

# Differences in international opportunity identification between native and immigrant entrepreneurs

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**Abstract** The aim of this study is to understand more about how identification of international opportunities differs between native and immigrant entrepreneurs. Based on a survey of 116 immigrant and 864 native Norwegian entrepreneurs with newly registered firms, we show that immigrant entrepreneurs are more likely to identify international opportunities than native entrepreneurs are. We reveal important differences in the identification process between native and immigrant entrepreneurs. Whereas general human capital has a significant positive effect on international opportunity identification for native entrepreneurs, we cannot find the same effect among immigrant entrepreneurs. Moreover, although financial capital positively influences international opportunity identification among native entrepreneurs, the same effect is significantly negative among immigrant entrepreneurs. Based on these findings, we conclude that native and immigrant entrepreneurs do not utilise the same resources to identify international opportunities. This study contributes to the literature on international entrepreneurship by documenting significant differences in how native and immigrant entrepreneurs identify international opportunities. It also contributes to immigrant entrepreneurship literature by bringing the opportunity-based view of entrepreneurship into the field.

**Keywords** International opportunities · International entrepreneurship · Immigrant entrepreneurship · Resource-based view · Human capital · Financial capital · Norway

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**Resumen** Este estudio responde a la interrogante de cómo la identificación de oportunidades internacionales difiere entre emprendedores inmigrantes y nativos. Para ello se utilizó datos de encuesta dirigida a emprendedores quienes recientemente registraron sus empresas. La muestra consistió en 116 emprendedores inmigrantes y 864 emprendedores noruegos. Los resultados indican que los emprendedores inmigrantes son más propensos a identificar oportunidades internacionales que sus pares noruegos. Asimismo, se obtuvieron diferencias importantes en el proceso de identificación de oportunidades entre emprendedores nativos e inmigrantes. En primer lugar, el capital humano tiene un efecto positivo y significativo en la identificación de oportunidades internacionales para los emprendedores nativos pero no para los emprendedores inmigrantes. En segundo lugar, el capital financiero influencia de manera positiva la identificación de oportunidades internacionales para emprendedores nativos, al contrario, los emprendedores inmigrantes reciben una influencia negativa del mismo efecto. En base a estos resultados, se concluye que los emprendedores nativos e inmigrantes no recurren a los mismos recursos para identificar oportunidades internacionales. A la vez, este artículo contribuye a la literatura de emprendedurismo sobre inmigrantes al integrar la perspectiva de emprendedurismo basado en oportunidades.

**Palabras claves** Oportunidades internacionales; emprendedurismo internacional; emprendedurismo inmigrante; visión basada en recursos; capital financiero; Noruega.

**Summary highlights** *Contributions:* This study contributes to the literature on international entrepreneurship by documenting significant differences in how native and immigrant entrepreneurs identify international opportunities and to immigrant entrepreneurship literature by bringing the opportunity-based view of entrepreneurship into the field.

*Purpose/research question:* How does the identification of international opportunities vary between native and immigrant entrepreneurs?

*Theoretical/conceptual framework:* In line with Mainela et al. (2014, p. 120), we understand international opportunities as “situations that both spans and integrates elements from multiple national contexts in which entrepreneurial action and interaction transform the manifestations of economic activity”. We focus on international opportunity identification as a market arbitrage discovery process, with a focus on the new venture idea (Davidsson 2015) that is connected to accidental recognition or deliberate search for possibilities that can create value. We employ a resource-based perspective on internationalisation (Peng 2001; Westhead et al. 2001) and focus on the roles of two particularly important types of resources: general human capital and financial capital.

*Basic methods and data:* The data comes from the online survey of all firms registered in Norway between January and May 2012 resulting in 980 valid cases (116 immigrants and 864 native Norwegians). Descriptive statistics and logistic regressions were applied in order to test the hypotheses.

*Results/findings:* According to our analysis, immigrant entrepreneurs identified international opportunities twice as often as native entrepreneurs. Human capital had a significant positive impact on natives’ internationalisation. No significant effect of education was detected for immigrant entrepreneurs. Equity capital had opposite effects

on internationalisation among immigrant and native entrepreneurs. Among natives, equity capital had a significant positive association with identifying international opportunities. This relationship has a negative association for immigrants.

*Limitations:* This study captures only the early stages of internationalisation process when evaluation of outcomes is not possible. Interaction between initial resources and individual entrepreneurs' backgrounds is not explored. The empirical data for this study have been collected in Norway with its specific historical, cultural and ethnic context.

*Theoretical implications and recommendations:* Concerning the international entrepreneurship literature, we define and operationalise international opportunity identification with an emphasis on this as a discovery process, the new venture idea, the spanning and integration of elements across national borders and the transformation of entrepreneurial action into newly established firms. Our findings add new knowledge about variations in the resources needed for international opportunity identification across different groups of entrepreneurs. In terms of immigrant entrepreneurship literature, the introduction of international opportunities is a novel contribution.

*Practical implications and recommendations:* This study suggests that some interventions at the earliest stages of the entrepreneurial process may influence the degree of internationalisation, but the effects will be different for immigrant and native entrepreneurs. Creating arenas for teambuilding between immigrant and native entrepreneurs may effectively stimulate the development of international opportunities in both groups.

*Future research suggestions:* The effects of specific human capital, ethnic origins and transnational networks are of primary interest. Using register data instead of or in addition to questionnaires may strengthen the analysis. The role of various contexts in developing international opportunities may be studied on the national, regional and neighbourhood levels. More insight is needed into how different entrepreneurs continue to develop opportunities after the early stages of internationalisation have passed.

