This research is still under development

Informal investors, rule of law, and household income in new venture internationalization

Abstract

Using insights from the resource-based view, entrepreneurial finance and the institutional theory, this study explores the factors influencing the internationalization of new ventures, focusing on the roles of informal investors, the rule of law, and household income. Drawing on a sample of early-stage entrepreneurs from 108 countries spanning the years 2005 to 2020, we employ a multilevel logistic regression to test our hypotheses. Our findings reveal that informal investors positively contribute to new venture internationalization. Furthermore, we find a moderating effect of the rule of law on this relationship, suggesting that a strong legal framework may attenuate the influence of informal investors on internationalization efforts. Additionally, this moderating effect is driven by low-income entrepreneurs. The study contributes to the understanding of the complex dynamics underlying new venture internationalization and underscores the importance of considering both individual and institutional factors within the international entrepreneurship domain.

Keywords: New venture internationalization, Informal investors, Rule of law, International entrepreneurship, Multilevel analysis.

1. Introduction

The internationalization of early-stage entrepreneurial firms is situated at the confluence of international business and international entrepreneurship research, spanning the last three decades (Oviatt & McDougall, 1994; Zander et al., 2015). Central to the study of entrepreneurial internationalization is the focus on the international expansion of new venture firms (Shane & Venkataraman, 2000). Building on McDougall's (1989) early work on international new ventures, a significant body of research has emerged on entrepreneurial internationalization. Several review articles have offered comprehensive insights into the progress of research in this domain (Jones et al., 2011; Schwens et al., 2018; Zucchella, 2021).

While notable progress has been made, the fundamental question of what propels the internationalization actions of such firms remains a current and pertinent topic. In fact, advancements in the field highlight the need for a deeper understanding, especially regarding the role of informal investment in the internationalization of new ventures (De Clercq et al., 2012; Qin et al., 2022). Informal investors play a vital role as key contributors to the establishment of new ventures. These investors not only offer essential early-stage financing to entrepreneurs at the onset of new ventures (Burke et al., 2014; Korosteleva & Mickiewicz, 2011) but are also personally engaged in the process of creating the new firm (Qin et al., 2022). Despite their importance, not much is known about the specific impact of informal investors on new venture internationalization.

Additionally, the conditions of home-based environments exhibit significant variability from country to country (De Clercq et al., 2013; Chen et al., 2018). Consequently, the relationship between the presence of informal investors in the country and the internationalization efforts of new ventures might be affected by the institutional context. In particular, entrepreneurs in countries with a higher level of the rule of law are more likely to have the legal and regulatory support they need to succeed in international markets. A solid configuration can reduce transaction costs and provide entrepreneurs with a clear legal framework that establishes the rights and obligations of the parties involved (Kenneth-Southworth et al., 2018). Nevertheless, there has been limited research investigating the interplay between informal investment and the rule of law in the context of international new ventures, especially within a framework encompassing diverse countries (D'Ingiullo et al., 2023; İpek & Bıçakcıoğlu-Peynirci, 2020).

Importantly, a deeper understanding of these links requires the consideration of individual antecedents of new venture internationalization, in addition to country-level

factors (Zhang et al., 2016; Yang et al., 2020). These firms are often constrained by limited financial resources due to their relatively modest scale of operations (Knight, 2001) and lack the established track record that would enhance their legitimacy in the eyes of capital providers (Manolova et al., 2013). In this situation, the entrepreneurs' personal wealth, as expressed in household income, constitutes a valuable resource in the entrepreneurial process (Autio & Acs, 2010) that may explain the internationalization of their new ventures. In fact, high-income households are not only better endowed with financial resources, but also provide fertile environments for accessing high quality opportunities (Arenius & De Clercq, 2005).

In the light of the above considerations, our objectives in this paper are threefold. Firstly, we investigate the impact of the proportion of informal investors in the country in the internationalization of new ventures. Secondly, we explore how the rule of law moderates the association between informal investors and internationalization. Finally, we employ a wealth stratification approach to scrutinize these connections, underscoring entrepreneurs' household income as a pivotal variable. Our conceptual framework draws upon the underpinnings of entrepreneurial finance (Cumming et al., 2019), the resource-based view (Wernerfelt, 1984) and the institutional approach (North, 1990).

Empirically, we employ a dataset combining individual-level observations from the Global Entrepreneurship Monitor (GEM) with country-level data for income classification from the World Bank (World Development Indicators, WDI) and the Worldwide Governance Indicators (WGI). Our dataset encompasses 78,349 early-stage entrepreneurs (those initiating firms within the past 42 months) representing 108 countries from 2005 to 2020. We utilize a multilevel logistic regression model to predict the likelihood of new venture internationalization.

Our study makes three key contributions. While previous research has been focused on the likelihood that an individual becomes an early-stage investor (Qin et al., 2022), our first contribution lies in the investigation of how informal investors influence new venture internationalization. Specifically, we suggest that they provide not only personal financial resources but also valuable expertise and show that the national share of informal investors positively affects the likelihood of internationalization of early-stage entrepreneurial firms. Secondly, our study contributes by assessing the extent to which a country's rule of law moderates the association between informal investors and the internationalization of new ventures. While prior research has found that local institutional quality positively affects new firm rates (Agostino et al., 2020), we show that

rule of law in the home country has an indirect effect on new venture internationalization when interacting with the presence of informal investors. Thirdly, we highlight the role of the entrepreneurs' household income as an important factor shaping these links. Expanding upon earlier research that illustrated that household income supports entrepreneurial growth aspirations (Autio & Acs, 2010), our study establishes its role as a key boundary condition. This contributes to a more nuanced understanding of the factors influencing new venture internationalization.

The rest of the paper is organized as follows. Section 2 presents the theoretical framework and develops the hypotheses. Section 3 describes the data and method. Section 4 reports the results. Section 5 discusses the findings and implications.

2. Theoretical background

2.1 New venture internationalization: A resource-based and entrepreneurial finance perspective

International entrepreneurship revolves around the creation of new firms and the internationalization of these ventures (Shane & Venkataraman, 2000; Muralidharan & Pathak, 2017). The resource-based view has long been a primary paradigm guiding the exploration of entrepreneurial efforts (Hitt et al., 2006; Tseng et al., 2007; Westhead et al., 2001) and provides a solid theoretical basis for understanding international entrepreneurship (Peng, 2001; Breuillot et al., 2022). In the RBV, firms are viewed as a collection of resources and recognize the value of resource endowments in the development of firm strategies (Penrose, 1959; Wernerfelt, 1984). Some of these resources attain strategic status, as they exhibit distinctive characteristics, being valuable, rare, imperfectly imitable, and non-substitutable (Barney 1991; Barney et al., 2001).

Under the resource-based framework, possessing specific resources may facilitate the internationalization of new firms. In fact, empirical evidence indicates a positive association between certain entrepreneurial and organizational resources and the internationalization of businesses (Brouthers et al., 2015; Filatotchev et al., 2008; Knight & Cavusgil, 2004). However, financial capital also plays a key role in the entrepreneurial process (Autio & Acs, 2010). New ventures are often constrained by limited financial resources due to their relatively modest scale of operations (Knight, 2001). These firms also lack the established track record that would enhance their legitimacy in the eyes of capital providers (Manolova et al., 2013). Financial capital inputs thus enhance the entrepreneur's ability to acquire other resources necessary to pursue internationalization.

Entrepreneurial finance focuses on understanding the financial aspects of entrepreneurial ventures, particularly in the context of obtaining funding for international new ventures to overcome resource constraints and compete in international markets (Cumming et al., 2019; McDougall et al., 1994). Entrepreneurs may indeed be more motivated to explore global opportunities when endowed with greater resources to act on them (Frese & Gielnik, 2014).

While conventional business practices typically emphasize internal funding as a primary source before turning to external options, international new ventures encounter a distinct challenge. These ventures must swiftly penetrate and navigate unfamiliar global markets (Vanacker & Manigart, 2010), creating a pressing need to secure financial resources for their internationalization endeavors. This financial strain becomes particularly acute in environments with limited financial development (Svirydzenka, 2016), where traditional financial avenues for supporting international expansion may be scarce. In such instances, informal investors emerge as a prompt and immediate response to fill this financial gap. Moreover, informal investors often possess a deeper comprehension of the entrepreneurial landscape and may exhibit a greater willingness to embrace risks in supporting ventures with an international focus (Maula et al., 2005).

The term "informal investors" aligns with prior studies (Qin et al., 2022; Shane et al., 2020) and is distinct from angel investors, business angels, or micro-angels (De Clercq et al., 2012; Reynolds et al., 2005; Wong et al., 2004). While these terms are prevalent in the entrepreneurship literature and often associated with investors in developed economies (Cumming & Zhang, 2019; Edelman et al., 2017), they represent a more sophisticated form of informal investor. Recognizing the diverse nature of these financiers across various countries, the term "informal investors" emerges as an inclusive concept, covering a broader spectrum and aligning with studies on informal financing (Allen et al., 2019; Sørheim & Landström, 2001).

Informal investors play a crucial role in the success of emerging ventures (Ardichvili et al., 2002; Hellmann et al., 2021). Distinguishing themselves from formal investors, they use their personal funds (Mason & Harrison, 2002), fostering a deeper connection with the firm. This connection extends beyond financial support, encompassing knowledge sharing, expertise, and networks (Landström & Mason, 2016; Qin et al., 2022). Many informal investors have close friendships or family ties with entrepreneurs (Korosteleva & Mickiewicz, 2011). Agreements often involve exchanging

equity or active participation in risk mitigation, especially in the context of international ventures (Kerr et al., 2014).

This relational aspect sets informal investors apart from formal counterparts, with their capital serving as a crucial funding source for entrepreneurs facing challenges securing financing from traditional avenues like banks or venture capital firms (Klyver et al., 2017; Sudek, 2006). Unlike conventional funding sources, informal investors provide a unique form of capital, flexible and accessible. Their support is particularly valuable, addressing the issue of lacking collateral by offering financing without such requirements (Allen et al., 2019; Mason & Stark, 2004). This flexibility proves essential for international new ventures requiring substantial initial investments (De Clercq et al., 2008; Manova, 2013).

However, the entrepreneurs' household income introduces another dimension to the internationalization of new ventures, as it constitutes a valuable resource to further explain the phenomenon. Firms founded by wealthier individuals encounter reduced financial constraints since they have access to more personal capital for financing their operations (Albert et al., 2022; Colombo & Grilli, 2005). International new ventures initiated by individuals with substantial financial capital will find it easier to overcome financial constraints due to their access to greater personal capital for funding the firm's international operations.

Moreover, high-income households, endowed with considerable financial resources, also facilitate access to opportunities (Arenius & De Clercq, 2005). This is because the social connectivity associated with financial wealth would enable individuals from high-income households to see more entrepreneurial growth opportunities (Dunn & Holtz-Eakin, 2000; Autio & Acs, 2010).

Therefore, a country's proportion of informal investors may serve as a timely response to the need for resources in navigating global markets, whereas the entrepreneurs' household wealth may function as a boundary condition in shaping the internationalization of new firms. This dual perspective highlights the intricate interplay between informal investors and entrepreneurs' financial backgrounds in influencing international new ventures.

