2009). An opportunity for me? The role of resources in opportunity evaluation decisions. *Journal of Management Studies*, 46(3), 337–361.
- Hennart, J., & Slangen, A. H. L. (2015). Yes, we really do need more entry mode studies! A commentary on shaver. *Journal of International Business Studies*, 46, 114–122. <https://doi.org/10.1057/jibs.2014.39>.
- Hormiga, E., & Bolívar-Cruz, A. (2014). The relationship between the migration experience and risk perception: A factor in the decision to become an entrepreneur. *International Entrepreneurship and Management Journal*, 10, 297–317. <https://doi.org/10.1007/s11365-012-0220-9>.
- Hurmerinta-Peltomäki, L. (2003). Time and internationalization. Theoretical challenges set by rapid internationalization. *Journal of International Entrepreneurship*, 1(2), 217–236.
- Hurmerinta, L., Paaivilainen-Mäntymäki, E., & Hassett, M. E. (2016). Tempus fugit: A hermeneutic approach to the internationalisation process. *Management International Review*, 56(6), 805–825.
- IDOS. (2013). *Dossier Statistico Immigrazione 2013 – Rapporto UNAR*. Rome: IDOS.
- Janney, J. J., & Dess, G. G. (2004). Can real-options analysis improve decision-making? Promises and pitfalls. *Academy of Management Executive*, 18(4), 60–75.
- Jiang, G., Kotabe, M., Hamilton, R. D., & Smith, S. W. (2016). Early internationalization and the role of immigration in new venture survival. *International Business Review*, 25(6), 1285–1296. <https://doi.org/10.1016/j.ibusrev.2016.04.001>.
- Johanson, J., & Vahlne, J.-E. (2006). Commitment and opportunity development in the internationalization process: A note on the Uppsala internationalization process model. *Management International Review*, 46(2), 165–178.
- Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalization of the firm - four Swedish cases. *Journal of Management Studies*, 12(3), 305–323.

- Jones, M. V., & Coviello, N. E. (2005). Internationalization: Conceptualising an entrepreneurial process of behavior in time. *Journal of International Business Studies*, 36(3), 284–303.
- Kaleka, A., & Morgan, N. A. (2019). How marketing capabilities and current performance drive strategic intentions in international markets. *Industrial Marketing Management*, 78, 108–121.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of Behavioral Research*. Belmont: Thomson Learning Inc.
- Kloosterman, R. C. (2010). Matching opportunities with resources: A framework for analysing (migrant) entrepreneurship from a mixed embeddedness perspective. *Entrepreneurship and Regional Development*, 22(1), 25–45.
- Kontinen, T., & Ojala, A. (2011). International opportunity recognition among small and medium-sized family firms. *Journal of Small Business Management*, 49(3), 490–514. <https://doi.org/10.1111/j.1540-627X.2011.00326.x>.
- Krueger, N. F. (2000). The cognitive infrastructure of opportunity emergence. *Entrepreneurship Theory and Practice*, 24, 9–27.
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5–6), 411–432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0).
- Kushnirovich, N., Heilbrunn, S., & Davidovich, L. (2018). Diversity of entrepreneurial perceptions: Immigrants vs. native population. *European Management Review*, 15(3), 341–355.
- Lévesque, M., & Stephan, U. (2020). It's time we talk about time in entrepreneurship. *Entrepreneurship Theory and Practice*, 44(2), 163–184.
- Ordonez, L., & Benson, I. I. I. L. (1997). Decisions under time pressure: How time constraint affects risky decision making. *Organizational Behavior and Human Decision Processes*, 71(2), 121–140.
- Madsen, T. K., & Servais, P. (1997). The internationalization of born globals: An evolutionary process? *International Business Review*, 6(6), 561–583.
- Mainela, T., Puhakka, V., & Servais, P. (2014). The concept of international opportunity in international entrepreneurship: A review and a research agenda. *International Journal of Management Reviews*, 16(1), 105–129. <https://doi.org/10.1111/ijmr.12011>.
- McDougall, P. P., & Oviatt, B. M. (1996). New venture internationalization, strategic change, and performance: A follow-up study. *Journal of Business Venturing*, 11(1), 23–40.