## Introduction

In 2005, Oviatt and McDougall suggested a definition of 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). Recent research has shown that the focus on international entrepreneurship in terms of discovery, enactment, evaluation, and exploitation of opportunities has been central to create new understandings of the field (see for example Mainela et al. 2014, 2015; Muzychenko and Liesch 2015; Dimitratos et al. 2016; Hannibal et al. 2016). In such an opportunity-based view of entrepreneurial internationalisation, one particularly important aspect is the interaction between the international opportunity and the individual entrepreneur (Shane and Venkataraman 2000; Eckhardt and Shane 2003). However, the literature on international entrepreneurship and immigrant entrepreneurship has not focused much on this aspect. In this study, we contribute to an understanding of differences in the opportunity-entrepreneur interaction by combining insight on international opportunities from the entrepreneurship and international entrepreneurship literature on the one hand and insight on the individual entrepreneur from

the immigrant entrepreneurship and a resources-based view of internationalisation on the other.

Based on Oviatt and McDougall's definition and influenced by the general trends in the field of entrepreneurship, discovery and exploitation of opportunities have been a popular topic in the international entrepreneurship literature in recent years. However, international entrepreneurship theory focuses mainly on creation of new international ventures as a means of exploiting such opportunities, and not so often on the individual entrepreneur. Even if some studies are strongly individual-centred, see for example Andersson and Evers (2015) on dynamic managerial capabilities and Lehto (2015) on entrepreneurial selling, more research that set the entrepreneur as the focal actor in the international opportunity context is needed (Mainela et al. 2015). Our study contributes to the international entrepreneurship literature by focusing on differences in opportunity identification between the two types of international entrepreneurs: native and immigrant entrepreneurs.

Furthermore, if we turn to the immigrant entrepreneurship literature, we can see that this literature proposes a variety of explanations for why and how individual immigrants engage in entrepreneurial activities. The important perspectives in this literature are as follows: middleman minority theory (Bonacich 1973), cultural thesis (Weber 1958; Light 1984), ethnic enclave perspective (Portes and Zhou 1992), blocked mobility view (Zhou 2004), social capital and utilisation of ethnic resources (Potocky-Tripodi 2004; Caulkins and Peters 2002; Light 2000; Portes and Zhou 1992), selective migration explanation (Sanders and Nee 1996; Vinogradov and Gabelko 2010) and mixed embeddedness perspective (Kloosterman et al. 1999; Kloosterman and Rath 2001). In addition, immigrants' transition from marginal abandoned market niches to more lucrative niches has been studied (Ram et al. 2003). While the perspectives from the immigrant entrepreneurship literature highlight many important aspects of the individual entrepreneur and his/her social context, few of them includes how these entrepreneurs may recognise international opportunities. Our study contributes to the immigrant entrepreneurship literature by bringing the opportunity-based view of entrepreneurship into the field and by demonstrating how international opportunity identification among immigrant entrepreneurs may be quite different from those performed by their native counterparts.

On the background, our study addresses the following research question:

- How does the identification of international opportunities vary between native and immigrant entrepreneurs?

To investigate the research question, we build on the assumption that immigrant entrepreneurs identify and exploit international opportunities more often than native entrepreneurs do. In short, we argue that immigrant entrepreneurs (compared to natives) often have better access to and understanding of public information relevant for international operations, use different techniques to search for information, understand deeper consumer needs in their country of origin and have more direct access to relevant transnational networks. From earlier research, we know that international opportunity development has both external and internal determinants (Mainela et al. 2014). In this study, we want to enhance the understanding of how some internal factors create the anticipated differences in international opportunity identification among

native and immigrant entrepreneurs. To do this, we employ a resource-based perspective on internationalisation (Peng 2001; Westhead et al. 2001). We focus on the roles of two particularly important types of resources: general human capital and financial capital. Compared to focus on other resources, such as specific human capital (for example, international business experience) and business-related social capital, strengthening of general human capital (in terms of educational programs) and incentives related to financial capital are often included in public policies and support systems that encourage entrepreneurship. Our study contributes to a better understanding of how general human capital and financial capital create significant differences in identifying international opportunities among native and immigrant entrepreneurs. Our study contributes thereby to more knowledge on how public policies and support systems should be designed to target the right type of entrepreneurial internationalisation.

Based on this, the remainder of the paper is organised as follows. Section 2 outlines the theory and hypotheses. Section 3 presents the method and Sect. 4 the findings. In Sect. 5, we discuss the findings and contributions of this study.

## Theory and hypotheses

### Identification of international opportunities

Discovery and exploitation of international opportunities lie at the heart of international entrepreneurship. Mainela et al. (2014) reviewed international entrepreneurship literature, and they found that the concept of international opportunities has been depicted in rather abstract and unspecified ways. Based on their review, they suggest a definition of international opportunities as “a situation that both spans and integrates elements from multiple national contexts in which entrepreneurial action and interaction transform the manifestations of economic activity” (Mainela et al. 2014, p. 120). This broad definition allows varied approaches to international opportunities (Lehto 2015). According to the definition, international opportunities can be discovered or created (see for example Alvarez and Barney 2007). Moreover, international opportunities can entail both arbitrage opportunities that start with noting demand-supply inefficiencies, i.e. the Kirznerian school, and innovation opportunities that start with an economic invention, i.e. the Schumpeterian school (see also Etemad 2015). We base our study on the definition above and perceive international opportunity identification as international market arbitrage discovery (Mainela et al. 2014). There has been an on-going debate about whether opportunities are discovered or created (Alvarez and Barney 2007; Alvarez et al. 2013). In this study, we focus more on the discovery than on the creation side of this discussion. This is because we build on a critical realist philosophy of science (see for example Bhaskar 2008 and Sayer 2000) and perceive opportunities as mainly objective realities that may or may not be discovered by entrepreneurs. We perceive opportunities as external to the firm (in the market) and more based on identifying unsatisfied needs (arbitrage) than on innovation.