2.2 The institutional context

While the resource-based view initially emphasized the positive relationship between firm factors and international activities, resource allocation decisions are not solely

dependent on internal factors that provide ownership advantages in foreign locations (Ngo et al., 2016; Manolopoulos et al., 2018). Indeed, these decisions may also be influenced by characteristics of the institutional environment (Filatotchev et al., 2009). The importance of the institutional perspective as a relevant framework for analyzing firms' internationalization activity has been underscored (Estrin et al., 2016; Gaur et al., 2014).

Institutional theory posits that each country possesses a unique combination of institutional dimensions, collectively forming its national institutional context. This context influences not only entrepreneurial decision-making (Marano et al., 2016) but also the effective deployment of firm resources (Priem & Butler, 2001). This becomes particularly prominent in the study of new and small ventures, which often face unique resource gaps that are challenging to fill (Brouthers et al., 2015). They may lack robust ownership advantages for committing to foreign operations (Cheng & Yu, 2008), making their internationalization partially attributable to institutional configurations (Manolopoulos et al., 2018).

While most studies have focused on the impact of the institutional context on firms' international activities, they originally emphasized the effects of host institutional environments, paying less attention to features and characteristics of the home country (Chang et al., 2014; Meyer et al., 2009). Currently, studies equally consider home institutions, recognizing their influence on international decisions (Krammer et al., 2018), and the quality of these institutions has been shown to affect the internationalization of new and small businesses, both directly and indirectly through its interaction with firm resources (Yi et al., 2013; Manolopoulos et al., 2018; Capelleras et al., 2023).

In particular, formal institutional factors related to the quality of the legal and political system, namely rule of law, play an important role in establishing fundamental principles that shape the choices, activities, and strategies of entrepreneurs (North, 1990; Williamson, 2000). This has the potential to minimize transaction costs and furnish entrepreneurs with a well-defined legal framework outlining the rights and obligations of the involved parties (Kenneth-Southworth et al., 2018). This environment reduces the likelihood of disputes or litigation, which can be costly and time-consuming, especially for international new ventures requiring complex and long-term contracts.

Therefore, a country with a robust rule of law configuration creates a stable and predictable legal environment, enabling entrepreneurs to plan and conduct business activities confidently (Estrin et al., 2013). In addition, it ensures that all businesses,

regardless of size, have equal opportunity, enforceable contracts, and protect property rights (Autio & Acs, 2010; Papageorgiadis et al., 2020). Additionally, it enhances mutual trust and social capital (Efendic et al., 2015) and attracts ambitious high-growth firms (Estrin et al., 2013).

When the law is perceived as clear, fair, and easily enforceable, incentives also arise for investment (Rodrik et al., 2004). Conversely, in countries with insecure property rights or high risks of expropriation, investments tend to be lower (Agostino et al., 2020). This is important for new ventures seeking to internationalize in their search for foreign investors for their expansion or agreements with foreign companies (Li et al., 2022).

Based on the preceding considerations, we suggest that the proportion of informal investors in the country will affect the internationalization of new ventures. Additionally, we argue that rule of law will act as moderator in this relationship. Finally, we posit that entrepreneurs' household income level will also play a role in these dynamics. In what follows, we develop three testable hypotheses reflecting our expectations.

3. Hypotheses development

3.1 Informal investors and new venture internationalization

Informal investors exhibit varying motivations, from financial gain to non-financial factors, such as supporting local entrepreneurs or contributing to social causes (Maula et al., 2005; Shane, 2005). These motivations, often tied to personal values and social interests, are evident when informal investors support ventures with social benefits (Mason et al., 2017). Moreover, such motivations might be linked to the opportunity for international exposure through investing in ventures that transcend territorial borders, providing a sense of personal pride for informal investors.

The prevalence and density of informal investors vary widely across different countries, influenced by several factors (Lerner et al., 2018). For instance, in countries where entrepreneurship and risk-taking are highly valued, a higher proportion of informal investors is likely. Consequently, informal investors are attracted to the potential rewards of investing in expanding ventures and are willing to accept associated risks (Sørheim & Landström, 2001). Additionally, the number of informal investors can be impacted by access to capital, with countries having limited formal financing options leading individuals to rely on informal networks to raise capital (Mertzanis, 2019). Education, awareness, and social networks also play a role in influencing the number of informal investors in a country (Maula et al., 2005). Furthermore, the regulatory environment

contributes to this variation, with more relaxed regulations leading to a higher number of informal investors (De Clercq et al., 2012; Prokop & Wang, 2022).

As the number of informal investors grows, various investor types emerge, including high-end investors, syndicate investors, and crowdfunding investors (Galema, 2020). High-end investors, typically wealthier individuals, are willing to invest in international ventures. In contrast, syndicate investors form groups to pool resources and provide comprehensive support to ventures with global potential (Mason et al., 2016). Similarly, crowdfunding platforms allow individuals to invest small amounts in international new ventures (Prokop & Wang, 2022).

The higher proportions of informal investors in a country can offer new ventures access to a diverse range of resources. This enables them to overcome internationalization challenges and seize global opportunities. Hence, we argue that informal investors favor new venture internationalization by contributing not only financial capital but also valuable non-financial resources such as expertise, networks, and risk mitigation (Reynolds et al., 1994; Zacharakis & Shepherd, 2001).

Firstly, informal investors provide a unique form of capital that is flexible and accessible, unlike conventional funding sources. This support is particularly valuable as it addresses the issue of lacking collateral, offering financing without such requirements (Allen et al., 2019; Mason & Stark, 2004). The flexibility of informal investors proves essential for international new ventures requiring substantial initial investments (De Clercq et al., 2008; Manova, 2013). They adapt their capital structure, whether involving debt, equity, or a combination, to better suit the firm (Wu et al., 2016).

Secondly, the importance of informal investors extends beyond being financiers; they also serve as mentors (Clarysse et al., 2005; Vanacker et al., 2016). The guidance provided by experienced investors is crucial for entrepreneurs venturing into international markets for the first time. In countries with a larger stock of informal investors, a greater diversity of investor types, including those with experience and expertise in specific international markets or industries, may exist. These investors provide valuable knowledge and insights, helping new ventures navigate the complexities of doing business abroad, including cultural differences, legal and regulatory frameworks, and market dynamics (Cumming & Zhang, 2019).

Thirdly, informal investors are often well-connected individuals with extensive networks in the business community. These networks can facilitate international expansion by opening doors to new markets or strategic alliances (Mason & Stark, 2004;

Colombo et al., 2015). Moreover, informal investors are more willing to take risks compared to traditional financial institutions. This risk tolerance can be advantageous for new ventures seeking to internationalize, as these investors are more likely to support global strategies (Cumming & Dai, 2011; Kerr et al., 2014).

From all these factors, a more extensive stock of informal investors can increase the likelihood of new ventures becoming international. Therefore, we posit the following hypothesis:

Hypothesis 1. A higher proportion of informal investors in a country positively influences new venture internationalization.

3.2 The moderating effect of rule of law

We have hypothesized that an increased share of informal investors positively influences the internationalization of new ventures, but this is likely contingent on the country's institutional context. In fact, when searching for financing sources, the level of institutional protection offered by a country's rule of law has significant implications for the financing decisions and expansion strategies of international new ventures (Castellani et al., 2022; Ren & Gao, 2023). Specifically, we posit that the robustness of the rule of law weakens the positive relationship between the proportion of informal investors and the internationalization of new ventures.

There are several reasons that justify this expectation. Firstly, in countries with a high rule of law, formal channels may offer resources similar to those provided by informal investors. This parallel resource availability can weaken the unique advantages of informal investors in supporting the internationalization of new ventures, as credibility and networks may be comparably accessible through formal means (Mason and Stark, 2004).

In fact, where the rule of law is strong, formal institutional protections may not only provide legal and financial security to entrepreneurs (Castellani et al., 2022; Levratto et al., 2018), but also enhance the reputation and credibility of their ventures. This may be because formal institutional protections may signal to potential investors, customers, and suppliers that the context of the venture is trustworthy and reliable. In contrast, informal financing sources may not provide the same level of credibility in foreign markets and may limit the potential of international new ventures.

Secondly, the stringent regulatory compliance and bureaucratic hurdles in countries with a strong rule of law pose challenges for new ventures and informal investors alike.

These challenges may impede the effective contribution of informal investors to the internationalization of new ventures, highlighting the intricate relationship between regulatory environments and informal investment impact (Cumming et al., 2017).

Moreover, while in countries with a strong rule of law, formal institutional protections offer benefits, the associated complex procedures may hinder the speed and flexibility of internationalization. Conversely, in nations with weak rule of law, informal financing sources, such as angel investors or family and friends, become indispensable due to limited access to formal institutional protections (Madestam, 2014).

Finally, informal investors, thriving in uncertain environments, may become more risk-averse in countries with a strong rule of law (Cassar, 2004). This heightened risk aversion, coupled with the formal procedures and regulations, limits the adaptability and agility that informal investors typically exhibit (Bowen & De Clercq, 2008), potentially diminishing their positive impact on new venture internationalization.

Therefore, rule of law is expected to diminish the connection between informal investors and the internationalization of new ventures. Thus, we propose the following hypothesis:

Hypothesis 2. A stronger rule of law weakens the positive relationship between the proportion of informal investors in a country and new venture internationalization.

3.3 The role of household income

We have suggested that the benefits of informal investors may diminish in contexts characterized by a high rule of law. Now we argue that this depends on the entrepreneurs' personal wealth in the form of household income.

The resource-based view suggests that possessing specific resources can facilitate the internationalization of new firms. While various resources contribute to this process, financial capital is particularly crucial (Brush et al., 2002; Manolova et al., 2014). Financial capital not only enhances the entrepreneur's ability to acquire resources but also plays a pivotal role in their internationalization efforts. In this context, entrepreneurs' household income emerges as a valuable resource influencing new venture internationalization. Wealthier individuals, with increased personal capital for financing, experience reduced financial constraints (Albert et al., 2023; Colombo & Grilli, 2005), facilitating international operations. International new ventures initiated by individuals with substantial financial capital will find it easier to overcome financial constraints due to their access to greater personal capital for funding the firm's international operations.

We argue that the entrepreneurs' household income acts as a boundary condition in the previous hypothesized relationship, where the benefits of informal investors on new venture internationalization diminishes in the presence of a strong rule of law environment among low-income entrepreneurs. Specifically, we suggest that in environments with strong legal protections, the risks associated with informal financing alternatives may outweigh its benefits, leading to a negative net effect on internationalization efforts when both predictors are considered simultaneously, but only for low-income entrepreneurs.

The anticipation of divergent outcomes between high-income and low-income entrepreneurs (Bruton et al., 2021) concerning informal investors and rule of law hinges on how their access to resources influences their behavior and decision-making. Firstly, high-income entrepreneurs typically have greater access to formal financing options, leading to a reduced reliance on informal investors. As a result, they may favor formal financing options due to their lower costs, more favorable terms, reduced perception of risks linked to legal uncertainties in informal financing, and the credibility and reputation benefits provided by formal financing sources (Castellani et al., 2022; Nguyen & Canh, 2021). These benefits may also improve their access to global markets and international networks. In this regard, informal sources of financing might be less relevant or even unnecessary for them if their institutional context offers adequate formal alternatives.

