International competitiveness readiness, home country institutions, and early internationalisation

Abstract

Purpose- Synthesising an individual-opportunity nexus model, this research aims to develop a model of early internationalisation by integrating international competitiveness readiness, entrepreneurial motives, and home-country institutions, and empirically assess this model using a multilevel estimate design.

Design/methodology/approach- Drawing upon a global context comprising 79,402 entrepreneurs from 87 countries, this research applies a Heckman two-step model together with a multilevel approach that allow us to deal with self-selection bias and to take the hierarchical nature of the data into account.

Findings- The findings show that early internationalisation is significantly affected by entrepreneurs' international competitiveness readiness and this association is moderated by entrepreneurial motives. In addition, the findings demonstrate that the individual-level effects are further modified by the quality of country-level governance.

Practical implications- The research findings have significant implications and value for policy-makers who are aiming to stimulate the rate of early internationalisation by influencing the quality of governance.

Originality/value- The results contribute to the development of knowledge and theoretical bases in international entrepreneurship. It provides a multi-level view on the relationships between entrepreneurs and the internationalisation of their firms from an integrative perspective, thereby complementing the perspective of international competitiveness readiness that primarily focuses on the effects of inherent resources and capabilities.

Key words Early internationalisation; International competitiveness readiness; Governance quality; Entrepreneurial motives
1. Introduction

Early internationalisation has come to be regarded as a distinct field of study over last two decades, and is the subject of much research in the domain of international entrepreneurship (IE) (Fabian et al., 2009; Tracey and Phillips, 2011). In spite of the importance of internationalisation being acknowledged in the extant literature, very few studies have so far attempted to uncover - among other research issues relevant to the phenomenon, why some entrepreneurs internationalise their businesses early (i.e. early internationalisation) while others do not (Knight and Liesch, 2016). Moreover, scholars have performed a wealth of research into the determinants of internationalisation across different countries both from micro-level (e.g. Boehe, 2013; Ellis, 2011) and macro-level (e.g. Urbano and Alvarez, 2014) perspectives. Recent developments suggest that, in order to advance our understanding of entrepreneurial activities, including early internationalisation, researchers need to pay more attention to the joint effect of both individual and contextual antecedents, as well as the interactions between them (Zhang et al., 2016; Yang et al., 2020). The interactions between the individual-level antecedents and the national institutions proposed by Frese (2009) have been emphasised as the key to a multilevel approach (Li, 2020; Lim et al., 2016). However, notwithstanding the growing awareness of the joint effects of micro- and macro-level aspects, determining the interactions between cross-level factors with regard to early internationalisation remains challenging.

In common with all entrepreneurial activity, heterogeneity in regard to early internationalisation derives from the knowledge, cognitions, resources, and capabilities of the entrepreneurs (Yang et al., 2020). Various explanations have been offered for this heterogeneity. One recent explanation is grounded in the notion of entrepreneurs’ international competitiveness readiness (Pinho et al., 2018). Existing research has identified competitiveness readiness as playing an important role in entrepreneurial activities (Schillo et al., 2016), but research on the association between entrepreneurs' international competitiveness readiness and early internationalisation remains scant. The study by Amorós et al. (2016) is an exception. Based on a sample of entrepreneurs in Chile, Amorós et al. (2016) found that international competitiveness readiness is positively related to entrepreneurs’ tendency towards firm internationalisation. Despite its contribution to enhancing our
understanding of the association between entrepreneurial readiness and international activities, their research does not disentangle the impacts of entrepreneurial motives and national institutions on the process of discovering, evaluating, and exploiting entrepreneurial opportunities beyond national borders. Less attention has been paid to the entrepreneurial motives and institutions that could jointly promote and constrain entrepreneurs’ international competitiveness readiness to expand their businesses internationally, and this neglect might have led to the inconsistent findings in regard to the observed differences in the rate of internationalised business across countries (Yang et al., 2020). In particular, opportunistic entrepreneurs might be motivated to pursue an international opportunity for some form of gain by the need to succeed or achieve, unlike necessity-driven entrepreneurs. Entrepreneurs' international competitiveness readiness and the pursuit of a recognised business opportunity in the international markets are therefore critical while, at the same time, entrepreneurs require an opportunity that motivates them to exploit their resources and capabilities (Jafari-Sadeghi, 2020; Raza et al., 2018). Most prior research has primarily focused on the direct effect of international competitiveness readiness on entrepreneurial activity, while overlooking its impact in combination with entrepreneurial motives. This research therefore takes an important step forward in terms of extending this line of argument theoretically, by being the first to investigate the combination of resources and capabilities used in the pursuit of global opportunities, which constitutes the basis for the emergence of an internationalised business.