Davidsson (2015, p. 674) argues that the limited progress in understanding the role of opportunities and their interactions with actors is rooted in “inherent and inescapable problems with the “opportunity” construct itself”. He therefore suggests a

reconceptualisation of opportunities in terms of external enablers, new venture ideas and opportunity confidence. Inspired by this reconceptualisation, we will investigate the discovery of opportunities in terms of one of these dimensions: new venture ideas. New venture ideas are “imagined future ventures”, i.e. imaginary combination of product/service offerings, potential markets or users, and means of bringing these offering into existence (Davidsson 2015, p. 683). We interpret “a situation that both spans and integrate elements from multiple national contexts” (Mainela et al. 2014, p.120) as the identification of a new venture idea based on sales to international markets. Moreover, we link “entrepreneurial action and interaction [that] transform the manifestation of economic activity” (Mainela et al. 2014, p. 120) to the establishment of a new firm.

On the way from the non-existence of the new venture idea to the full international exploitation of it, it is difficult to specify where the identification ends and the exploitation begins. However, there is a broad agreement in the literature that the discovery of an opportunity and the subsequent exploitation of it are preceded by two main processes (Muzychenko and Liesch 2015). The first process, termed as for example international opportunity scouting (Hilmersson and Papaioannou 2015) or opportunity recognition (Andersson and Evers 2015), is connected accidental discovery or deliberate search for possibilities that can create value. The second process, exploitation, termed as for example enactment (Laperriere and Spence 2015) or opportunity realisation (Åkerman 2015) is about mobilising, committing and orchestrating resources. Our focus in this study is on the first process, and we therefore use the term international opportunity identification. This study focuses on the anticipated differences in opportunity identification among native and immigrant entrepreneurs. The following section explains how a resource-based view of internationalisation (Peng 2001; Westhead et al. 2001) may be utilised in this context.

### **A resource-based view of internationalisation**

A resource-based view has played an important role in explaining why some entrepreneurs and not others are able to internationalise rapidly (Peng 2001). The answer is typically that these entrepreneurs have superb knowledge resources and the equally superb capability to leverage these resources in a way not matched by others. Westhead et al. (2001) argue that human capital and financial resources should be considered of particular interest related to the propensity of new firms to export. However, based on a sample of entrepreneurs of unspecified origin, these authors found out no statistically significant relationships between the relevant resource-based factors and propensity to export. In the current study, we explore whether this lack of evidence may be caused by more complex relationships between the variables than previously suggested. Modern studies on entrepreneurship tend to shift from isolated exploration of entrepreneurs’ and firms’ characteristics to an understanding of entrepreneurship as an interaction between individuals and opportunity structures (Venkataraman 1997; Eckhardt and Shane 2003). Interactive approaches have also been widely used in the immigrant entrepreneurship field. The mixed embeddedness approach (Kloosterman 2010) underlines the interplay between social, economic and institutional contexts. In the current study, we argue that the identification of international opportunities is a result of the interaction between the individual’s resources and the international opportunity. Therefore, we

expect that different groups of entrepreneurs may need different types of resources to identify international opportunities. The roles of two types of resources for internationalisation, general human capital and financial capital, are discussed in the following sections. Compared to specific human capital (such as international business experience) and business-related social capital, the two forms of capital discussed in this paper are targeted relatively often by public policies that encourage entrepreneurship. Financial incentives and educational programmes are the two most frequently used forms of public intervention in entrepreneurship.

### **International opportunity identification among native and immigrant entrepreneurs**

Different entrepreneurs tend to identify different international opportunities. The unique opportunities that a person will discover depend on personal factors such as their access to information, life experiences and social ties (Shane 2004). These characteristics differ between native and immigrant entrepreneurs (Vinogradov and Elam 2010). In this study, our point of departure is that immigrant entrepreneurs are more likely to identify international opportunities than native entrepreneurs are. It is important to notice that immigrant entrepreneurs have considerable advantages over native entrepreneurs mostly in the cases when immigrants choose their home country or the countries that are culturally, historically and linguistically close to their country of origin as their target market. The following argumentation is made under the assumption that immigrants are more likely to choose their country of origin for internationalisation, than any other third country. This assumption will be checked in the empirical analysis.

There are several reasons why immigrant entrepreneurs may be better suited for identifying opportunities related to international business than natives are. First, immigrants may have access to public information that is not readily available to natives. Fluency in foreign languages eases the identification of opportunities that may open up abroad. Both natives and immigrants may systematically monitor the environment in search of international opportunities, but immigrants are expected to be more effective at this task because they may not need to translate information from other countries (news channels, newspapers, etc.). Srinivasan and Pyati (2007) argue that immigrants' diasporic information environment includes both local (host country) and global domains. Being embedded in this extended information environment, immigrants may have a better overview of the relevant information sources than native entrepreneurs possess. Compared to natives, immigrants may have better understanding of which sources that are important and which media to trust. Moreover, they have a better overview of the relevant information sources than native entrepreneurs possess. In addition, access to some online resources, such as online social networks from a particular country, is virtually impossible for those individuals who are not fluent in the relevant language and not integrated into the nationality-selective virtual society. Immigrants are better equipped for relating the news to the historical context of a particular country and may have deeper understanding of the persons and social groups operating in this context.