Conversely, even in environments with robust rule of law, low-income entrepreneurs may feel disinclined towards formal financing alternatives and their associated benefits due to information asymmetries. These gaps may drive them to opt for informal financing, seeing legal barriers as major hurdles to accessing formal financing given their limited assets, creditworthiness, or collateral (Dutt et al., 2016; Nguyen & Canh, 2021). As a result, they are expected to rely more on external support to facilitate their internationalization efforts, leaving them more vulnerable to their contextual challenges (Riding et al., 2012). In such environments, the comparison between formal and informal financing sources reveals several drawbacks associated with informal financing. These include higher financial costs, dependency on informal investors, potential lack of transparency in agreed terms and conditions, risks stemming from personal relationships with informal investors, and limited access to networks and connections necessary for expanding into foreign markets (Levratto et al., 2018).

Secondly, high-income entrepreneurs reduced reliance on informal sources of financing is accentuated by their appreciation of institutional protections provided by a

strong rule of law (Mertzanis, 2019). Entrepreneurs with higher income levels are likely to place greater value on a robust legal framework. This is because they often have larger assets and investments at stake, necessitating strong legal frameworks for contract enforceability, property rights protection, and overall business stability, which can facilitate their internationalization (Cagetti & De Nardi, 2006). Moreover, strong legal frameworks provide these entrepreneurs with a common language to conduct trade at a global level (D'Ingiullo et al., 2023).

Despite the presence of robust rule of law, low-income entrepreneurs may still struggle to navigate the complex regulatory environment (Braggion et al., 2018). Administrative complexities, bureaucratic hurdles, and compliance expenses can serve as deterrents for these entrepreneurs, and the benefits offered by institutional factors such as rule of law may not translate as effectively into positive internationalization outcomes for them. Their understanding of this context may be hindered by the intricate legal procedures and compliance requirements, which can impose significant burdens, leading to delays, inefficiencies, and increased operational costs. Moreover, limited access to legal expertise and compliance assistance exacerbates these challenges, leaving entrepreneurs ill-equipped to navigate regulatory complexities effectively.

Based on the above discussion, we suggest that the benefits of informal investors diminish in high rule of law contexts, especially for low-income entrepreneurs. High-income entrepreneurs prefer formal financing alternatives due to lower costs and favorable terms. In contrast, low-income entrepreneurs face barriers accessing formal financing, relying more on informal sources, despite potential drawbacks such as higher costs and limited networks. Therefore, we formulate the following hypothesis as follows:

Hypothesis 3. A stronger rule of law weakens the positive relationship between the proportion of informal investors in a country and new venture internationalization, when entrepreneurs' level of income is low.

In Figure 1, we summarize our conceptual framework and hypotheses.

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4. Data and methodology

4.1 Data and sample selection

We construct a multilevel dataset in which individuals (i.e., entrepreneurs) are nested within countries. To test our hypotheses, we combine individual-level observation from the Global Entrepreneurship Monitor (GEM) Adult Population Survey (APS) with country-level macroeconomic indicators obtained from the World Development Indicators (WDI) and the World Bank's Governance Indicators (WGI). The GEM APS individual survey data comprises a representative sample of the population in each participating country and further descriptions about the project can be found in Bosma (2013) and Reynolds et al. (2005). Additionally, existing research in the international or comparative entrepreneurship domain that can serve as examples of validation and generalizability of the results can be found in Autio et al. (2013), Brieger et al. (2022), Epure et al. (2023), Estrin et al. (2013; 2020), Li (2018), or Muralidharan and Pathak (2017), among others. Respondents are randomly selected and surveyed through phone calls or face-to-face interviews. Data collected are standardized using country weights specifications, allowing for generalizability in comparative studies. In this paper that we are predicting new venture internationalization, we focus on the early-stage entrepreneurs defined as "owner-managers of young firms". They are individuals running business older than 3 months old but younger than 42 months old (Bosma, 2013; Estrin et al., 2013; 2020; Levie and Autio, 2011; Reynolds et al. 2005). Considering this individual unit of analysis, new venture internationalization is observed in firms at their inception (Douglas 2013; Estrin et al. 2013) but beyond the nascent phase (Crick, 2009; Estrin et al., 2020; Hessels et al., 2008)[1].

Hence, the GEM data provides several benefits for testing our hypotheses on cross-country empirical specifications. To mention the most relevant one, the survey's key advantage lies in its representativeness of entrepreneurial outcomes (in this case new venture internationalization) in large international samples, enabling the integration of detailed individual and environmental dimensions. Another advantage is the fact that the survey covers a significant range of years which is useful to account for external temporal variation.

[1] According to the GEM definitions, nascent entrepreneurs are "individuals active in the process of starting a new firm during the preceding 12 months and with expectations of full or part ownership but have not yet launched one" (Reynolds et al., 2005).

We supplemented GEM data by matching country-level data from the World Bank's World Development Indicators and the Worldwide Governance Indicators. Our final sample comprises 78,349 observations from 108 countries for the years 2005-2020. Table A1 in the appendix provides sample composition of the main variables of interest.

4.2 Variables and measures

4.2.1 Dependent variable

Our dependent variable measures *new venture internationalization* (e.g., Brieger et al., 2022; Li, 2018; Muralidharan and Pathak, 2017). We obtain this data from the GEM project. While we are aware that multiple-item measures may be more reliable than single-items ones when measuring outcomes such as performance or more specifically internationalization intensity (Ramaswamy et al., 1996; Ruzzier et al., 2007), combining elements from a multi-item specification might impact the overall effect of each individual components (Muralidharan and Pathak, 2017). Therefore, a single item to account for new venture internationalization that is related to the percentage of sales generated in foreign countries has been proposed in the literature (McDougall and Oviatt, 1996). Similar measures are argued to be a viable proxy for new venture internationalization (Brieger et al., 2022; Muralidharan and Pathak, 2017; Sullivan 1994). Here, we use a binary value that takes value 1 if the percentage of customers abroad are greater than 25%, and 0 if no export activity is reported (Hessels et al., 2008; Hessels and Van Stel, 2011). As a robustness check, we run the model considering those new ventures with a percentage of customers abroad greater than 75% and the results are consistent with our original dependent variable specification.

4.2.2 Informal investors

To account for the country's proportion of *informal investors*, we begin with a transformed individual dummy variable capturing business angel or investment experience from the GEM dataset. The variable estimates whether in the past three years the respondent has personally provided funds for a new business started by someone else and excluding any purchases of stocks or mutual funds (De Clercq et al., 2012). To capture this effect at the country level, we converted this binary measure to a continuous one by aggregating the average of the individual responses per country and year, reflecting the overall proportion of informal investors in a given country.

4.2.3 Rule of law

We rely on the World Bank's Governance Indicators (WGI) to measure *rule of law*. This data covers more than 200 countries and territories worldwide over the period 1996-2022. It is suitable to carry out comparative studies and being able to evaluate broad trends over time. The data is updated annually (Kaufmann and Kraay, 2023). Our variables of interest, rule of law, captures the level of trust and adherence to the norms of a society, especially in relation to the effectiveness of enforcing contracts, upholding property rights, maintaining law enforcement, and ensuring judicial systems, while also taking into account the probability of criminal activities and physical aggression, as well as the quality of governance within a country. WGI scores range from approximately -2.5, indicating weak rule of law, to 2.5, indicating a strong one (Kaufmann et al., 2011). As a robustness, we consider to additional variables from the WGI that may be capturing similar institutional characteristics towards the prediction of new venture internationalization. Thus, we consider control of corruption and regulatory quality. These two latter ones are in line with the idea of governments ensuring the rule of law compliance and aiming at avoiding contractual relationships voids (Dau and Cuervo-Cazurra, 2014).

4.2.4 Household income

One of the primary tasks for entrepreneurs is to balance their endeavors between developing new ventures and generating additional sources of income (Autio, 2007). The efforts of entrepreneurs are contingent upon their household income level, which can have an impact on the business prospects they develop and the access to additional resources (Autio and Acs, 2010). Thus, *household income* is measured in GEM with a three-income tier scale (1=lowest; 2=middle; 3=highest). For empirical reasons we decided to codify this variable as a binary one taking value 1 if the respondents are in the highest income tier and 0 if they belong to the lowest and the middle category (e.g., Albert et al., 2023). As a robustness check, we run the model with the three categories and the conclusions of our results remain the same.

4.2.5 Control variables

We control for several individual- and country-level variables. Thus, regarding individual-level controls, we consider the age of the entrepreneur in years and its squared term as age has been a factor positively influencing new venture internationalization in the past (see, e.g., Muralidharan & Pathak, 2017; Li, 2018). We also include gender as it has been instrumental in predicting entrepreneurship (Arenius & Minniti, 2005) and more specifically the extent of firm internationalization (see, e.g., Brieger et al., 2022; Muralidharan & Pathak, 2017). We also consider three mains entrepreneurs' socio-cognitive traits (Boudreaux et al., 2019; Epure et al., 2023) previously used in the entrepreneurship literature (Autio et al., 2013; Wennberg et al., 2013). First, we include *fear of failure* that takes value 1 if the respondent's fear of failure could prevent starting-up a business and 0 otherwise. Second, *self-efficacy* that takes value 1 if the respondent perceives to have the knowledge, skill, and experience required to start-up a new business and 0 otherwise. Third, perceived founding opportunities taking value 1 if the respondent perceives that in the next six month there will be good opportunities for starting a business and 0 otherwise. Entrepreneurial outcomes are influenced by individuals' self-perceived capabilities which derive from human capital both general and specific (Capelleras et al., 2019; Epure et al., 2023; Gruber et al., 2023; Van Praag, 2005). Specifically, higher education is related to having more resources to identify opportunities to internationalize (Capelleras et al., 2018; Samuelsson & Davidsson, 2009). Accordingly, we control for *higher education* that takes value 1 if the respondent's highest completed level of education is post-secondary education, and 0 otherwise. We also include *entrepreneurial experience* to control for specific practice (Becker, 1964; Mincer, 1974). We construct this variable based on the combination of two questions in the GEM survey taking value 1 if (a) the respondent has owned and managed a business that was then sold, shut down, discontinued or quit in the past twelve months, and (b) the business has continued its activity after quitting (Epure et al., 2023), and 0 otherwise. We also control for the entrepreneur's personal network and potential uncontrolled factors emerging from market experience and social interactions (Epure et al., 2023) by including *knows other entrepreneurs* that is a dummy variable taking value 1 if the respondent knows someone personally who started a business in the past two years, and 0 otherwise. Regarding firm-level data we also control for the current employment level (Autio and Acs, 2010; Autio et al., 2013; Capelleras et al., 2018; 2019; Estrin et al., 2013; 2020). The rationale of

including this variable is that the extent of internationalization will be contingent to the level of employee capacity in the firm.