Although a large body of studies has emerged in recent decades on ways in which country-level institutions affect internationalisation (Cullen et al., 2014), the main focus of prior research has been given on the influences of institutional factors such as corruption (Chowdhury et al., 2015), economic institutions (Zahra et al., 2005), formal and informal institutions (Li, 2019), national culture and social institutions (Yamakawa et al., 2008). When entrepreneurs undertake international expansion, their home country’s governance quality- i.e. the entire formal institutional environment - plays an important role (Filatotchev et al., 2007; Slangen and Van Tulder, 2009). Inadequate attention has been given to the governance quality that could enable and mobilise the institutional environments in order to facilitate entrepreneurship (Chang et al., 2014; Cuervo-Cazurra et al., 2018). Furthermore, the existing
literature has identified macro-level environments as playing an important role in combination with individual characteristics and entrepreneurial activities (Laine and Galkina, 2017), but the question of how the proposed moderating role of entrepreneurial motives on early internationalisation is contingent on the home country governance quality remains under-researched. This paper attempts to address these aforementioned gaps in the extant literature by examining how the three-way interactions between micro- and macro-level factors affect early internationalisation. More specifically, this research builds on Shane’s (2003) individual-opportunity nexus model to develop a conceptual framework designed to assess how entrepreneurs’ international competitiveness readiness affects their early internationalisation. Moreover, the framework can be used to gain insight into at how the quality of macro-level governance provides macro-level conditions for the relationships between international competitiveness readiness, entrepreneurial motives, and early internationalisation.

The first contribution of this research is that it is among the first to integrate the individual-opportunity nexus within a multilevel model in order to explain the differences in the degree of early internationalisation across countries. It extends the existing literature by simultaneously considering the role played by entrepreneurial motives in entrepreneurs’ readiness to internationalise their businesses. While the moderating role played by entrepreneurial motives in a firm’s internationalisation has so far received limited attention (Yang et al., 2020), this research reveals that opportunity-oriented motivation is grounded in entrepreneurs’ desire to utilise their resources and capabilities, which enhances the effects of international competitiveness readiness on early internationalisation. Second, this research introduces the concept of governance quality into the equation and assesses both its direct and triple interaction effects. It argues that the association between individual competitiveness readiness and early internationalisation cannot be fully understood without taking country-level governance mechanisms into consideration. This study brings the analysis of entrepreneurial behaviour into a context-specific domain, and espouses the view that home-country governance mechanisms matter, and thus should be taken into consideration in current theories on firm internationalisation (Gaur et al. 2014). Third, while prior analysis of micro- and macro-level factors has advanced our understanding of internationalisation, this
research takes an important further step within the field by bringing these two levels of development together and extending the extant IE research. It uses the individual-opportunity nexus model (Shane, 2003) to assess early internationalisation as the result of both motivational factors and the external environment and investigate how their cross-level interaction affects early internationalisation. It suggests that cross-level analysis involves acknowledging that there is a specific person-environment relationship in operation, and that the impact of individual antecedents on early internationalisation cannot be fully captured if entrepreneurs and/or institutional environments are treated as separate entities. Thus, this paper addresses the significant important gap that exists regarding the lack of multilevel cross-country analyses on how micro-level antecedents and macro-level contexts jointly affect early internationalisation.

The remainder of the paper is structured as follows. Section 2 reviews existing research in early internationalisation. Then, it conceptualises the link between micro-level antecedents and the degree of early internationalisation and discusses how home country governance quality provides macro-level conditions for these associations in Section 3. The data and estimation method used are outlined in Section 4. Section 5 presents the analytical results. Section 6 discusses theoretical contributions, practical implications, and limitations while Section 7 draws conclusions.

2. Theoretical background

This section offers an overview of existing studies on early internationalisation and adds a recent theoretical development within the domain of entrepreneurship as a building block for the conceptual model.

2.1. Early internationalisation

Internationalisation is defined as the process of discovery, assessment and exploitation of opportunities across domestic borders (Oviatt and McDougall, 2005). Within the broader studies on internationalisation, a specific line of enquiry is related to the question of why some entrepreneurs internationalise their businesses early while others do not. Extant research in this domain has been labelled as early internationalisation research and has gained
legitimacy as a distinct sub-field of IE (Knight and Liesch, 2016). Building on the seminal work by McDougall (1989) on international new ventures (INVs), an increasing number of studies on early internationalisation have emerged. A substantial body of review articles has generated an overview of the research progress in this domain and focused on certain aspects of internationalisation.

The existing literature suggests that international competitiveness readiness refers to the individual-level entrepreneurs' propensity and preparedness to internationalise their businesses (Pinho et al., 2018). According to this perspective, entrepreneurs can utilise the resources and capabilities available to them to promote the international expansion of their businesses (Amorós et al., 2016). Resources and the capability to innovate constitute key factors in relation to entrepreneurs’ readiness for internationalisation. These resources and capabilities include knowledge, technology, information, and assets, which allow entrepreneurs to conceive and implement business strategies that lead to greater effectiveness in different markets (Amorós et al., 2016). Moreover, entrepreneurs’ readiness to internationalise their businesses could be fuelled by their entrepreneurial motives (Pinho et al., 2018). One of the most important motivational classifications is the distinction between opportunity and necessity motives, which relates to the concept of being ‘pulled’ or ‘pushed’ into entrepreneurship (Jafari-Sadeghi, 2020). Opportunity-motivated entrepreneurs create new ventures in order to pursue business opportunities rather than because they are forced to do so. These individuals start their ventures because of a desire for success, achievement, status, and wealth rather than for the purpose of survival. By contrast, necessity-driven entrepreneurs seek self-employment due to a lack of better alternatives (e.g. involuntary job loss and a scarcity of job vacancies). The primary objective of necessity-driven entrepreneurs in being self-employed is to fulfill their immediate needs to escape an uncomfortable situation in their current employment or poverty (Fuentelsaz et al., 2015). Thus, these different entrepreneurial motivations do not necessarily provide individuals with the same level of impetus for pursuing high-risk, albeit potentially high-reward, entrepreneurial opportunities in the global market.