Second, immigrant entrepreneurs may use different techniques to search for information compared to native entrepreneurs. It has been suggested that people find the

best opportunities when they search in places where others do not look (Shane 2004), and expert entrepreneurs are more likely to search for opportunities using private, rather than public, information (Hills and Shrader 1998). Immigrants entrepreneurs are expected to have much better access to private sources abroad in their home country than host country natives (i.e. those born in the immigrants' new country of residence) do. In this case, immigrants' friends, relatives and former co-workers in the home country may supply vital private information.

A third reason why immigrants have an advantage over natives is that immigrants possess a relatively intimate knowledge of consumer needs in their country of origin. This knowledge-based view of a firm has previously been used to explain the early internationalisation of small firms (Autio et al. 2000; Zhou 2007; Vissak and Zhang 2014). This view predicts that knowledge of a foreign market is essential for successful internationalisation. Nordman and Melen (2008) suggest that business founders with high levels of international knowledge use this knowledge to develop structured internationalisation strategies for their firms. Experiences from their home country and continued communication with relatives and friends in the home country provide key insights for understanding the foreign customers' attitudes, preferences, consumption behaviours and other habits. This connection with other countries makes immigrant entrepreneurs relatively more aware of export-related entrepreneurial opportunities. At the same time, immigrants may be pushed into international opportunities by lack of knowledge about the host country markets (Clydesdale 2008).

Finally, immigrants may have access to transnational networks that are critical for rapid internationalisation. These networks may include immigrants and, specifically, transnational entrepreneurs beyond the borders of the home- and host-countries (for example Wong 1998). Shane (2004) suggests that social ties are one of the most important sources of information leading to the identification of business opportunities. While studying internationalisation among Asian-owned small firms in the UK, Crick et al. (2001) found that some firms rapidly achieve high export levels using their owners' networks in their home country. Some ethnic entrepreneurs as well as most native business owners lack such international networks, resulting in a relatively less radical internationalisation strategy. Based on US census data, Light et al. (2002) found that while transnationalism had no effect on import, it was positively related to export from the USA.

Based on these aforementioned arguments, we formulate the following hypothesis:

H1: Immigrant entrepreneurs are more likely to identify international opportunities than native entrepreneurs are.

In this paper, our argumentation and analysis is based on the assumption that a difference between immigrants and natives with respect to identification of international opportunities does exist. H1 represents a base for discussing effects of human and financial capital.

### **General human capital**

An entrepreneur's human capital is often associated with business survival and development (for example, Cooper et al. 1994). This is also true among immigrants (Sanders



and Nee 1996; Sequeira 2007; Sequeira and Rasheed 2004; Sequeira and Rasheed 2006; Vinogradov and Kolvereid 2007). However, very few studies explore the link between human capital and identification of international opportunities. Westhead et al. (2001) argued that entrepreneurs with undergraduate or postgraduate degrees are relatively more likely to be exporters because of their high expectations, superior problem-solving skills and awareness of business opportunities in foreign markets. Managers with high levels of education possess information-processing capabilities that are arguably advantageous for firms pursuing internationalisation (Herrmann and Datta 2005).

In this paper, in accordance with Westhead et al. (2001), we suggest that highly educated native entrepreneurs embark upon international business ideas because they want to exploit especially lucrative opportunities in foreign markets. As a starting point, natives have restricted knowledge about foreign markets. The psychic distance between two countries, defined as “factors that make it difficult to understand foreign environments” (Johanson and Vahle 2009, p. 1412), hinders identification of international opportunities. Native entrepreneurs may compensate for this lack of inherent knowledge and understanding with formal education. The need for this type of compensation has been widely discussed in the literature on foreign investments, suggesting that foreign investors need a firm-specific advantage (managers’ education in this case) to overcome the liability of foreignness (Hymer 1976; Zaheer 1995). The same logic suggests that entrepreneurs may need additional personal resources (including education) to identify international opportunities. Less educated native entrepreneurs are more likely to discover and exploit domestic opportunities. Thus, the following hypothesis is proposed:

H2a: General human capital is positively associated with international opportunity identification among native entrepreneurs.

In the immigrant entrepreneurship literature, empirical evidence of the effect of human capital on immigrants’ propensity to start a business is contradictory. On the individual level, education from a home country is normally positively related to immigrants’ business ownership (Li 2001; Sanders and Nee 1996; Beaujot et al. 1994). However, Le (2000) found the opposite relationship between these factors. Education from a host country is found to influence immigrants’ business ownership both positively (Beaujot et al. 1994; Akee et al. 2007) and negatively (Le 2000). Moreover, Sanders and Nee (1996) found that the effect of home country education may be positive for previously uneducated immigrants and negative for immigrants with higher levels of education from their home countries. When the total level of education from all countries was measured, the effect was mostly positive (van Tubergen 2005; Borjas and Bronars 1989; Borjas 1986; Fairlie and Meyer 1994; Razin and Scheinberg 2001; Bates and Dunham 1993; Sequeira 2007). However, Clark and Drinkwater (1998), Evans (1989) and Cobas (1986) observed negative relationships between total educational level and immigrant business ownership. While contributing to our understanding of immigrant business founding, the empirical findings from these papers were not found applicable to explaining immigrants’ identification of international opportunities.

Some authors observed that highly educated immigrants are overrepresented among founders of high technology international businesses in the USA (Saxenian 1999; Wadhwa et al. 2007; Hart et al. 2009). However, these highly skilled entrepreneurs represent a tiny minority of the immigrant entrepreneur population, whereas most immigrants are involved in construction, retail, transportation and other sectors not associated with high technology (Fairlie 2012). In these sectors, education may not be so closely associated with internationalisation.