- McMullen, J. S., & Dimov, D. (2013). Time and the entrepreneurial journey: The problems and promise of studying entrepreneurship as a process. *Journal of Management Studies*, 50(8), 1481–1512.
- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132–152. <https://doi.org/10.5465/amr.2006.19379628>.
- Middleton, S., Liesch, P. W., & Steen, J. (2011). Organizing time: Internationalization narratives of executive managers. *International Business Review*, 20(2), 136–150.
- Miocevic, D., & Crnjak-Karanovic, B. (2011). Cognitive and information-based capabilities in the internationalization of small and medium-sized enterprises: The case of Croatian exporters. *Journal of Small Business Management*, 49(4), 537–557.
- Mitchell, J. R., & Shepherd, D. A. (2010). To thine own self be true: Images of self, images of opportunity, and entrepreneurial action. *Journal of Business Venturing*, 25(1), 138–154. <https://doi.org/10.1016/j.jbusvent.2008.08.001>.
- Mustafa, M., & Chen, S. (2010). The strength of family networks in transnational immigrant entrepreneurship. *Thunderbird International Business Review*, 52(2), 97–106.
- Muzychenko, O., & Liesch, P. W. (2015). International opportunity identification in the internationalisation of the firm. *Journal of World Business*, 50(4), 704–717.
- Ndofor, H. A., & Priem, R. L. (2011). Immigrant entrepreneurs, the ethnic enclave strategy, and venture performance. *Journal of Management*, 37(3), 790–818.
- Nebus, J., & Chai, K. (2014). Putting the “psychic” back in psychic distance: Awareness, perceptions, and understanding as dimensions of psychic distance. *Journal of International Management*, 20(1), 8–24. <https://doi.org/10.1016/j.intman.2013.01.001>.
- Neville, F., Orser, B., Riding, A., & Jung, O. (2014). Do young firms owned by recent immigrants outperform other young firms? *Journal of Business Venturing*, 29(1), 55–71.
- Nowiński, W., & Rialp, A. (2016). The impact of social networks on perceptions of international opportunities. *Journal of Small Business Management*, 54(2), 445–461.
- OECD (2019). *The missing entrepreneurs 2019. Policies for inclusive entrepreneurship*. Paris: OECD publishing. Available at <https://read.oecd.org/10.1787/3ed84801-en?format=pdf>, accessed October 5th, 2020.
- Olson, J. M., & Zanna, M. P. (1993). Attitudes and attitude change. *Annual Review of Psychology*, 44(1), 117–154.

- Oviatt, B. M., & McDougall, P. P. (2005). Defining international entrepreneurship and modeling the speed of internationalization. *Entrepreneurship Theory and Practice*, 29(5), 537–553.
- Oyson III, M. J., & Whittaker, H. (2015). Entrepreneurial cognition and behavior in the discovery and creation of international opportunities. *Journal of International Entrepreneurship*, 13(3), 303–336. <https://doi.org/10.1007/s10843-015-0156-6>.
- Papke, L. E., & Wooldridge, J. M. (1996). Econometric methods for fractional response variables with an application to 401(K) plan participation rates. *Journal of Applied Econometrics*, 11, 619–632.
- Perlow, L. A., Okhuysen, G. A., & Repenning, N. P. (2002). The speed trap: Exploring the relationship between decision making and temporal context. *Academy of Management Journal*, 45(5), 931–955.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Rohan, M. J. (2000). A rose by any name? The values construct. *Personality and Social Psychology Review*, 4(3), 255–277.
- Sapienza, H. J., Autio, E., George, G., & Zahra, S. A. (2006). A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review*, 31(4), 914–933.
- Saxenian, A. (2002). Local and global networks of immigrant professionals in Silicon Valley. (P. P. I. of California, Ed.). San Francisco, CA.
- Schnatterly, K. (2003). Increasing firm value through detection and prevention of white-collar crime. *Strategic Management Journal*, 24, 587–614.
- Smans, M., Freeman, S., & Thomas, J. (2014). Immigrant entrepreneurs: The identification of foreign market opportunities. *International Migration*, 52(4), 144–156.
- Sommer, L. (2010). Internationalization processes of small and medium-sized enterprises — A matter of attitude? *Journal of International Entrepreneurship*, 8, 288–317.