At a macro-level, the existing research has demonstrated that the entrepreneurial behaviour of pursuing opportunities is influenced by the presence of a supportive or inhibitory
institutional context (Estrin et al., 2016; Schillo et al., 2016). The role of institutions in affecting entrepreneurial behaviours is not a new subject within the broader field of entrepreneurship. However, in regard to entrepreneurial internationalisation, with a few exceptions (e.g., Chen et al., 2018), studies have tended to concentrate on the influence of host-country institutional environments, thereby overlooking the impact of institutions in home country. Furthermore, the question of how institutional governance facilitates and impedes entrepreneurs' pursuit of opportunities as well as how it affects entrepreneurs' international competitiveness readiness to identify and seize such opportunities by internationalising their businesses, remain understudied. This research thus advances the extant research by integrating micro-level and macro-level antecedents into IE and by taking the collective effects of these cross-level variables into consideration. It builds on an individual-opportunity nexus model that highlights the interplay between different levels of analyses and adopts the view that considering one without the other might generate inconclusive findings in relation to our understanding of early internationalisation.

2.2 Individual-opportunity nexus

The fragmentation of the field of entrepreneurship encompasses the lack of a shared conceptual framework, which has arisen from the tendency among scholars to explain entrepreneurial activities solely from the standpoint of individual entrepreneurs or the business context as separate entities (Shane, 2003). A recent study by Thrane et al. (2016) suggested that there is a tendency to rely on approaches pertaining to either an individual- or an environmental-level analysis. However, the domain of entrepreneurship lacks conceptual models that explicitly integrate these two levels together. In order to move the conversation within the literature on from focusing solely on entrepreneurial activities including internationalisation, this research therefore applies the individual-opportunity nexus as a theoretical framework that can be used to explain internationalisation in a more coherent way. The individual-opportunity nexus places great emphasis on the significance of the opportunities that exist within macro-level institutions as providing the prime motivation for individuals, and suggests that the act of entrepreneurship should be seen as located at the nexus between individuals and sources of opportunity external to them (Shane, 2003). In
particular, the reason why only some entrepreneurs prove to be capable of pursuing international business opportunities is a consequence of the interplay between individual antecedents such as entrepreneurs' resources, entrepreneurial motives and environmental antecedents such as national institutions.

According to the individual-opportunity nexus model, macro-level institutions play a highly significant role in terms of the interplay between entrepreneurs and opportunities. Consequently, the use of macro-level analysis can advance the model by revealing how national institutions create entrepreneurial opportunities and how they interact with individual entrepreneurs with different entrepreneurial motives to prompt them to further evaluate and seize upon opportunities for early internationalisation. Although empirical works on how environmental antecedents affect individuals’ discovery and exploitation of opportunities are emerging, theoretical and empirical research based on a cross-level approach remains scarce. In order to address these research gaps in the literature, our research adopts an integrative view, that is, it assumes that an entrepreneur is involved in a continuous process of interaction with motivational factors, and the external environment, thereby complementing the perspective on international competitiveness readiness that primarily focuses on the influences of entrepreneurs' inherent resources and/or capabilities. At the same time, the understanding of early internationalisation can be further advanced by considering the direct influence as well as the contextual impacts provided by the quality of home-country governance on entrepreneurs' pursuit of opportunities in international markets.

In the next section, building upon the individual-opportunity nexus, we develop hypotheses about how international competitiveness readiness might contribute to early internationalisation. We then extend our conceptual model by examining how the differences between individuals' entrepreneurial motives and the home-country governance quality could influence the leverage of international competitiveness readiness on internationalisation behaviours.

3. Hypothesis development

3.1. International competitiveness readiness

International readiness is described by Tan et al. (2007) as an entrepreneur's 'preparedness and
propensity to commence internationalisation' (p.302). Building upon this work, Amorós et al. (2016) defined international competitiveness readiness as multi-dimensional, referring to a combination of entrepreneurs’ distinctive resources and capabilities to perform product and process innovation, and abilities to perceive opportunities and the evaluation of environmental competition. The ability to innovate is crucial for entrepreneurs who intend to expand their businesses into international markets as it serves as a sustainable source of competitive advantage, which not only facilitates growth and productivity but also accelerates internationalisation at an early stage of the business (Pinho et al., 2018). Entrepreneurs can develop two types of innovation: product innovation and process innovation. Product innovation is related to entrepreneurs’ abilities to find new ways to identify, acquire, and exploit opportunities and this, in turn, makes them better placed into expand international markets (Baregheh et al., 2009). The development of process innovation allows entrepreneurs to reduce production costs and thus compete by offering lower prices. Internationalised firms that are associated with a high degree of process innovation can manage the social capital and knowledge that offers international growth opportunities more effectively (Jones et al., 2001).