Immediately after migration, the immigrant has more knowledge about his/her home country, including the home country markets, than about the host country. This knowledge is essential for discovering and successfully exploiting entrepreneurial opportunities (Shane 2004). Arriving to a new country, immigrants have to overcome the liability of foreignness (Hymer 1976; Zaheer 1995) that hinders them from identification and exploitation of domestic entrepreneurial opportunities. With little or no formal education from the host country, immigrants may find it easier to discover and exploit opportunities abroad than in their current country of residence. Immigrants educated in the home country may see more domestic opportunities than the less educated immigrants because higher education may be associated with faster language learning, earlier integration into the host country's society and effective learning about how the markets in their new country of residence function. Thus, the following hypothesis reflects the expected effect of general human capital on the identification of international opportunities among immigrants:

H2b: General human capital is negatively associated with international opportunity identification among immigrant entrepreneurs.

## Financial capital

There are conflicting views as to why some firms are able to internationalise early and others are not (Keupp and Gassmann 2009). The current study suggests that financial capital may have different effects on internationalisation intentions among immigrant and native entrepreneurs.

For native entrepreneurs, internationalisation may require additional investments into knowledge accumulation about foreign markets and establishing contacts abroad. Transaction costs may be higher in international trade compared to domestic operations. In the resource-based view, access to additional financial resources is expected to be required for internationalisation (Keupp and Gassmann 2009). On the other hand, a lack of resources in the home country is likely to push entrepreneurs to search for the resources abroad, thereby enhancing internationalisation (Mathews and Zander 2007). The latter argument may be of secondary importance in relatively wealthy countries such as Norway, which has the lowest percentage of necessity entrepreneurs in the world (Amoros and Bosma 2013), relatively satisfactory availability of financial capital (Bullvåg et al. 2011) and high GDP per capita (World Bank 2014). In addition, Cooper et al. (1994) suggested that more financial capital might indicate plans that are more ambitious. Thus, natives with ambitions to extend their business beyond the limited scope of

the domestic market may require additional capital. The following hypothesis is proposed:

H3a: Financial capital is positively associated with international opportunity identification among native entrepreneurs.

Although a positive relationship between financial capital and immigrant business ownership has been previously observed (for example, Bates and Dunham 1993; Vinogradov and Isaksen 2008), the empirical evidence demonstrating how financial capital influences internationalisation among immigrants is lacking.

Compared to native entrepreneurs, financial capital may have the opposite effect on internationalisation among immigrant entrepreneurs. For immigrants who often have established connections abroad, it can be less financially demanding to identify opportunities abroad than in their host country. Transaction costs may also be lower for immigrant entrepreneurs in their country of origin because of language-related advantages, better understanding of foreign legislation compared to host country rules, and perceived credibility among immigrant business partners that is greater than their credibility among natives. Thus, the following hypothesis reflects the suggestion that immigrants perceive internationalisation as an alternative that demands less capital than starting up within the host country market:

H3b: Financial capital is negatively associated with international opportunity identification among immigrant entrepreneurs.

## Method

### Context

We have chosen Norway as the context to study how international opportunity identification varies between immigrant and native entrepreneurs. First, Norway's history of migration is representative of the migration patterns for many western, and especially European, countries. A relatively small-scale work-related migration began in the 1960s and 1970s. As of 2014, Norway's population is made up of up to 14.9% immigrants (first and second generation). Second, immigrant entrepreneurship is a widespread phenomenon in the country with the percentage of self-employed immigrants roughly equal to the percentage of self-employed natives (Statistics\_Norway 2014). Third, the number of unregistered businesses in Norway is low, making data from official business registers relatively reliable. Data, which include contact information for newly registered businesses, are easily available to the public.

### Measures

**International opportunity identification** We define international opportunities identification in line with Mainela et al. (2014, p. 120) as “a situation that both spans and integrates elements from multiple national contexts in which entrepreneurial action and interaction transform the manifestation of economic activity”. We understand this as

international market arbitrage discovery and emphasise the new venture idea (Davidsson 2015). In newly established firms considered in this study, we operationalise the venture idea as the business idea. Thus, we operationalise international opportunity identification as to what extent the business ideas were based on sales to other countries. For native entrepreneurs, the formulation of the question was as follows: to what extent do you agree with the following statement: “my/our business idea is based on sales of goods/services to other countries”. For immigrant entrepreneurs, two questions were formulated: “to what extent do you agree that your business idea is based on (1) sales of good/services to my country of origin and (2) sale of good/services to any other country (not Norway and not your country of origin)”. In conjunction with research by Govindarajan and Gupta (2000), who argue that internationalisation and thus spanning and integrating elements form multiple contexts is a continuous variable, the items were measured by using a 7-point Likert scale ranging from totally disagree (1) to totally agree (7). An opportunity was considered to be international when the respondent scored 3 and higher on this scale.

**General human capital** Educational level is applied as one of the most used proxies for general human capital. In this study, six alternatives (from primary to Ph.D./M.D., and similar levels) were presented to the respondents. The scale was later transformed into a dichotomous variable by dividing respondents into two groups based on whether they had a higher level of education (three or more years at a university) or a lower level of education (less than 3 years at a university).

**Financial capital** The respondents were asked about the amount of equity capital invested into the business by the owners (divided into nine categories as follows: under NOK 50,000, 51–200,000, 201–500,000, 501,000–1 mil, 1–2 mil, 2.5–5 mil, 5.1–10 mil, 10.1–50 mil and over 50 mil). This variable was later transformed (1/original value) due to deviation from normal distribution.