Concerning the country-level controls, we include several macroeconomic indicators that are known to influence new venture internationalization prospects as national level of economic development may impact the different forms of entrepreneurial activity (Stel et al., 2005). Therefore, we control for *GDP growth* to reflect country's economic growth cycles (Koellinger, 2009; Koellinger and Thurik, 2012) and because growing economies may offer more favorable environment to pursue entrepreneurship (Dau and Cuervo-Cazurra, 2014). The level of development of a country is also accounted in our controls by including the *GDP per capital* at purchasing parity (ppp) (Autio et al., 2013; Estrin et al., 2020). As a proxy of the size and change of national markets, we also control for *population growth* expressed as the percentage variation of population size (millions) from one year to the next, to capture long-term economic growth (Autio and Acs, 2010; Strulik, 2005). Innovation is likely to impact the extent of internationalization of new ventures (Muralidharan and Pathak, 2017), thus we account for the proportion of *innovativeness* in the country. We use a combination of three originally individual-level variables related to innovation that capture entrepreneurs' responses regarding for any kind of innovation, resulting from their response of having few or no competitors if they use the latest technology/procedures available or if their product is new to some or all their customers (Koellinger, 2008). To capture this effect at the country level, we created a continues variable by aggregating the average of the individual responses per country and year, accounting for the overall proportion of innovativeness in a given country. To control for the international investment activity and economic globalization, we consider foreign direct investment (*FDI*) net inflows as a percentage of the GDP. We also include time dummies to control for the years in our sample period. Finally, we add industry controls to account for sectoral differences (Autio et al., 2013; Estrin et al., 2013; 2020). Table 1 provides variable definitions and data sources.

--- Insert Table 1 about here ---

4.3 Empirical strategy

The individual observations gathered from the GEM data are nested within countries. Thus, our empirical approach is a multilevel analysis which is performed using a hierarchical logistic model enabling variation in the intercepts across different countries (e.g., Aguinis et al., 2013; Autio et al., 2013; Brieger et al., 2022; Delios., 2023; Estrin et al., 2020; Epure et al., 2023; Li, 2018; Muralidharan and Pathak, 2017; Yang et al., 2020). This approach is interesting in datasets where there may appear unobserved heterogeneity in cross country, time, and individual variation. Moreover, this specification tolerates to assume independence of observations, which alternative standard multivariate methods (e.g. OLS, logit, or probit) would not permit it (Hofmann et al., 2000). In other words, using standard multivariate methods would assume that individuals act alike and disregarding the environment in their decision-making (Epure et el., 2023). Therefore, what we can see is how country level variable effects (i.e. informal investment and rule of law) impact heterogeneously individual responses (i.e. new venture internationalization). Our baseline specification is:

$$Y_{ijt} = \beta_0 + \beta_1 Age_{ijt} + \beta_2 Age2_{ijt} + \beta_3 Gender_{ijt} + \beta_4 Educ_{ijt} + \beta_5 Ent\_Exp_{ijt} + \beta_6 Household\_Incomeg_{ijt} + \beta_7 Self\_Efficacy_{ijt} + \beta_8 Fear\_Fail_{ijt} + \beta_9 Opport_{ijt} + \beta_{10} Employment_{ijt} + \beta_{11} Knows\_Ent_{ijt} + \beta_{12} Informal\_Inv_{ijt} + \beta_{13} FDI_{jt} + \beta_{14} Innovatinvess_{jt} + \beta_{15} Rule\_of\_Law_{jt} + \beta_{16} GDPpc_{jt} + \beta_{17} GDPgrowth_{jt} + \beta_{18} PopulationGrowth_{jt} + \nu_{it} + \psi_t + \mu_{ijt} + \varepsilon_{jt}$$

where Y_{ijt} is our measure for new venture internationalization of individual *i* within country *j* at year *t*; {Age_{ijt}, $Age2_{ijt}$, $Gender_{ijt}$, $Educ_{ijt}$, Ent_Exp_{ijt}, $Household\_Incomeg_{ijt}$, $Self\_Efficacy_{ijt}$, $Fear\_Fail_{ijt}$, $Opport_{ijt}$, $Employment_{ijt}$, $Knows\_Ent_{ijt}$} are the individual-level control variables; {$Informal\_Inv_{ijt}$} represents the country-level predictor; {FDI_{jt}, $Innovatinvess_{jt}$, $Rule\_of\_Law_{jt}$, $GDPpc_{jt}$, $GDPgrowth_{jt}$, $PopulationGrowth_{jt}$}accounts for the country-level controls. The combination of $\mu_{ijt} + \varepsilon_{jt}$ denotes the random part of the equation, where μ_{ijt} are the country-level residuals, and ε_{jt} are the individual-level ones. We also consider both industry and year fixed effects to control for potential time-related endogenous issues resulting from omitting additional industry specifications (ν_{it}) and possible temporal effects that may impact the extent of internationalization (ψ_t), respectively.

To test any potential multicollinearity issue, we estimate the variance inflation factors (VIF) and the tolerance values for all our variables in our full model. As shown in Table A2 in the appendix, all VIF values scored below the threshold of 10 meaning that

we do not find indication of multicollinearity problems (Hair et al., 2006). In addition, tolerance values are all above 0.1, which further indicates that our variables do not suffer from multicollinearity (Autio et al. 2013).

5. Results

5.1 Descriptive results

Table 2 provides descriptive statistics and correlations for the variables in our model. Within this sample, 10.7% reported owning or managing an international new venture, meaning they had more than 25% of their customer revenues from foreign customers. When examining international new ventures based on income differences, 12.5% of them constitute high-income entrepreneurs of international new ventures. However, the percentage is smaller among low-income entrepreneurs, where only 9.3% have international new ventures. The composition of the sample is configured by 43.23% belonging to entrepreneurs of the high-income group in their respective countries, while the rest 56.77% belonging the low-income group. The average proportion of informal investors is 7%, which aligns with previous research (De Clercq et al., 2012). Our focal measure of the institutional context is rule of law, which is measured by the extent to which countries enforce their laws. This indicator generally ranges from -2.5 to 2.5, with an average score in our model of 0.26. In Table A1, the sample composition variation among focal variables in each country is presented.

---Insert Table 2 about here---

5.2 Multilevel logistic regression model results

Table 3 displays the outcomes of the multilevel logistic random intercept models predicting new venture internationalization. In Table 4, we present the models comparing the results for high-income and low-income entrepreneurs, focusing on the same outcomes examined in Table 3.

Model 1 of Table 3 examines the influence of informal investors on new venture internationalization. The results support hypothesis 1 suggesting that a higher proportion of informal investors in a country positively influences new venture internationalization. This result is consistent in the full Model 3. We next consider the effect of rule of law as moderator to the positive impact of informal investors on internationalization. In Model

3 we find support for hypothesis 2 postulating that a stronger rule of law weakens the positive relationship between the proportion of informal investors in a country and new venture internationalization.

---Insert Table 3 about here---

Additionally, we explore the effect sizes by using the results of Model 3 in Table 3, where one standard deviation increase in the extent of informal investors (0.055) is related to a higher likelihood of new venture internationalization by 9.4% respect to the sample average. However, when examining these findings by taking an indicative value of a country's rule of law, such as the average score among the countries in the sample (0.26), the likelihood of internationalization decreases by 1.8%. Overall, this analysis suggests that while the proportion of informal investors is generally beneficial for new venture internationalization, the impact of this variable may vary depending on the level of rule of law in a given country. To illustrate these findings, Figure 2 presents the interaction effect.

---Insert Figure 2 about here---

In Table 4 the models are presented splitting the sample among entrepreneurs of a high household income and the ones of a low household income. In Model 6 we find support for hypothesis 3 anticipating that a stronger rule of law weakens the positive relationship between the proportion of informal investors in a country and new venture internationalization, when entrepreneurs' level of income is low. Thus, results show that the institutional context does not affect homogenously all entrepreneurs, but this is contingent to their household income level.

---Insert Table 4 about here---

Finally, we also explore the effect sizes among low-income entrepreneurs, as presented in Model 6. Results reveal that an increase in the extent of informal investors increases their likelihood of internationalization by 10.95%. Nonetheless, under average levels of rule of law in a country, the likelihood of new ventures internationalization reduces by 4.4%. All in all, these results highlight the dependence of contextual factors

for low-income entrepreneurs in their internationalization likelihood. Figure 3 graphically illustrates this relationship.

---Insert Figure 3 about here---

5.3 Robustness checks

To check the robustness of our results, we conducted some additional tests. First, we tested the results using two alternative measures of the institutional context. For this purpose, we run the estimations using the variables: regulatory quality and control of corruption, as alternative measures of the regulatory framework of a country (Kaufmann et al., 2011). These results are presented in Table 5, and they are consistent with the main results in Table 4.

---Insert Table 5 about here---

As a second robustness check, we evaluated an alternative measure of the dependent variable. In this case we examined high-export oriented new ventures, which are new ventures with more than 75% of their customers abroad (De Clercq et al., 2008). The results are presented in Table 6, where we also find consistency in the outcomes when testing the hypotheses.

---Insert Table 6 about here---

Finally, we augmented the stratification of income levels among entrepreneurs, classifying them in three groups corresponding to high, medium, and low income. The results in Table 7 indicate that there are not significant differences from the findings attained from the sample split using two-level classification (Albert et al., 2022).

---Insert Table 7 about here---

6. Discussion

6.1 Discussion of findings

Three main findings emerge from our research. Firstly, we have found a positive association between the proportion of informal investors in a country and new venture internationalization. This finding suggests that informal investors contribute to facilitating the internationalization efforts of early-stage ventures. One potential reason for this could be the complementary resources and expertise that informal investors provide to entrepreneurial firms (Qin et al., 2022). Informal investors not only inject much-needed financial capital but also offer valuable industry knowledge, networks, and mentorship, which are instrumental in navigating the complexities of international markets. Additionally, informal investors may act as a signal of confidence in the venture's potential, thereby attracting additional resources and partnerships necessary for international expansion.

Secondly, our results indicate that a strong rule of law weakens the positive relationship between informal investors and new venture internationalization. Therefore, we show that the quality of the institutional environment interacts with informal investors to influence internationalization. This aligns with studies emphasizing the importance of an effective rule of law in encouraging individuals to invest time and resources into new businesses (Mickiewicz et al., 2021), particularly those with an international focus (D'Ingiullo et al., 2023). One possible explanation is that in countries with a robust legal framework and enforcement mechanisms, entrepreneurs may perceive formal financing options as more reliable and less risky compared to informal sources. Consequently, they may be less reliant on informal investors and more inclined to pursue traditional funding channels, such as bank loans or venture capital investments. Moreover, a strong rule of law may provide entrepreneurs with greater confidence in their ability to enforce contracts and protect intellectual property rights, reducing their dependence on informal investors for legal support and risk mitigation.

Thirdly, our analysis reveals that in environments characterized by strong rule of law, the positive relationship between informal investors and new venture internationalization is weaker, particularly when entrepreneurs come from lower-income households. This finding suggests that individual-level factors interact with institutional contexts to shape internationalization. One possible explanation is that environments characterized by high levels of rule of law typically feature stringent regulatory frameworks and robust enforcement mechanisms. In such contexts, entrepreneurs from

lower-income backgrounds may perceive these legal protections as obstacles to their goal of achieving rapid internationalization. The complexities involved in navigating this regulatory landscape could amplify the perceived risks associated with informal investors, outweighing the potential benefits of using such financing alternatives for international expansion. Moreover, their resource constraints may be linked to a limited understanding and expertise in complying with the intricate aspects of the regulatory framework, further discouraging their pursuit of internationalization efforts (D'Ingiullo et al., 2023; Levie & Autio, 2011).