Bloodgood et al. (1997) found that the degree of internationalisation undertaken by new ventures increases when a differentiated product strategy is adopted. Similarly, Knight and Cavusgil (2004) emphasised 'the critical role of innovative culture, as well as knowledge and capabilities, in this unique breed of international, entrepreneurial firm' (2004, p.24).

Furthermore, Amorós et al. (2016) suggested that the recognition of opportunities is an important factor that promotes entrepreneurs' competitiveness readiness in the international business context. Entrepreneurs' ability to recognise opportunities is regarded as the chance to fulfill a market need by using a creative combination of resources to deliver value (Pinho et al., 2018). This situation is described as market detection, which affects a set of possibilities for doing business globally. If entrepreneurs face increasing competition in terms of innovation from larger companies in their home countries or encounter a greater number of domestic competitors offering the same products, they will be more likely to internationalise their businesses (Westhead et al., 2002). The increased competition in their home country leads to a misalignment between entrepreneurs’ needs and the business environment, which, in turn, adversely affects domestic sales and profits, constrains growth opportunities, and induces an
escape response from local firms (Witt and Lewin, 2007). Taking these arguments together, a higher degree of international competitiveness readiness helps entrepreneurs to compete more effectively in a competitive international environment and makes them more likely to internationalise their businesses. It is therefore argued:

**Hypothesis 1** The degree of international competitiveness readiness is positively associated with the degree of early internationalisation.

3.2. Entrepreneurial motivational factors

In this section, it is argued that the influence of international competitiveness readiness on early internationalisation is greater for entrepreneurs who are motivated by opportunity than for necessity-driven entrepreneurs. Opportunities are defined as 'situations in which goods, services, raw materials, markets and organising methods can be introduced through the formation of new means, ends, or means-ends relationship’ (Eckhardt and Shane, 2003, p. 336). The emergence of an internationalised business involves the pursuit of business opportunities overseas by individuals (Gaur et al., 2014). The pursuit of a latent opportunity can offer opportunity-motivated entrepreneurs an auto-system that allows them to control their resources and capabilities, which will thereby strengthen the extent to which international competitiveness readiness affects internationalisation. However, necessity-driven entrepreneurs launch their ventures as a substitute for employment and are thus less inclined to engage in the forethought and planning required to expand their businesses internationally. They tend to be satisfied with being able to operate in their home country for the purpose of supporting themselves. In other words, they tend to be more sensitive to immediate domestic opportunities than international business opportunities. Consequently, their international competitiveness readiness is likely to have a weaker effect on their propensity to expand their businesses internationally. Therefore, the following hypothesis is proposed:

**Hypothesis 2** The positive effect of international competitiveness readiness on the degree of early internationalisation is greater for opportunity-motivated entrepreneurs than for necessity-motivated entrepreneurs.
3.3. Governance quality and early internationalisation

Current studies have suggested that internationalisation is a reflection of the macro-level environments in which businesses are operating (Lim et al., 2016). A growing number of scholars have claimed that the ‘governance quality’ of a country is the key concept that determines the institutional, political, and legal conditions of the home country (Slangen and Van Tulder, 2009). The concept of governance quality embodies the overall ‘public institutions and policies created by governments as a framework for economic, legal, and social relations’ (Globerman and Shapiro, 2003, p. 20). Thus, home country governance can serve the purpose of promoting both domestic and international entrepreneurial actions. A beneficial governance infrastructure is regarded as including an impartial legal system, an efficient and incorruptible government, and public policies that are stable, accountable, transparent and trustworthy, which will decrease the perceived uncertainties for entrepreneurial activities (Manolova et al., 2008). The decreased transaction costs involved in starting ventures and in conducting entrepreneurial activities give rise to incentives for entrepreneurs to seek international opportunities. For example, Zhang et al. (2016) found that the support offered to firms by the Chinese government in the form of lost-cost regulatory resources such as cheap credit, land subsidies, and tax are crucial for their success in exploring business opportunities domestically and abroad. It can therefore be assumed that:

Hypothesis 3 Home-country governance quality is positively associated with the degree of early internationalisation.