**Control variables** Gender (male/female) and previous start-up experience (yes/no) were used as control variables for personal characteristics. It was observed that immigrants were significantly overrepresented in the construction and manufacturing sector, whereas differences between immigrants and natives were less striking in other sectors. Based on this finding, belonging to the construction and manufacturing sector was used as a control variable for business characteristics.

## Sample

A pre-test was conducted for 1257 firms registered during 1 week in February 2012. Next, data on 31,340 firms registered between January and May 2012 were imported in April 2013 from official registers. A total of 6504 firms with irrelevant organisational forms (for example, state-owned entities and subsidiaries) were deleted from the list. Duplicate e-mail addresses and some firms that were not newly registered were also deleted. No email address was provided by 42% of newly registered firms. In total, 14,656 questionnaires were sent out and 1328 responses were received after three rounds of reminders.

A relatively low response rate (11%) was achieved most likely because the online survey is often considered to be spam. In addition, newly established firms are overloaded with different commercial proposals.

For the purposes of this study, only responses from the founders of the firms were included in the analysis, further reducing the sample to 997 respondents. Three respondents were removed because they were second-generation migrants (i.e. born in Norway with one or both parents born abroad). The immigrants who came to Norway at a young age (<18 years old) were also removed from the sample. These edits yielded a final database of 980 cases (116 immigrants and 864 native Norwegians). Most of the respondents with immigrant backgrounds came from Eastern Europe (25%), Scandinavian countries (21%) and Western Europe (18%).

Approximately 73% of all firms had no employees except the founder, and another 20% had only one to two employees. Half of the founders spent less than 20 h a week working with their firms. Thus, most of these businesses may be characterised as small, hobby-based businesses or businesses at the initial stage of a slow and careful start-up process.

Differences between immigrant and native entrepreneurs and their firms are presented in Tables 1, 2 and 3 below. The immigrant sample was found to be less male-dominated than the sample of natives was. Immigrants were younger than their Norwegian counterparts. Immigrants' businesses were especially overrepresented in construction and manufacturing. There were no significant differences between immigrants and natives with respect to education, business-founding experience or the amount of equity capital invested into their start-ups.

**Table 1** Characteristics of the entrepreneurs and their businesses (categorical measures)

Characteristics	Natives		Immigrants		Chi-square	Sig. (two-sided)
	<i>n</i>	%	<i>n</i>	%		
Founder's characteristics						
Gender (% male)	854	70.6	116	60.3	5.065	.031
Education (% higher education <sup>a</sup> )	864	27.5	116	26.7	.850	.821
Business founding experience	862	41.8	115	40.9	.033	.920
Business characteristics:						
Team founding (v. founding alone)	629	24.8	85	14.1	4.750	.017
Industry						
Agriculture, forestry, fishery and fish farms	25	2.9	2	1.5	.785	.564
Construction and manufacturing	72	8.3	23	17.7	11.450	.002
Transportation	13	1.5	3	2.3	.460	.454
Retail, wholesale, hotels and catering	102	11.8	13	10.0	.360	.659
IT and communication	92	10.6	13	10.0	.050	.999
Other professional services	435	50.3	59	45.4	1.113	.302
Other services	125	14.5	17	13.1	.178	.788

<sup>a</sup> Three or more years at the university or comparable

**Table 2** Characteristics of the entrepreneurs and their businesses (pseudo-continuous measures)

Characteristics	Natives		Immigrants		<i>t</i> -value	Sig.
	Mean	SD	Mean	SD		
Age <sup>a</sup>	6.07	2.64	5.40	1.85	2.66	.008
Equity capital invested	1.58	1.11	1.44	.89	1.28	.198

<sup>a</sup> Coded as 12 categories

### Resolution of potential biases

It is possible that immigrant and native entrepreneurs have different predispositions towards reporting an e-mail address to the official registers. To check for this bias, contact names from the pre-test sample were divided into clearly foreign names and other names. Of these 881 names, 124 (14.07%) were clearly foreign. The proportions of the firms reporting e-mail addresses were not significantly different for these two groups.

The differences between firms with and without e-mail addresses were also considered. Limited Partnerships and Sole Proprietorships constituted 93% of all registered

**Table 3** Logistic regressions for native and immigrant entrepreneurs separately

	Native entrepreneurs				Immigrant entrepreneurs			
	Model 1 (controls)		Model 2		Model 1 (controls)		Model 2	
	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)
Constant	-.351	.704	.309	.362	1.743	5.717	-.458	.632
Control variable:								
Q8 Gender	-.689***	.502	-.728***	.483	-.952*	.386	-1.112*	.329
Q7 Start-up Experience	.009	1.009	-.015	.985	-.119	.887	-.110	.896
Industry: Construction and Manufacturing	-.360	.698	-.372	.689	-.247	.781	.329	1.389
Human capital								
Education			.614**	1.848			.764	2.146
Financial capital								
Equity capital (NB: inverted variable)			-1.193***	.303			1.936*	6.931
Model chi-square	14.028**		25.156***		5.863		6.662*	
-2 Log likelihood	872.700		847.544		134.124		127.462	
Nagelkerke $R^2$	.026		.071		.075		.155	
Overall hit ratio (%)	76.8		76.8		60.8		65.7	

Dependent variable: International opportunity identification

Significance level: \* $\alpha = 0.05$ ; \*\* $\alpha = 0.01$ ; \*\*\*  $\alpha = 0.001$

firms. The former are underrepresented among the firms reporting e-mail addresses. Very few foreign firms registered in Norway reported an e-mail address. However, the total number of such firms is negligible.