6.2 Theoretical implications

Our study contributes to theoretical advancements in some key areas. The findings align with the RBV perspective by highlighting the significance of resources in facilitating the internationalization of new ventures (Peng, 2001; Jiang et al, 2020). The positive relationship between informal investors and new venture internationalization underscores the importance of possessing specific resources, including not only financial resources but also expertise and networks provided by informal investors (Ardichvili et al., 2002). This extends the RBV framework by emphasizing the role of informal investors as key contributors to the international expansion of early-stage ventures. Additionally, from an entrepreneurial finance perspective, our study highlights the crucial role of informal investors in overcoming financial constraints faced by new ventures, particularly in the context of international expansion (Cumming & Zhang, 2019). The positive association between informal investors and new venture internationalization underscores their function as an important source of flexible and accessible capital for early-stage ventures (Mason & Stark, 2004). This contributes to the understanding of entrepreneurial finance by emphasizing the unique financing challenges and opportunities encountered by international new ventures and the role of informal investors in addressing them.

Our study also underscores the moderating role of the institutional context, specifically the rule of law, in shaping the relationship between informal investors and new venture internationalization. By demonstrating that a high rule of law weakens the positive impact of informal investors on internationalization efforts, we contribute to institutional theory by highlighting the importance of considering that institutional factors influence not only the behavior of firms (North, 1990; D'Ingiullo et al., 2023) but also the effectiveness of resources such as informal investors in facilitating internationalization. This highlights the complexity of entrepreneurial decision making

within diverse institutional landscapes and underscores the importance of considering institutional dynamics when examining the role of resources in entrepreneurial outcomes.

Furthermore, within the RBV framework, entrepreneurial wealth in the form of household income emerges as a resource that complements other strategic assets possessed by the firm (Wernerfelt, 1984). Wealthier entrepreneurs have greater financial autonomy, allowing them to leverage their resources more effectively to exploit opportunities in international markets (Manolova et al., 2014). Consequently, the presence of informal investors and the quality of the institutional environment interact with the entrepreneur's wealth to shape the internationalization of new ventures. This underscores the significance of household income as a boundary condition in these relationships. The implication here is that the influence of financial resources extends beyond mere availability to include the specific form in which they are held.

This also highlights the importance of considering both individual and institutional elements in international entrepreneurship research (Manolopoulos et al., 2018; Yang et al., 2020). In fact, our study provides insights into the complex dynamics of new venture internationalization by integrating micro-level entrepreneurial factors and macro-level home-country institutions. Overall, our study provides a foundation for future research exploring the intricate interplay between resources, institutions, and internationalization in the context of new ventures.

6.3 Practical implications

The practical implications outlined in this study hold substantial significance for policymakers and entrepreneurs alike. Policymakers tasked with nurturing entrepreneurial ecosystems can enhance the support for the internationalization of new ventures by integrating informal investors as a significant participant. This integration holds particular relevance for ventures facing resource constraints. Policies and initiatives aimed at promoting entrepreneurship should not only focus on access to this type of financing but also on facilitating connections between entrepreneurs and informal investors. Ideally, support programs would be expected to encourage collaboration and knowledge-sharing between entrepreneurs and informal investors, potentially through networking events, mentorship programs, or educational workshops focused on internationalization strategies. In addition, policymakers need to gain a better understanding of the diverse characteristics of informal investors within their country. While some informal investors in developed economies exhibit a sophisticated investment approach, many others,

especially in less developed economies, lack experience in entrepreneurial activities (Cumming & Zhang, 2019; Edelman et al., 2017). Recognizing these differences will assist in ensuring tailored support programs.

Furthermore, policymakers can encourage entrepreneurial support organizations, such as incubators and accelerators, to acknowledge and validate the funding obtained from informal investors. This recognition is particularly pertinent for entrepreneurs seeking to internationalize their ventures. Developing financing legitimation practices can enhance the credibility and visibility of new ventures relying on such funding. Moreover, this environment may incorporate mechanisms to attract potential investors, such as improving capital accessibility and facilitating information exchange, like creating online platforms for crowding investment opportunities or establishing investor networks.

Despite the potential advantages offered by informal financing, the benefits of operating within a regulatory environment characterized by a strong rule of law far outweigh those of informal financing. Therefore, the continuity of a regulatory framework aligned with international standards will greatly facilitate entrepreneurs in navigating international markets. Such regulations should prioritize key aspects as intellectual property protection and the effective enforcement of contracts. By emphasizing these elements, an internationally recognized regulatory framework can promote trust and confidence among international customers, suppliers, encourage foreign direct investment and facilitate the interaction with other participants in international markets. Moreover, clear and enforceable regulations that ensure fair competition and prevent corruption can enhance the visibility and accessibility of new ventures in international markets. This emphasis on transparency and accountability in business dealings will not only foster trust but also facilitate the exposure of new ventures to global opportunities (D'Ingiullo et al., 2023).

For entrepreneurs, these findings offer valuable insights into the diverse array of resources accessible to support venture internationalization. Beyond the conventional avenues of formal financing, entrepreneurs have the opportunity to explore alternative options, notably by engaging with informal investors. These informal investors not only provide financial capital but also offer invaluable non-financial support (Maula et al., 2005). This understanding allows them to strategically allocate resources based on their specific needs and circumstances. They can choose to leverage formal financing for its established credibility and reputation, or they can tap into the perceived value of informal

investors, who bring expertise, networks, mentorship, partnerships, flexibility, and more, all of which are crucial for navigating the complexities of international markets.

However, it is essential to recognize that the entrepreneurial landscape is intimately intertwined with the institutional environment. Here, the distinct advantages offered by informal investors are constrained by the prevailing regulatory framework. As a result, entrepreneurial financing decisions involve a thorough assessment of the trade-offs involved, taking into account the levels of rule of law in their respective countries. Informal sources of financing inherently introduce greater uncertainty and ambiguity, lacking the legal protections and enforceability associated with formal financing arrangements. Entrepreneurs must weigh these risks against potential benefits, considering their individual risk tolerance, especially before seeking funding from informal sources (Mason & Harrison, 2002).

Moreover, the accessibility of informal investors as a financing option could be interpreted differently by entrepreneurs depending on their individual circumstances (Cagetti & De Nardi, 2006). Low-income entrepreneurs, facing greater resource constraints, may be more inclined to consider informal investors due to their limited financial means. Conversely, high-income entrepreneurs may be less affected by the presence of informal investors, given their ample resources and potentially easier access to formal financing channels. These variations in income highlights the importance of strategic planning to improve the prospects of internationalization. Specifically, low-income entrepreneurs are encouraged to cultivate relationships with informal investors and capitalize on their networks and expertise to facilitate their ventures' expansion into international markets. Therefore, entrepreneurial strategic planning, coupled with a comprehensive understanding of available resource allocation options, increases the likelihood of internationalization. In line with this, it is advisable for entrepreneurs to explore diversifying their funding sources. Additionally, entrepreneurs should prioritize gaining insights into the regulatory framework, not only from their environments but also of their target markets.

6.4 Limitations and further research

While the research offers significant insights into new venture internationalization, several limitations should be acknowledged. Firstly, the study relies on cross-sectional data, restricting the evaluation of individual entrepreneurs' progress over time. Nonetheless, our focus is on ventures that internationalize at an early stage or from

inception (Oviatt & McDougall, 1994; Zander et al., 2015). To delve deeper into the internationalization processes among new ventures, future research could employ a longitudinal design. This approach would enable the exploration of relationships between variables over time, offering insights into the underlying dynamics of these relationships. Secondly, the study is constrained by the availability of data, particularly the focus of the research is primarily on the interplay between entrepreneurial characteristics and contextual factors, leaving room for further exploration of institutional and contextual factors in the host country (Muralidharan & Pathak, 2017). Thirdly, regarding the measurement of informal investment activity. Future research could incorporate alternative measures to capture additional characteristics of informal investment behavior. Fourthly, while the study emphasizes the role of informal investors and a country's rule of law in promoting internationalization, other significant factors such as cultural aspects and government policies may also influence internationalization efforts (İpek & Bıçakcıoğlu-Peynirci, 2020). Incorporating these factors into future research would provide a more comprehensive understanding of internationalization determinants among entrepreneurs. Finally, the study is restricted to household income levels as self-reported by entrepreneurs (Albert et al., 2023), limiting the analysis to a certain extent. Further exploration could extend the analysis to include the firm's capital structure for a more comprehensive examination. In summary, while the research contributes valuable insights into the relationship between informal investors, rule of law, and new venture internationalization, addressing these limitations in future research endeavors would enhance understanding and support the development of policies to foster entrepreneurial activities.

6.5 Conclusion

This study delves into the interplay between informal investors, the rule of law, and household income in driving new venture internationalization. Our paper enriches the resource-based view by highlighting the role of informal investors in facilitating internationalization, offering both financial resources as well as expertise and networks. It also enhances institutional theory by elucidating that the influence of informal investors is contingent upon the strength of rule of law. Furthermore, the study demonstrates that the level of wealth among entrepreneurs emerges as a crucial resource shaping these relationships between informal investors, the rule of law, and internationalization. Therefore, the study advances our understanding of the mechanisms driving new venture

internationalization by integrating both micro and macro factors. Future research should further explore these dynamics to deepen our comprehension of international entrepreneurship.

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Table 1. Variables definitions and data sources.

Variable	Definition	Source
Individual-level variables		
New venture internationalization	Dummy variable: 1 = represents the percentage of the customers normally living outside the respondent's country is more than 25%, 0 = otherwise.	GEM
Gender	Dummy: 1 = female, 0 = male.	GEM
Age	Current age of participants in years.	GEM
Household income	Dummy variable: 1 = highest household income tier of the respondent, 0 = middle and lowest household income tier. This is an originally categorial variable that classifies the household income tier of the respondent (lowest=1; middle=2; highest=3). For empirical purposes we have converted this variable to a binary one.	GEM
Higher education	Dummy variable: 1 = respondent holding a post-secondary education degree, 0 = otherwise.	GEM
Entrepreneurial experience	Dummy variable: 1 = respondent owned or managed a business that was then GEM sold, shut down, discontinued, or quit in the past 12 months, and then this business continued its activity after the entrepreneur disengaged, 0 = otherwise.	GEM
Knows other entrepreneurs	Dummy variable: 1 = respondent personally knows someone who started a business in the past two years, 0 = otherwise.	GEM
Perceived founding opportunities	Dummy variable: 1 = respondent answered "yes" to "In the next six months, will there be good opportunities for starting a business in the area where you live?", 0 = otherwise.	GEM
Self-efficacy	Dummy variable: 1 = respondent answered "yes" to "Do you have the knowledge, skill, and experience required to start a new business?", 0 = otherwise.	GEM
Fear of failure	Dummy variable: 1 = respondent answered "yes" to "Would fear of failure prevent you to start-up a business?", 0 = otherwise.	GEM
Venture Size	Logarithm of the current number of employees (not counting the owners).	GEM
Country-level variables		
Informal investors	Proportion of informal investors in the country who, in the past three years, have personally provided funds for a new business started by someone else, excluding any purchases of stocks or mutual funds.	GEM
Innovativeness	Proportion of the country's average innovation level derived from the combination of three questions. 1. Will all, some, or none of your potential customers consider this product or service new and unfamiliar? 2. Right now, are there many, few, or no other businesses offering the same products or services to your potential customers? and 3. Have the technologies or procedures required for this product or service been available for less than a year, or between one to five years, or longer than five years?	GEM
Rule of law	Perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance).	WGI
Regulatory quality (robustness)	Regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance).	WGI
Control of corruption (robustness)	Control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance).	WGI
GDP per capita (PPP)	GDP per capita at purchasing power parity (constant 2017 international $). In log.	WDI
GDP growth	Annual percentage growth in GDP.	WDI
Population growth	Annual population growth, expressed in percentage change.	WDI
FDI	Foreign direct investment, net inflows (% of GDP)	WDI

Notes: GEM – Global Entrepreneurship Monitor Adult Population Survey (https://www.gemconsortium.org) for the individual-level variables. WGI -Worldwide Governance Indicators WDI (www.govindicators.org) – World Bank's World Development Indicators (https://data.worldbank.org/products/wdi) for the country-level variables.