3.4. The triple interaction effects of governance quality

The governance mechanisms in operation provide business conditions that enhance opportunity-motivated individuals’ mental schema, thus allowing them to better capture and allocate resources that can be used in internationalisation. For instance, Parente and Prescott (1994) found that barriers to the adoption of technology are caused by institutional constraints, violence and corruption, while institutional governance enforces desirable entrepreneurial behaviour by defining standards and rules. Smeets and de Vaal (2016) claimed that the use of the newest available technology is greater among opportunity-motivated entrepreneurs when
country-level institutional quality increases. In addition, a better-developed governance structure can encourage entrepreneurs to invest in the newest technology and to innovate in their home countries (Lim et al., 2016) but the resultant more intensive competition can push enterprises into a difficult situation (Pinho et al., 2018). In these circumstances, opportunity-motivated entrepreneurs are less likely to build on their knowledge of the context within the domestic market, which has the effect of facilitating their escape response from the home country environment (Witt and Lewin, 2007). Given that opportunity-motivated entrepreneurs are more externally oriented towards the pursuit of international opportunities than necessity-driven entrepreneurs, it can be further assumed that the macro-level governance quality on early internationalisation have a greater effect in the case of opportunity entrepreneurship. In contrast, necessity-driven entrepreneurship involves individuals feeling compelled to start ventures only as a last resort because other options for work are either unsatisfactory or absent (Jafari-Sadeghi, 2020). Consequently, opportunity-motivated entrepreneurs tend to evaluate the availability and accessibility of products and technological innovations more positively and are thus more likely to take advantage of their resources to pursue opportunities, which enhances the positive impact of international competitiveness readiness on early internationalisation among opportunity-driven entrepreneurs. When taken together, these arguments point to a triple interaction effect, under which the proposed moderating effect of entrepreneurial motives on the association between international competitiveness readiness and early internationalisation referred to Hypothesis 2 is likely to be modified by high-quality governance in the home country:

**Hypothesis 4** The moderating effect of entrepreneurial motives on the relationship between international competitiveness readiness and early internationalisation will be greater when the home-country governance quality is more developed.
4. Data and methodology

4.1. Data and sample description

Data on governance quality in the home country, together with macro-level control variables, were collected from Governance Indicator, World Bank’s Worldwide and World Economic Outlook Database. The Global Entrepreneurship Monitor-Adult Population Survey (GEM-APS) was used to identify individual entrepreneurs. The GEM-APS survey started in the late 1990s with the aim of producing harmonised data on the prevalence and perceptions of new entrepreneurial activity across countries. GEM survey is conducted annually with representative entrepreneurs who are aged from 18 to 64 years old in each participating country (Reynolds and Hechavaria, 2008). We pooled data obtained through the GEM-APS for the period 2011-2015 on 87 countries. Early-stage entrepreneurs were defined as adults actively involved in starting up a new business (i.e. nascent entrepreneurs) or owning an operating firm that is up to three and a half years old (i.e. young business owners) (Urbano and Alvarez, 2014). Our usable dataset comprised 79,402 observations from 87 countries.

Dependent variable

Early internationalisation. Following the measure of early internationalisation used in prior research (e.g. Amorós et al., 2016; Li, 2018; Muralidharan and Pathak, 2017; Yang et al., 2020), the degree of early internationalisation was assessed by asking early-stage entrepreneurs the percentage of sales generated in foreign countries out of the total amount of sales made by their firms. The respondents comprised individuals involved in starting up a new business (i.e. nascent entrepreneurs) or who own an operating firm that is up to three and a half years old (i.e. young business owners). This measure captures the following different degree of export intensity (proportion of export sales to total sales): no internationalisation (ratio of international sales to total sales equals 0%); low intensity (ratio of international sales to total sales is less than 25%); mid intensity (ratio of international sales to total sales is between 25% and 75%); and high intensity (ratio of international sales to total sales is greater than 75%). In line with Muralidharan and Pathak’s (2017) study, this operationalisation generated an evenly distributed range of values representing the degree of entrepreneurs' engagement in early internationalisation. In order to demonstrate the differences between
countries with regard to the degree of early internationalisation, Figure 1 was plotted based on a random-intercept model that includes country-level effects with 95% confidence intervals. The vertical axis shows the predicted intercept and the horizontal axis shows the ranking of the country-level effects. Considerable heterogeneity can be observed in the degree of early internationalisation across the sampled countries, which implies that there is a degree of variance in the dependent variable and a need to use multilevel approaches.

[Insert Figures 1 about Here]

Independent variables

*International competitiveness readiness.* Following the approach employed by Amorós et al. (2016), entrepreneurs’ international competitiveness readiness was captured using four variables, based on a sample of 79,402 early-stage entrepreneurs who are actively involved in starting up a new business or who own an operating firm that is up to three and a half years old. More specifically, the identified early-stage entrepreneurs were asked to state the number of potential customers who considered their product to be new and innovative (0-None; 1-Some; 2-All) and how long the technology or procedures necessary to produce the product had been available to them (0-More than five years; 1-Between one and five years; 2-Less than a year). Entrepreneurs’ ability to perceive opportunities was measured dichotomously, by asking the individual respondents if they believed there would be good opportunities to start new businesses in the area where they live in the next six months (0-No; 1-Yes). Lastly, perceived competition was assessed by gathering early-stage entrepreneurs’ knowledge about the intensity of competition from businesses offering the same products to potential customers (0-No competitors; 1-Few competitors; 2-Many competitors). Following the approach used in Amorós, Etchebarne, Zapata and Felzensztein’s (2016) study, the arithmetic sum of these variables was used to generate a single overall proxy of the degree of international competitiveness readiness ranging from '0' to '7'. Table 1 details the measures and definitions of the variables studied.