- Sommer, L., & Haug, M. (2011). Intention as a cognitive antecedent to international entrepreneurship—Understanding the moderating roles of knowledge and experience. *International Entrepreneurship and Management Journal*, 7(1), 111–142.
- Stevenson, H. H., & Jarillo, J. C. (1990). A paradigm of entrepreneurship: Entrepreneurial management. *Strategic Management Journal*, 11(5), 17–27.
- Sui, S., Morgan, H. M., & Baum, M. (2015). Internationalization of immigrant-owned SMEs: The role of language. *Journal of World Business*, 50(4), 804–814.
- Sundararajan, M., & Sundararajan, B. (2015). Immigrant capital and entrepreneurial opportunities. *Entrepreneurial Business and Economic Review*, 3(3), 29–50.
- Takeuchi, R., Tesluk, P. E., Yun, S., & Lepak, D. P. (2005). An integrative view of international experience. *Academy of Management Journal*, 48(1), 85–100.
- Tan, A., Brewer, P., & Liesch, P. W. (2007). Before the first export decision : Internationalisation readiness in the pre-export phase. *International Business Review*, 16, 294–309.
- Tumasjan, A., Welpel, I., & Spörrle, M. (2013). Easy now, desirable later: The moderating role of temporal distance in opportunity evaluation and exploitation. *Entrepreneurship: Theory and Practice*, 37(4), 859–888. <https://doi.org/10.1111/j.1540-6520.2012.00514.x>.
- United Nations (2018). *Policy guide on entrepreneurship for migrants and refugees*. UNCTAD, IOM, UNHCR. Available at: https://unctad.org/system/files/official-document/diae2018d2_en.pdf, accessed October 5th, 2020.
- Vandor, P., & Franke, N. (2016). See Paris and... found a business? The impact of cross-cultural experience on opportunity recognition capabilities. *Journal of Business Venturing*, 31(4), 388–407. <https://doi.org/10.1016/j.jbusvent.2016.03.003>.
- Wang, Q., & Liu, C. Y. (2015). Transnational activities of immigrant-owned firms and their performances in the USA. *Small Business Economics*, 44(2), 345–359.
- Welch, C., & Paavilainen-Mäntymäki, E. (2014). Putting process (back) in: Research on the internationalization process of the firm. *International Journal of Management Reviews*, 16(1), 2–23.
- Westhead, P., Wright, M., & Ucbasaran, D. (2001). The internationalization of new and small firms: A resource-based view. *Journal of Business Venturing*, 16(4), 333–358.
- Williams, D. W., & Wood, M. S. (2015). Rule-based reasoning for understanding opportunity evaluation. *Academy of Management Perspectives*, 29(2), 218–236.

- Wood, M. S., & McKelvie, A. (2015). Opportunity evaluation as future focused cognition: Identifying conceptual themes and empirical trends. *International Journal of Management Reviews*, *17*, 256–277. <https://doi.org/10.1111/ijmr.12053>.
- Wood, M. S., & Williams, D. W. (2014). Opportunity evaluation as rule-based decision making. *Journal of Management Studies*, *51*(4), 573–602.
- Wright, M., Westhead, P., & Ucbasaran, D. (2007). Internationalization of small and medium-sized enterprises (SMEs) and international entrepreneurship: A critique and policy implications. *Regional Studies*, *41*(7), 1013–1030.
- Zahra, S. A. (2005). A theory of international new ventures: A decade of research. *Journal of International Business Studies*, *36*(1), 20–28.
- Zahra, S. A., & George, G. (2002). International entrepreneurship: The current status of the field and future research agenda. In M. A. Hitt, R. Ireland, M. Camp, & D. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset* (pp. 255–288). London: Blackwell.
- Zahra, S. A., Ireland, R. D., & Hitt, M. A. (2000). International expansion by new venture firms: International diversity, mode of market entry, technological learning, and performance. *Academy of Management Journal*, *43*(5), 925–950.
- Zahra, S. A., Korri, J. S., & Yu, J. (2005). Cognition and international entrepreneurship : Implications for research on international opportunity recognition and exploitation. *International Business Review*, *14*, 129–146.

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