No bias was detected for geographical distribution of the firms across the counties. Industries that were overrepresented among the firms with e-mail addresses included garment, information and communication, consulting, education, medical, arts, repair of electronics, and social services. Industries that were underrepresented include oil and gas, building and construction, catering, finance and insurance, and real estate.

Some non-response bias was detected. Sole Proprietorships were less likely to respond than Limited Partnerships, and 94% of respondents reported registering Sole Proprietorship or Limited Partnerships. Foreign firms registered in Norway were relatively less likely to respond to the survey. Industries that were overrepresented among respondents include unknown industries, information and communication, and consulting. Underrepresented industries included building and construction, gross-sale and car maintenance, transportation, real estate, medical and social services.

## Analysis

In our sample, immigrant entrepreneurs identified international opportunities twice as often as native entrepreneurs (43.3 versus 23.7%, chi-square = 20.355, significant at .001 level). These findings support hypothesis 1. Only 9% of immigrants developing international opportunities do not try to export to their home country. In three of four cases, identification of international opportunities involves at least one country in addition to the home country.

The relationships between general human capital, financial capital and international opportunity identification were further analysed using logistic regression analysis. This statistical method allows predicting categorical-dependent variable (international opportunity identification) with predictor variables that are continuous and/or categorical. Regressions were applied separately for immigrant and native respondents. Sample size and, especially, EPV (events per variable) influence the results of a logistic regression. While no definite theoretically based threshold has been established, simulations studies show that EPV values lower than 10 lead to serious biases in regression coefficients and jeopardise validity (see for example Peduzzi et al. 1996). In our study, EPV for immigrant sample is  $116/5 = 23.2$  and  $864/5 = 172.8$  for natives. When EPV is so much higher than 16 (Vittinghoff and McCulloch 2006), the differences between regressions with 116 or 864 cases are practically unobservable.

At the second stage, measures of general human capital and financial capital were added leading to the significant increase in chi-square and  $R^2$  for both native and immigrant entrepreneurs. The overall hit ratio increased only in the latter case.

Among the control variables, only gender had a significant effect on the dependent variable. Female native entrepreneurs are approximately 50% less likely to identify international opportunities than native males. Immigrant females are 70% less likely to do so in comparison to immigrant men.

Regarding the effect of human capital, education had a significant positive impact on natives' internationalisation. The probability of identifying international opportunities is 84.8% higher for natives with higher education (H2a confirmed). No significant

effect of education was detected for immigrant entrepreneurs. This finding indicates that for immigrants, higher education does not lead to a higher probability of developing international business opportunities. However, this result may be considered with some scepticism because lower significance of the regression coefficients for immigrants compared to natives may be caused by the sample size differences. Regression results for the much smaller samples (immigrants in this case) tend to be less significant compared to larger samples.

Equity capital has opposite effects on internationalisation among immigrant and native entrepreneurs. Among natives, equity capital has a significant positive association with identifying international opportunities (note that  $B$  is smaller than 0 because the variable was reversed). Thus, H3a is confirmed. This relationship has a negative association for immigrants (H3b confirmed).

## Discussion

### The effects of general human capital and financial capital on internationalisation among immigrants

In this study, we have focused on identification of international opportunities among native and immigrant entrepreneurs. Some significant differences in how international opportunity identification varies between these two types of entrepreneurs have been revealed. First, our findings confirm that immigrant entrepreneurs identify international opportunities more often than native entrepreneurs do. In fact, immigrant entrepreneurs identify such opportunities almost twice as often as native entrepreneurs do. Second, this difference cannot be explained simply by an average endowment of financial and general human capital. Immigrant entrepreneurs are not significantly different from natives when considering their educational level and they use, on average, the same amount of equity capital as native entrepreneurs. However, our analysis demonstrates that compared to native entrepreneurs, immigrant entrepreneurs have a lower demand for both general human resources and financial capital to identify international opportunities.

Our findings reveal that although general human capital has a significant positive effect on international opportunity identification among native entrepreneurs, the same effect cannot be identified among immigrant entrepreneurs. These findings support the assumption that native entrepreneurs with higher education tend to identify international opportunities more often than their companions with lower education do. Native entrepreneurs with lower education tend to identify domestic business opportunities. Moreover, our findings demonstrate that higher formal education is less needed to identify international opportunities among immigrant entrepreneurs. We think that this is because immigrant entrepreneurs often have inherent knowledge about the international context in which they are likely to operate. In addition, their companions with higher education will probably be employed in a good job in the host country rather than starting their own business.

Our findings also reveal that although financial capital positively influences international opportunity identification among native entrepreneurs, the same effect is significantly negative among immigrant entrepreneurs. The identification of



international opportunities is therefore perceived as relatively more capital-intensive by native than by immigrant entrepreneurs. These results indicate that native entrepreneurs require additional investments to internationalise, whereas immigrants perceive internationalisation as an alternative that demands less capital. This may indicate that immigrants identifying international opportunities substitute financial investments with other resources such as networks. Immigrants may have better access to transnational networks than to networks in the host country. Although native entrepreneurs need extra financial resources to internationalise, immigrants choose to internationalise in a field where financial capital may be substituted with social ties.

### Implications for theory and practice

Our study brings together insight on international opportunities from the entrepreneurship and international entrepreneurship literature (Alvarez et al. 2013; Davidsson 2015; Mainela et al. 2014), insight related to individual entrepreneurs from the immigrant entrepreneurship literature (Beaujot et al. 1994; Bonacich 1973; Kloosterman and Rath 2001; Light 2000; Ram et al. 2003) and a resource-based view of internationalisation focusing on general human and financial capital (Peng 2001; Westhead et al. 2001). This study has implications for the literature on both international and immigrant entrepreneurship.