[Insert Table 1 about Here]
Entrepreneurial motives. This research utilises the GEM definition of entrepreneurial motives and thus categorises entrepreneurial motives into opportunity motives and necessity motives (Williams, 2009). Following prior research (e.g. Jafari-Sadeghi, 2020; Yang et al., 2020), the binary variable of 'entrepreneurial motive' was obtained using GEM-APS, with a value of ‘1’ representing opportunity-motivated entrepreneurs and '0' to denote that entrepreneurs were necessity-driven.

Governance quality. This research applies the Worldwide Governance Indicator (WGI) developed by the World Bank to capture the governance quality in the entrepreneurs’ home countries (Chang et al., 2014). The WGI survey includes 212 countries and formerly published the results every two years from 1996 to 2003, since which time they have been published annually. By applying unobserved components models, six dimensions of governance quality were aggregated: political stability, rule of law, regulatory quality, government effectiveness, control of corruption, and accountability (Kaufmann et al., 2009). Each index is continuous in nature, ranging from -2.5 to +2.5. This research follows Chang et al.’s (2014) method of aggregating these scores in order to generate an index of governance quality. An aggregate score was assigned to each country, with a higher value representing a better quality of governance in the country measured. Since the dataset in this research was comprised of GEM-APS data from 2011 to 2015, the measure of governance quality was established using only those countries that consistently appeared in both the GEM and WGI surveys in each of those years.

Control variables

Given the greater propensity of males to internationalise their businesses in comparison to females (Muralidharan and Pathak, 2017), this research took the gender of early-stage entrepreneurs into account. According to Arenius and Minniti's (2005) work, age and household income appeared to exert significant effects on entrepreneurial activities. Thus, this research controlled for entrepreneurs' socioeconomic status and age. As educational attainment has often been viewed as a driver of entrepreneurship (Estrin et al., 2016), the respondents were requested to state the highest educational qualification that they had
obtained. Moreover, Wu and Chen (2014) found that sectorial differences play an important role in affecting export intensity. Therefore, dummy variables were generated in order to capture different entrepreneurial types, which were categorised as: extractive industry, transforming industry, business service industry, and consumer-oriented industry. The consumer-oriented sector was used as the reference category. At a macro level, the existing literature suggested that there is a significant association between the economic development of home countries and the entrepreneurial activities (Carree et al., 2002). Hence, this research included the gross domestic product (GDP) per capita and the GDP growth rate of each country. Data on countries’ GDP per capita and growth were collected from the International Monetary Fund (IMF).

4.2. Estimation method

While this research focuses on entrepreneurs who took part in the GEM survey, the results could be influenced by factors that affect individual self-selection of entrepreneurship. To deal with this potential self-selection bias, this research divided the analyses into two stages (Heckman, 1979). A probit equation was run during the first stage in order to predict individual self-selection of entrepreneurship. An inverse Mill’s ratio was then computed using the residuals from the selection equation and the ratio was included in the second stage to correct for selection bias. In this second stage, multilevel ordinal logistic regression was applied with the degree of early internationalisation being the dependent variable. The application of a multilevel approach enabled us to deal with unobserved heterogeneity within the context of a cross-individual, cross-time, and cross-country dataset. Multilevel models have several advantages over pooling OLS models. First, ignoring the interdependency between individual- and national-level characteristics can cause bias in the coefficients and standard errors (Lim et al., 2016), because observations within groups (in this case, countries) are correlated. Multilevel modeling approaches offer a framework that takes the hierarchical nature of the data into account, correcting for biases in the parameters resulting from clustering (Schillo et al., 2016). Second, multilevel approaches can provide a systematic analysis of the effects across different levels, as well as their cross-level interaction effects (Echambadi et al., 2006). In this research, the use of fixed effects enabled us to capture the
impact of individual- and country-level predictors. The use of random effects controlled for clustering of the data first within a country, and second within a country-year subsample. In order to take differences in samples obtained across years into account, this research utilised the sample information by treating countries and country-years as groupings, respectively. The use of a multilevel approach is widely accepted: we found that the effects of both of country and country-year groupings were statistically significant.

5. Analysis and results

The pairwise correlation coefficients are listed in Table 2. To further diagnose potential problems of multicollinearity, variance inflation factors (VIFs) were performed. The VIF for all variables did not exceed the conventional level of 5 (Ryan, 1997). In addition, our large sample size alleviated the micronumerosity problem, which could otherwise have become another source of coefficient instability (Goldberger, 1991).