Table 2. Descriptive statistics and correlation matrix.

No.	Variables	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1	New Venture Internationalization	0.107	0.309	**1.00**																		
2	Informal investors	0.070	0.055	**-0.03**	**1.00**																	
3	Rule of law	0.260	0.895	**0.11**	**-0.23**	**1.00**																
4	Gender	0.425	0.494	**-0.07**	**0.03**	**-0.06**	**1.00**															
5	Industry	3.198	0.984	**-0.03**	**0.01**	**-0.08**	**0.18**	**1.00**														
6	Age	37	11	0.00	**-0.10**	**0.17**	0.00	**-0.07**	**1.00**													
7	Higher education	0.377	0.485	**0.08**	**-0.06**	**0.26**	**-0.05**	-0.01	**0.02**	**1.00**												
8	Household income	0.432	0.495	**0.05**	-0.01	**0.06**	**-0.10**	**-0.03**	**0.02**	**0.21**	**1.00**											
9	Entrepreneurial experience	0.036	0.187	**0.06**	**0.07**	**-0.03**	**-0.02**	**0.01**	**-0.02**	0.01	0.01	**1.00**										
10	Know entrepreneur	0.680	0.466	**0.05**	**0.10**	**0.01**	**-0.07**	**0.03**	**-0.08**	**0.11**	**0.11**	**0.04**	**1.00**									
11	Self-efficacy	0.844	0.363	**0.04**	**0.05**	**0.04**	**-0.06**	0.00	0.01	**0.07**	**0.07**	**0.02**	**0.16**	**1.00**								
12	Perceived opportunity	0.615	0.486	0.03	**0.14**	**-0.06**	**-0.02**	**0.03**	**-0.08**	**0.00**	**0.03**	**0.03**	**0.17**	**0.15**	**1.00**							
13	Fear of failure	0.287	0.452	**0.00**	**-0.04**	**-0.02**	**0.05**	**0.02**	**0.01**	-0.02	**-0.06**	**0.04**	**-0.04**	**-0.17**	**-0.09**	**1.00**						
14	Venture Size	0.896	0.973	**0.18**	**0.03**	**0.07**	**-0.16**	**-0.09**	0.01	**0.16**	**0.16**	**0.07**	**0.10**	**0.05**	**0.04**	**-0.02**	**1.00**					
15	GDP per capita	23583	17693	**0.14**	**-0.45**	**0.75**	**-0.09**	**-0.06**	**0.18**	**0.30**	**0.06**	**-0.03**	-0.01	**0.02**	**-0.10**	0.01	**0.15**	**1.00**				
16	GDP growth	2.836	3.756	**-0.03**	**0.15**	**-0.22**	**0.02**	**0.02**	**-0.06**	**-0.09**	**-0.01**	**0.01**	0.00	**-0.05**	**0.09**	**-0.03**	**0.03**	**-0.30**	**1.00**			
17	Population	1.169	0.995	0.00	**0.42**	**-0.31**	0.01	**0.05**	**-0.11**	**-0.12**	**-0.05**	**0.06**	**0.03**	**0.03**	**0.13**	**-0.03**	**0.03**	**-0.38**	**0.19**	**1.00**		
18	FDI	3.689	7.905	**0.03**	**-0.04**	**0.17**	0.00	**-0.02**	**0.02**	**0.04**	0.01	**-0.01**	0.00	0.01	0.00	**-0.02**	0.00	**0.10**	**0.13**	**-0.04**	**1.00**	
19	Innovativeness	0.634	0.186	**0.09**	**-0.03**	**0.09**	**-0.03**	**0.02**	**0.04**	**0.03**	**0.03**	**0.02**	**-0.01**	0.00	**0.02**	**-0.03**	**0.07**	**0.07**	**0.30**	**0.03**	**0.06**	**1.00**

Notes: Correlation coefficients displayed in bold are significant at 0.1%.

Table 3. Multilevel logistic random intercept model predicting new venture internationalization.

Dep. Var.: New Venture Internationalization	(1)	(2)	(3)
Informal investors (H1)	1.736**	1.773**	1.722**
	(0.690)	(0.691)	(0.691)
Rule of Law		0.274***	0.355***
		(0.093)	(0.104)
Informal investors*Rule of Law (H2)			-1.295*
			(0.744)
Gender	-0.137***	-0.137***	-0.138***
	(0.027)	(0.027)	(0.027)
Age	-0.033***	-0.033***	-0.033***
	(0.007)	(0.007)	(0.007)
Age squared	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Higher education	0.086***	0.087***	0.086***
	(0.027)	(0.027)	(0.027)
Household income	0.120***	0.119***	0.120***
	(0.026)	(0.026)	(0.026)
Entrepreneurial experience	0.440***	0.441***	0.439***
	(0.056)	(0.056)	(0.056)
Know entrepreneur	0.140***	0.139***	0.138***
	(0.029)	(0.029)	(0.029)
Self-efficacy	0.080**	0.079**	0.079**
	(0.039)	(0.039)	(0.039)
Perceived opportunity	0.132***	0.131***	0.132***
	(0.028)	(0.028)	(0.028)
Fear of failure	0.073**	0.073**	0.074**
	(0.029)	(0.029)	(0.029)
Venture Size (ln)	0.348***	0.349***	0.348***
	(0.012)	(0.012)	(0.012)
GDP PPP (ln)	0.500***	0.320***	0.315***
	(0.074)	(0.096)	(0.095)
GDP Growth	0.009	0.009	0.009
	(0.006)	(0.006)	(0.006)
Population growth	-0.061***	-0.050***	-0.048**
	(0.018)	(0.019)	(0.019)
FDI	-0.002	-0.002	-0.002
	(0.002)	(0.002)	(0.002)
Innovativeness	1.519***	1.507***	1.505***
	(0.176)	(0.176)	(0.176)
Constant	-7.942***	-6.286***	-6.274***
	(0.744)	(0.927)	-0.925
Years Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Observations	78,349	78,349	78,349
Number of groups	108	108	108

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors in parentheses.

Table 4. Multilevel logistic random intercept model predicting new venture's internationalization differential effects by income level.

Dep.Var.: New Venture Internationalization	(1)	(2)	(3)	(4)	(5)	(6)
Sample:		High income			Low income	
Informal investors	0.958	0.924	0.927	2.318**	2.322**	2.005**
	(0.925)	(0.927)	(0.927)	(0.957)	(0.956)	(0.960)
Rule of Law		0.275***	0.259**		0.163	0.354***
		(0.104)	(0.120)		(0.114)	(0.131)
Informal investors*Rule of Law (H3)			0.268			-3.075***
			(0.999)			(1.042)
Gender	-0.172***	-0.173***	-0.172***	-0.098***	-0.099***	-0.101***
	(0.039)	(0.039)	(0.039)	(0.037)	(0.037)	(0.037)
Age	-0.040***	-0.040***	-0.040***	-0.025**	-0.025**	-0.026**
	(0.011)	(0.011)	(0.011)	(0.010)	(0.010)	(0.010)
Age square	0.000***	0.000***	0.000***	0.000**	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Higher education	0.125***	0.127***	0.127***	0.046	0.047	0.044
	(0.038)	(0.038)	(0.039)	(0.039)	(0.039)	(0.039)
Entrepreneurial experience	0.355***	0.356***	0.356***	0.515***	0.516***	0.510***
	(0.082)	(0.082)	(0.082)	(0.079)	(0.079)	(0.079)
Know entrepreneur	0.137***	0.136***	0.136***	0.138***	0.138***	0.138***
	(0.043)	(0.043)	(0.043)	(0.040)	(0.040)	(0.040)
Self-efficacy	0.055	0.054	0.054	0.096*	0.095*	0.095*
	(0.059)	(0.059)	(0.059)	(0.053)	(0.053)	(0.053)
Perceived opportunity	0.084**	0.083**	0.083**	0.192***	0.191***	0.192***
	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)
Fear of failure	0.030	0.031	0.031	0.100**	0.100**	0.101**
	(0.042)	(0.042)	(0.042)	(0.039)	(0.039)	(0.039)
Venture Size (ln)	0.308***	0.309***	0.309***	0.392***	0.392***	0.392***
	(0.016)	(0.016)	(0.016)	(0.018)	(0.018)	(0.018)
GDP PPP (ln)	0.395***	0.205**	0.205**	0.569***	0.456***	0.447***
	(0.076)	(0.104)	(0.104)	(0.088)	(0.117)	(0.117)
GDP Growth	0.013	0.013	0.013	0.003	0.003	0.002
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Population growth	-0.046	-0.038	-0.038	-0.060***	-0.053**	-0.047**
	(0.033)	(0.033)	(0.033)	(0.023)	(0.023)	(0.024)
FDI	-0.001	-0.002	-0.002	-0.001	-0.001	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Innovativeness	1.166***	1.142***	1.142***	1.991***	1.992***	2.011***
	(0.244)	(0.245)	(0.245)	(0.251)	(0.251)	(0.251)
Constant	-6.218***	-4.465***	-4.455***	-9.345***	-8.314***	-8.311***
	(0.796)	(1.031)	(1.032)	(0.893)	(1.141)	(1.136)
Years Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	33,872	33,872	33,872	44,477	44,477	44,477
Number of groups	108	108	108	108	108	108

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors in parentheses.