Existing international entrepreneurship literature focuses mainly on the creation of new international ventures as a means to discover and exploit international opportunities. Our study confirms that the interaction between the international opportunity and the individual entrepreneur is a fruitful way to conceptualise and understand entrepreneurial internationalisation processes (see also Andersson and Evers 2015; Lehto 2015). Our findings add new knowledge about variations in the resources needed for opportunity identification across different groups of international entrepreneurs. In line with Jiang et al. (2016) studying new venture survival, we contribute to a richer understanding of international entrepreneurship by bringing in an immigrant effect. Paying attention to personal and intergroup differences between native and immigrant entrepreneurs, instead of treating them as a homogenous group (Westhead et al. 2001), improves the in-depth understanding of these processes and the predictive and explanatory power of the models. Moreover, one methodological contribution to this literature is that we define and operationalise international opportunity identification as a market arbitrage discovery process (Mainela et al. 2014), with an emphasis on the new venture idea (Davidsson 2015).

In terms of immigrant entrepreneurship literature, the introduction of international opportunities is a novel contribution. Originating in sociological and anthropological traditions and focusing on how different immigrant and ethnic groups function in the receiving country, the immigrant entrepreneurship literature devotes little attention to international entrepreneurial opportunities. Our results suggest that mono-causal explanations for entrepreneurial activity among immigrants, such as blocked mobility hypothesis (Bonacich 1973) and cultural thesis (Light 1984), are incomplete without taking opportunity identification into account. Our findings are more in line with mixed embeddedness (Kloosterman 2010) and other interactive approaches (Waldinger 2002) that also emphasise the central role of the opportunity structure. Our study explores further how opportunity structure is translated into business start-ups via the

opportunity identification process. Mixed embeddedness perspective underlines the link between meso-level of opportunity structure and micro-level of individual entrepreneurs. Our study suggests that opportunity identification is one of the mechanisms linking these two levels. Immigrant entrepreneurship literature provides rather contradictory evidence of the effect of human capital on immigrants' propensity to start a business and virtually no insight into the relationship between human capital and internationalisation. In our sample, no effect of education on the identification of international opportunities is found among immigrants, suggesting that liability of foreignness (Hymer 1976; Zaheer 1995) has not played an important role for internationalisation of immigrant-owned businesses.

The results of this study may also have practical implications for policy-makers concerned with stimulating internationalisation among different groups of entrepreneurs. This study suggests that some interventions at the earliest stages of the entrepreneurial process may influence the degree of internationalisation, but the effects will be different for immigrant and native entrepreneurs. First, financial initiatives are likely to have significant effects on early internationalisation of native-owned, but not immigrant-owned, firms. Second, because formal education is positively related to international opportunity identification among native entrepreneurs, specific training programmes may stimulate the creation of international businesses in this group. These programmes may target participants' access to information about foreign markets and development of relevant international networks. The same set of training programmes is expected to have minimal effect on identification of international opportunities among immigrants. Creating arenas for teambuilding between immigrant and native entrepreneurs may effectively stimulate the development of international opportunities in both groups. Native entrepreneurs may use partners with immigrant backgrounds to acquire relevant knowledge about foreign country contexts and to internationalise in more cost-effective ways. Immigrant entrepreneurs may benefit from collaboration with native entrepreneurs in terms of access to domestic networks and financial resources.

### **Limitations and future research**

The authors see some limitations of this research that opens up avenues for future refinements. First, this study captures only the early stages of internationalisation process when evaluation of outcomes is not possible. More insight into how the performance of international opportunity identification varies among different group of entrepreneurs is needed. Measured as business survival, employment, or by financial indicators, the output of internationalisation may be at least partly attributed to the initial resource base. Second, interaction between initial resources and individual entrepreneurs' backgrounds may be further explored. In addition to the focus on general human and financial capital in this study, the effects of specific human capital, ethnic origins and transnational networks, for example, are of primary interest. Third, the empirical data for this study have been collected in Norway with its specific historical, cultural and ethnic context. Moreover, using register data instead of or in addition to questionnaires may strengthen the analysis. The role of various contexts in developing international opportunities may be studied on the national, regional and

neighbourhood levels. Fourth and finally, more insight is needed into how different entrepreneurs continue to develop opportunities after the early stages of internationalisation have passed.

## Conclusion

In this study, we have investigated how the identification of international opportunities varies between native and immigrant entrepreneurs. Based on the insight on international opportunities from the entrepreneurship and international entrepreneurship literature on the one hand, and insight on the individual entrepreneur based on immigrant entrepreneurship and a resource-based view of internationalisation on the other, we argue that immigrant entrepreneurs identify international opportunities more often than native entrepreneurs do. Moreover, we suggested four hypotheses explaining the relationships between general human capital, financial capital and opportunity identification for these two groups of entrepreneurs. Our findings show that native and immigrant entrepreneurs need quite different resources to identify international opportunities. Although general human capital had a significant and positive impact on international opportunity identification for native entrepreneurs, the same effect was not significant for immigrant entrepreneurs. Furthermore, whereas financial capital positively influenced international opportunity identification among native entrepreneurs, the effect was negative for immigrant entrepreneurs. We contribute to the international entrepreneurship literature by finding significant differences in how native and immigrant entrepreneurs identify such opportunities and to the immigrant entrepreneurship literature by bringing the opportunity-based view of entrepreneurship into the field.

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