Level 1 predictors (individual-level)

The empirical results are presented in Tables 3 and 4. The inverse Mill’s ratio was shown to be statistically significant influence in all the models, thus underlining the importance of controlling for self-selection. Model 1 is a base model in which the individual-level controls were included. The random effects due to country and country-year groupings were reported ($\sigma_u=1.201$, $\sigma_v=0.126$) and the intra-class correlation suggests that 26.76% ($\sigma_u^2/(\sigma_u^2+\sigma_e^2)$) of the total variance within the data can be accounted for by the country grouping and 3.69% ($\sigma_v^2/(\sigma_u^2+\sigma_e^2)$) of the variance was due to the year grouping. The estimated coefficients of the individual-level controls conform to the findings from the extant literature. In Model 2, the decreases in log-likelihood ratio, Akaike information criterion (AIC) and the Bayesian information criterion (BIC) show that the inclusion of individual-level predictors increases the explanatory power of the probability of an entrepreneur internationalising his/her business. The results demonstrate that international competitiveness readiness positively and significantly affects the degree of early internationalisation ($\beta =0.597$, odds ratio = 1.816, $p <$
0.001). Hence, Hypothesis 1 is supported. Furthermore, the interaction between individual-level readiness and entrepreneurial motivation was tested in Model 3. Evidence was found to confirm the assumption that entrepreneurial motives can positively moderate the association between international competitiveness readiness and early internationalisation ($\beta = 0.190$, odds ratio = 1.209, $p < 0.001$). This positive relationship was 20.92% stronger among opportunity-motivated entrepreneurs than for necessity-driven entrepreneurs in odds. Figure 2 depicts this interaction effect, which reveals a pattern consistent with Hypothesis 2.

[Insert Figure 2 about Here]

**Level 2 predictors (country-level)**

Following the examination of individual-level predictors, a random-coefficient regression model was specified in which country-level controls and predictors were included. The results in regard to the individual-level predictors in Model 4 are consistent with Hypothesis 1 and Hypothesis 2 when the influence of country-level factors is taken into consideration. The quality of home-country governance positively and significantly affects early internationalisation ($\beta = 0.376$, odds ratio = 1.456, $p < 0.01$), supporting our assumption that, under a stronger governance mechanism in their home countries, entrepreneurs have a greater propensity to explore international business opportunities. Hypothesis 3 is thus supported.

**Triple interaction effects (cross-level)**

In Model 5, with regard to the three-way interaction between international competitiveness readiness, entrepreneurial motives, and governance quality, the estimation of the coefficient is positive and significant ($\beta = 0.106$, odds ratio = 1.111, $p < 0.1$), implying that the moderating effects of entrepreneurial motives on the relationships between international competitiveness readiness and early internationalisation are stronger in countries where governance systems are more developed. Thus, Hypothesis 4 is supported. To gain further insight into the triple interaction effects of home-country governance quality, we plotted these effects in Figures 3 and 4. Figure 3 demonstrates the three-way interactions between readiness, motivations, and the degree of early internationalisation. Figure 4 illustrates the differences in these interaction
effects for opportunity–motivated and necessity-driven entrepreneurs.

**Robustness check**

This research also undertook a sensitivity analysis. More specifically, following Chen, Saarenketo and Puimalainen’s (2018) method, a boundary of 25% of sales in foreign markets within three years was used as another proxy for early internationalisation. In line with this approach, if a new firm has 25 or more of its customers in foreign markets, it was defined as an international venture. On the other hand, if a new business has fewer than 25% of its customers outside the home country, it was designated as a domestic business. This boundary of 25% of foreign sales was also used in Knight's (1997) work to differentiate between global ventures and domestic ventures. The variable 'internationalised business' was generated and set to be dichotomous, with a value of '1' if the new business was an international venture and a value of '0' if it was a domestic business. Multilevel binomial logistic regressions were then performed. The results were presented in Table 5. The estimates did not systematically differ from those of the initial models.

[Insert Tables 3, 4, and 5 about Here]

[Insert Figures 3 and 4 about Here]

6. **Discussion**

6.1. **Theoretical contributions**

Our research makes several theoretical contributions to the IE literature. First, this research is among the first to use the individual-opportunity nexus model (Shane, 2003) to empirically assess and explain the impact of international competitiveness readiness on the degree of early internationalisation across countries. While the significance of differences in entrepreneurs' readiness to internationalise their businesses has been recognised in the field of IE, this link is not yet well established (Amorós et al., 2016; Pinho et al., 2018). This research takes an important step in extending the IE literature by leveraging theoretical perspectives derived from the individual-opportunity nexus model (Shane, 2003) and in turn, advances the current trend for a stronger theoretical delineation of early internationalisation. More specifically, although there have been independent advancements in the existing IE literature
that have helped to enhance our understanding of why entrepreneurs choose to internationalise their businesses from micro-level and macro-level perspectives, these two streams of literature continue to develop independently and diverge in their theoretical orientations. By synthesising an individual-opportunity nexus model, this research addresses a significant gap in the IE literature by adopting a multi-level perspective in regard to how individual international competitiveness readiness and entrepreneurial motives, and home-country governance quality operate as interacting determinants of early internationalisation.

Second, by incorporating the hypothesis about entrepreneurial motives, this research further clarifies the role of opportunity exploration in moderating the association between international competitiveness readiness and early internationalisation. The results contribute to a better understanding of the relationships between competitiveness readiness and internationalisation and how the effect is influenced by entrepreneurs' pursuit of opportunities. The examination of entrepreneurial motives also moves the conversation within the IE literature on from whether entrepreneurs' resources and capabilities matter, to how they interact with opportunity-motivated entrepreneurship and necessity-driven entrepreneurship to facilitate and inhibit the utilisation of such resources and capabilities in different ways in terms of entrepreneurial behaviour.