Table 5. Robustness checks: Alternative institutional factors measures

Dep. Var.: New Venture Internationalization	(1)	(2)	(3)	(4)	(5)	(6)
Sample:	All		High income		Low income	
Informal investors	2.348***	1.606**	1.090	0.922	2.918***	1.800*
	(0.700)	(0.693)	(0.943)	(0.929)	(0.959)	(0.967)
Regulatory quality	0.397***		0.372***		0.411***	
	(0.101)		(0.123)		(0.135)	
Informal investors*Regulatory Quality	-3.558***		-0.995		-6.222***	
	(0.816)		(1.075)		(1.134)	
Control of corruption		0.438***		0.209**		0.503***
		(0.092)		(0.106)		(0.119)
Informal investors*Control of Corruption		-1.544**		0.062		-3.406***
		(0.707)		(0.926)		(0.993)
Gender	-0.139***	-0.138***	-0.174***	-0.172***	-0.102***	-0.101***
	(0.027)	(0.027)	(0.039)	(0.039)	(0.037)	(0.037)
Age	-0.033***	-0.033***	-0.040***	-0.040***	-0.026**	-0.025**
	(0.007)	(0.007)	(0.011)	(0.011)	(0.010)	(0.010)
Age squared	0.000***	0.000***	0.000***	0.000***	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Higher education	0.085***	0.085***	0.128***	0.127***	0.040	0.041
	(0.027)	(0.027)	(0.039)	(0.039)	(0.039)	(0.039)
Household income	0.121***	0.119***				
	(0.026)	(0.026)				
Entrepreneurial experience	0.434***	0.438***	0.356***	0.355***	0.501***	0.509***
	(0.056)	(0.056)	(0.082)	(0.082)	(0.079)	(0.079)
Know entrepreneur	0.137***	0.139***	0.134***	0.136***	0.138***	0.138***
	(0.029)	(0.029)	(0.043)	(0.043)	(0.040)	(0.040)
Self-efficacy	0.080**	0.078**	0.055	0.054	0.096*	0.094*
	(0.039)	(0.039)	(0.059)	(0.059)	(0.053)	(0.053)
Perceived opportunity	0.132***	0.131***	0.083**	0.083**	0.191***	0.190***
	(0.028)	(0.028)	(0.039)	(0.039)	(0.039)	(0.039)
Fear of failure	0.074***	0.074**	0.031	0.031	0.102***	0.101**
	(0.029)	(0.029)	(0.042)	(0.042)	(0.039)	(0.039)
Venture Size (ln)	0.347***	0.348***	0.308***	0.309***	0.390***	0.391***
	(0.012)	(0.012)	(0.016)	(0.016)	(0.018)	(0.018)
GDP PPP (ln)	0.389***	0.262***	0.185*	0.236**	0.574***	0.358***
	(0.094)	(0.093)	(0.104)	(0.101)	(0.118)	(0.113)
GDP Growth	0.007	0.010	0.011	0.013	0.001	0.003
	(0.006)	(0.006)	(0.008)	(0.008)	(0.008)	(0.008)
Population growth	-0.053***	-0.058***	-0.038	-0.050	-0.051**	-0.052**
	(0.019)	(0.019)	(0.033)	(0.033)	(0.023)	(0.023)
FDI	-0.002	-0.002	-0.002	-0.002	-0.001	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Innovativeness	1.546***	1.501***	1.131***	1.159***	2.112***	2.008***
	(0.177)	(0.177)	(0.245)	(0.245)	(0.252)	(0.252)
Intercept	-7.111***	-5.848***	-4.352***	-4.771***	-9.706***	-7.564***
	(0.913)	(0.898)	(1.032)	(1.002)	(1.152)	(1.101)
Years Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	78,349	78,349	33,872	33,872	44,477	44,477
Number of groups	108	108	108	108	108	108

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors in parentheses.

Table 6. Robustness checks: Alternative dependent variable.

Dep. Var.: New Venture Internationalization	(1)	(2)	(3)
Specification:		High export levels > 75%	
Sample:	All	High income	Low income
Informal investors	0.589	-0.806	1.253
	(1.056)	(1.402)	(1.439)
Rule of Law	0.496***	0.415***	0.512***
	(0.135)	(0.154)	(0.172)
Informal investors*Rule of Law	-3.728***	-0.569	-6.497***
	(1.105)	(1.466)	(1.527)
Gender	-0.133***	-0.234***	-0.032
	(0.042)	(0.062)	(0.059)
Age	-0.028**	-0.020	-0.032*
	(0.012)	(0.017)	(0.016)
Age square	0.000**	0.000	0.000*
	(0.000)	(0.000)	(0.000)
Higher education	0.142***	0.130**	0.141**
	(0.043)	(0.060)	(0.062)
Household income	0.134***		
	(0.041)		
Entrepreneurial experience	0.357***	0.237*	0.481***
	(0.085)	(0.125)	(0.117)
Know entrepreneur	0.109**	0.094	0.121*
	(0.046)	(0.066)	(0.064)
Self-efficacy	0.172***	0.163*	0.172**
	(0.064)	(0.094)	(0.087)
Perceived opportunity	-0.023	-0.123**	0.100
	(0.043)	(0.059)	(0.063)
Fear of failure	0.063	0.053	0.075
	(0.045)	(0.064)	(0.062)
Venture Size (ln)	0.265***	0.221***	0.314***
	(0.017)	(0.023)	(0.025)
GDP PPP (ln)	0.278**	0.134	0.460***
	(0.119)	(0.130)	(0.149)
GDP Growth	0.014	0.020*	0.003
	(0.009)	(0.012)	(0.013)
Population growth	-0.064**	-0.065	-0.065*
	(0.028)	(0.048)	(0.034)
FDI	-0.003	-0.002	-0.002
	(0.002)	(0.003)	(0.003)
Innovativeness	0.584**	0.718**	0.790**
	(0.267)	(0.365)	(0.380)
Constant	-6.626	-4.924***	-8.905***
	(1.168)	(1.329)	(1.474)
Years Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Observations	78,349	33,872	44,477
Number of groups	108	108	108

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors in parentheses.

Table 7. Robustness checks: Alternative three-level differential effects by income level

Dep. Var.: New Venture Internationalization	(1)	(2)	(3)
Sample:	High-income	Middle income	Low income
Informal investors	0.927	0.573	4.063***
	(0.927)	(1.232)	(1.358)
Rule of Law	0.259**	0.385**	0.293*
	(0.120)	(0.152)	(0.163)
Informal investors*Rule of Law	0.268	-3.203**	-3.129**
	(0.999)	(1.319)	(1.509)
Gender	-0.172***	-0.064	-0.147***
	(0.039)	(0.049)	(0.057)
Age	-0.040***	-0.023*	-0.030*
	(0.011)	(0.014)	(0.016)
Age squared	0.000***	0.000	0.000
	(0.000)	(0.000)	(0.000)
Higher education	0.127***	0.115**	-0.071
	(0.039)	(0.051)	(0.064)
Entrepreneurial experience	0.356***	0.415***	0.606***
	(0.082)	(0.111)	(0.114)
Know entrepreneur	0.136***	0.180***	0.081
	(0.043)	(0.054)	(0.060)
Self-efficacy	0.054	-0.003	0.228***
	(0.059)	(0.071)	(0.080)
Perceived opportunity	0.083**	0.166***	0.224***
	(0.039)	(0.052)	(0.061)
Fear of failure	0.031	0.036	0.172***
	(0.042)	(0.054)	(0.059)
Venture Size (ln)	0.309***	0.380***	0.419***
	(0.016)	(0.023)	(0.028)
GDP PPP (ln)	0.205**	0.347***	0.543***
	(0.104)	(0.133)	(0.138)
GDP Growth	0.013	0.000	-0.002
	(0.008)	(0.011)	(0.013)
Population growth	-0.038	-0.027	-0.053
	(0.033)	(0.032)	(0.033)
FDI	-0.002	-0.000	-0.001
	(0.002)	(0.003)	(0.003)
Innovativeness	1.142***	1.919***	2.434***
	(0.245)	(0.323)	(0.381)
Constant	-4.455***	-7.413***	-9.473***
	(1.032)	(1.305)	(1.368)
Years Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Observations	33,872	24,488	19,989
Number of groups	108	108	105

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors in parentheses.

Figure 1. Conceptual framework and hypotheses.

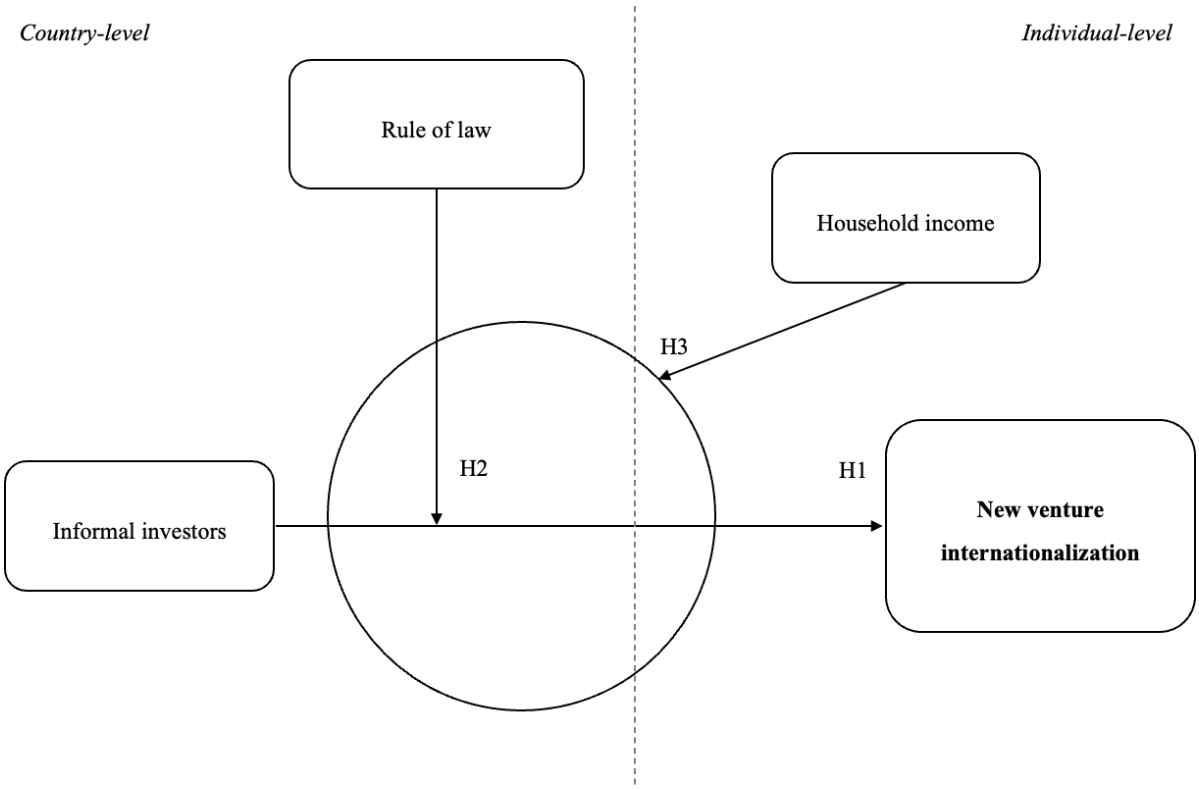


Figure 2. Moderating effect of a country`s Rule of Law on the relationship between informal investors and new venture internationalization.