Third, this research offers a more nuanced understanding of the role of home-country governance quality in entrepreneurial activity. While a growing number of studies have examined the central role played by country-level institutions, governance quality, defined as the entire formal institutional environment and overall institutional framework that provides the foundation for other economic institutions and policies, has received little attention within the field of IE (Cuervo-Cazurra et al., 2018). This research addresses the aforementioned gap by offering a contextualised understanding of early internationalisation. It suggests that governance quality acts as an important contingency that affects the potential returns and costs of growing a business internationally. In particular, if governance in the home country includes an impartial legal system, an incorruptible and efficient government, and transparent and accountable public policies, these all serve to enhance international expansion activities. In countries where the quality of governance is higher, entrepreneurs with strong international
competitiveness readiness assess institutional resources more favourably. They become more alert to business opportunities in international markets and subsequently act to seize those opportunities.

6.2. Practical implications

The research findings have implications for early-stage entrepreneurs with propensity of expanding business onto international markets and policy-makers. First, while policy-makers have primarily focused on the role of the macro environment in facilitating entrepreneurial opportunities, home country governance may not be sufficient in itself to make new entrepreneurs decide to internationalise (Stephan and Uhlaner, 2010). The research findings have implications and value particularly for policy-makers who are aiming to promote the national rate of internationalisation among firms by improving the quality of governance. The results emphasise the importance of having administratively capable governments to formulate policies and implement them in terms of reaping the benefits of institutions (i.e. high governance quality). This was the first research to apply the concept of governance quality from political science in order to comprehensively assess the mechanisms of the governance required to release the potential of entrepreneurial antecedents and motivations. It was found that the significant effects of governance quality imply that policy-makers should create macro environments designed to provide entrepreneurs who have the necessary capabilities and resources with the most appropriate governmental support.

Second, our hypotheses are concerned with international competitiveness readiness. The results showed substantial support for the proposition that a combination of businesses' resources and capabilities related to innovation in both the product and manufacturing process, opportunity recognition, and evaluation of the environmental competition has a significant effect on early internationalisation. For early-stage entrepreneurs, it is therefore relevant to develop greater innovativeness in their products and services and alertness to opportunities, and the use of new technology could help their firms to become more competitive internationally and, in turn, more connected to global markets. Moreover, the results showed that the existence and pursuit of entrepreneurial opportunities is a critical driver of internationalisation. While competitiveness readiness is significant in terms of inspiring firms
to expand internationally, the utilisation of resources and capabilities needs to be aligned with entrepreneurs' business motives. This is consistent with a recent study by Jafari-Sadeghi (2020), which emphasises the need to recognise that entrepreneurs might differ in relation to the entrepreneurial motives required for the exploration and exploitation of opportunities.

Third, the significant triple interaction effects between international competitiveness readiness, entrepreneurial motives, and governance quality suggest that, to facilitate entrepreneurial firms' international activities in home countries, resources and capabilities are important with regard to entrepreneurs' readiness to internationalise their firms. In the context of early-stage businesses, competitiveness readiness acts as an important facilitator in the process of converting capabilities into the competencies that lead to international expansion. Policy-makers should therefore acknowledge the importance of improving and developing macro-level institutional environments as governance conditions provide new entrepreneurs with a more supportive environment for internationalisation. Policy-makers should also enact policies which facilitate entrepreneurs' access to resources for implementing novel technologies in both the domestic and international markets.

6.3. Limitations and scope for future research

This research has some limitations. First, given that it was developed based on multilevel models across two levels of analysis, it was appropriate to concentrate on the country-level and individual-level variance. However, future research could investigate how institutional arrangements coevolve over time and thus assess the dynamic impact of national governance. The quality of home country governance may vary across different stages of countries’ development. The scope of the current study was not sufficient to investigate these aspects but they are worth examining in future work. Second, the GEM dataset only captures international sales for the purpose of measuring the degree of early internationalisation. This is appropriate for assessing the degree of early-stage entrepreneurs’ internationalisation, because exporting is the primary mode of international activity (Yang et al., 2020). Nonetheless, this study’s theoretical logic could be expanded to examine other aspects of international growth activities such as foreign production, international sourcing, and geographical dispersion in future research.
7. Conclusions

By synthesising an individual-opportunity nexus model, this research examined the joint effects of international competitiveness readiness, entrepreneurial motives, and national governance quality on early internationalisation. Using multiple datasets from the GEM-APS survey, WGI, and IMF, we found that early internationalisation is related to early-stage entrepreneurs' competitiveness readiness in terms of product innovation, technological innovation, opportunity recognition, and evaluation of the environmental competition. Moreover, the analytical results suggest that governance quality serves as a direct explanatory variable and modifies the relationship between international competitiveness and entrepreneurial motives. This research thus makes important theoretical contributions to the existing IE literature and offers political and practical recommendations.
Reference