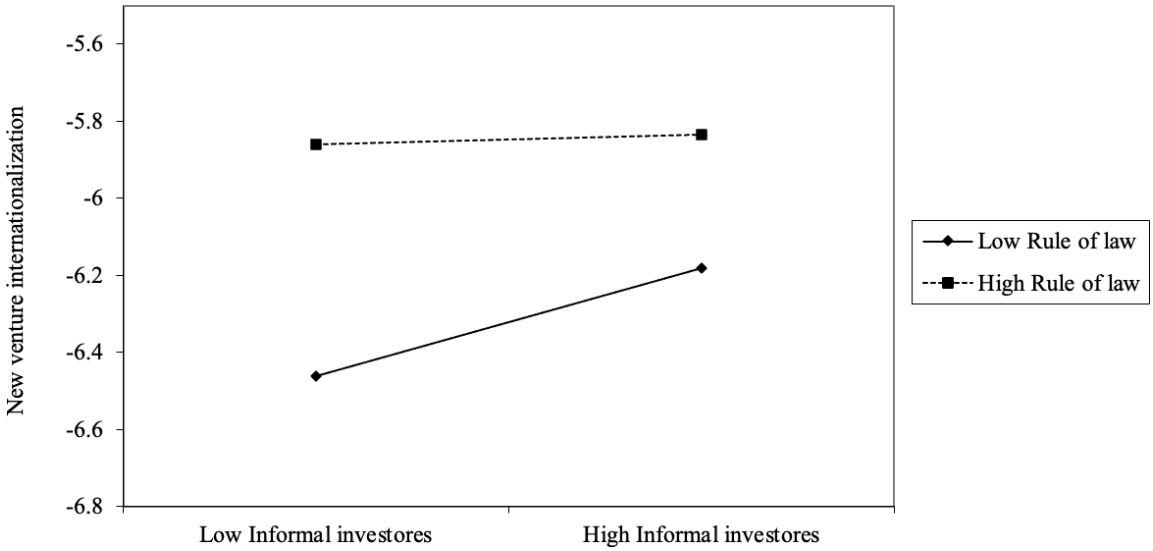
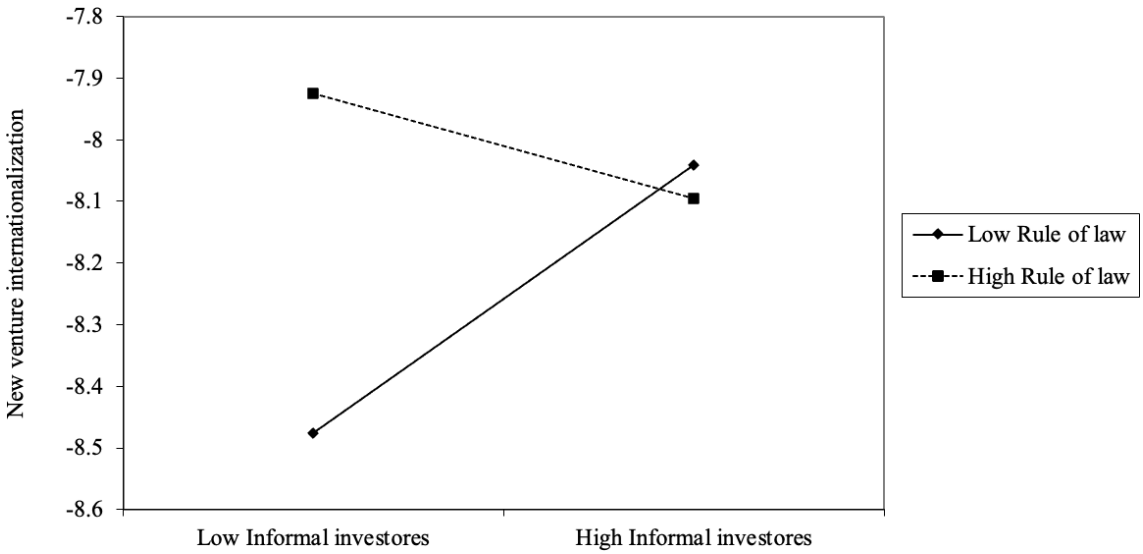


Figure 3. Moderating effect of a country`s Rule of Law on the relationship between informal investors and new venture`s export orientation for low-income households.



Appendix A

Table A1. Sample composition.

No.	Country	Frequency	New venture internationalization	Informal investors	Rule of law	Household income
1	Algeria	245	0.07	0.10	-0.77	0.50
2	Angola	1,116	0.13	0.15	-1.12	0.38
3	Argentina	798	0.04	0.04	-0.61	0.39
4	Armenia	90	0.16	0.08	-0.13	0.53
5	Australia	525	0.09	0.04	1.77	0.56
6	Austria	363	0.29	0.07	1.87	0.49
7	Bangladesh	105	0.01	0.06	-0.73	0.32
8	Barbados	258	0.13	0.06	1.07	0.39
9	Belarus	15	0.13	0.02	-0.79	0.60
10	Belgium	200	0.33	0.03	1.43	0.57
11	Belize	208	0.37	0.10	-0.84	0.04
12	Bolivia	560	0.06	0.12	-1.02	0.34
13	Bosnia and Herzegovina	263	0.21	0.04	-0.24	0.54
14	Botswana	582	0.06	0.10	0.62	0.05
15	Brazil	5,824	0.01	0.02	-0.12	0.34
16	Bulgaria	74	0.08	0.03	-0.10	0.38
17	Burkina Faso	640	0.05	0.10	-0.48	0.34
18	Cameroon	386	0.05	0.17	-0.98	0.47
19	Canada	656	0.22	0.07	1.79	0.44
20	Chile	5,447	0.08	0.15	1.22	0.48
21	China	2,645	0.03	0.08	-0.43	0.50
22	Colombia	3,689	0.11	0.07	-0.34	0.50
23	Costa Rica	193	0.08	0.04	0.53	0.64
24	Croatia	467	0.32	0.04	0.26	0.56
25	Cyprus	200	0.25	0.04	0.75	0.40
26	Czech Republic	157	0.17	0.08	1.01	0.54
27	Denmark	320	0.20	0.03	1.98	0.43
28	Dominican Republic	115	0.09	0.07	-0.61	0.49
29	Ecuador	1,180	0.03	0.03	-0.95	0.42
30	Egypt	647	0.13	0.04	-0.40	0.37
31	El Salvador	242	0.04	0.06	-0.62	0.40
32	Estonia	295	0.21	0.07	1.25	0.55
33	Ethiopia	190	0.02	0.04	-0.68	0.41
34	Finland	354	0.08	0.03	1.98	0.48
35	France	205	0.19	0.03	1.44	0.44
36	Georgia	70	0.19	0.03	0.29	0.50
37	Germany	958	0.14	0.04	1.68	0.46
38	Ghana	555	0.05	0.17	0.08	0.12
39	Greece	612	0.17	0.03	0.43	0.42
40	Guatemala	1,987	0.02	0.09	-1.03	0.42
41	Hong Kong	123	0.44	0.07	1.64	0.62
42	Hungary	375	0.18	0.04	0.67	0.51
43	Iceland	207	0.17	0.07	1.85	0.54
44	India	741	0.05	0.05	-0.02	0.49
45	Indonesia	2,642	0.02	0.04	-0.43	0.30
46	Iran	1,454	0.02	0.08	-0.89	0.42
47	Ireland	517	0.23	0.04	1.64	0.44
48	Israel	392	0.19	0.04	1.00	0.43
49	Italy	207	0.19	0.02	0.38	0.35
50	Jamaica	765	0.09	0.06	-0.34	0.19
51	Japan	210	0.11	0.02	1.41	0.42
52	Jordan	113	0.34	0.06	0.22	0.48
53	Kazakstan	184	0.08	0.10	-0.63	0.39
54	Korea	932	0.09	0.03	1.07	0.46
55	Kosovo	6	0.50	0.02	-0.47	0.50
56	Kuwait	131	0.14	0.08	0.33	0.60
57	Latvia	565	0.24	0.07	0.84	0.61
58	Lebanon	925	0.34	0.06	-0.82	0.25
59	Libya	73	0.15	0.04	-1.34	0.18
60	Lithuania	251	0.26	0.07	0.85	0.51

61	Luxembourg	127	0.36	0.06	1.82	0.34
62	Macedonia	286	0.26	0.06	-0.26	0.50
63	Madagascar	494	0.00	0.03	-0.88	0.30
64	Malawi	619	0.07	0.14	-0.19	0.65
65	Malaysia	620	0.08	0.04	0.49	0.43
66	Mexico	884	0.10	0.05	-0.54	0.48
67	Montenegro	35	0.26	0.10	0.01	0.71
68	Morocco	531	0.13	0.03	-0.13	0.29
69	Namibia	58	0.24	0.10	0.25	0.41
70	Netherlands	952	0.11	0.04	1.83	0.53
71	New Zealand	39	0.15	0.04	1.86	0.49
72	Nigeria	809	0.10	0.13	-1.13	0.37
73	Norway	469	0.11	0.04	1.96	0.48
74	Pakistan	123	0.15	0.01	-0.80	0.33
75	Panama	1,046	0.16	0.05	-0.09	0.39
76	Peru	935	0.05	0.08	-0.59	0.43
77	Philippines	743	0.05	0.03	-0.37	0.33
78	Poland	588	0.10	0.04	0.63	0.57
79	Portugal	358	0.21	0.02	1.09	0.41
80	Qatar	486	0.26	0.08	0.85	0.64
81	Romania	306	0.31	0.05	0.14	0.57
82	Russia	302	0.05	0.03	-0.77	0.65
83	Saudi Arabia	1,055	0.39	0.12	0.19	0.35
84	Senegal	210	0.02	0.15	-0.14	0.64
85	Serbia	59	0.14	0.04	-0.48	0.24
86	Singapore	252	0.37	0.04	1.73	0.47
87	Slovakia	479	0.19	0.07	0.54	0.46
88	Slovenia	405	0.24	0.03	1.01	0.60
89	South Africa	821	0.20	0.03	0.11	0.43
90	Spain	6,434	0.11	0.03	1.07	0.46
91	Sudan	156	0.16	0.18	-1.12	0.46
92	Suriname	19	0.16	0.01	-0.05	0.68
93	Sweden	416	0.17	0.06	1.90	0.48
94	Switzerland	571	0.22	0.06	1.88	0.51
95	Thailand	2,521	0.05	0.05	-0.09	0.35
96	Togo	147	0.10	0.13	-0.66	0.43
97	Trinidad & Tobago	380	0.06	0.06	-0.14	0.48
98	Tunisia	89	0.10	0.07	-0.06	0.39
99	Turkey	1,575	0.12	0.10	0.03	0.51
100	Uganda	1,860	0.04	0.26	-0.37	0.32
101	United Arab Emirates	544	0.45	0.07	0.75	0.59
102	United Kingdom	1,897	0.15	0.02	1.71	0.51
103	United States	1,158	0.10	0.06	1.58	0.49
104	Uruguay	655	0.13	0.06	0.64	0.52
105	Vanuatu	183	0.09	0.19	0.26	0.57
106	Vietnam	669	0.02	0.09	-0.40	0.45
107	West Bank & Gaza Strip	125	0.20	0.03	-0.35	0.44
108	Zambia	610	0.07	0.16	-0.36	0.63

Note: N=78,349

Table A2. Multicollinearity test on variables

Variable	VIF	Tolerance
Informal investors	1.75	0.571671
Rule of Law	4.81	0.207872
Gender	1.08	0.923721
Higher education	1.22	0.820983
Household income	1.12	0.896308
Entrepreneurial experience	1.02	0.98213
Know entrepreneur	1.1	0.912701
Self-efficacy	1.09	0.915143
Perceived opportunity	1.08	0.923209
Perceived opportunity	1.06	0.947819
Venture Size (ln)	1.15	0.867535
GDP PPP (ln)	3.52	0.283899
GDP Growth	1.81	0.551086
Population growth	1.53	0.652105
FDI	1.09	0.915118
Innovativeness	2.11	0.472959

Notes: VIF values greater than 10 indicate reasons for concern due to collinearity among variables. Tolerance values less than 0.10 indicate collinearity among variables. Our variables do not suffer from collinearity. We do not include age squared as by the construction both variables are highly correlated and inflate the VIFs (Estrin et al., 2020).