

The role of foreign venture capital and foreign business angels in start-ups' early internationalization: The case of Polish ICT start-ups

Krystian Bigos, Adam Michalik

ABSTRACT

Objective: The objective of the article is to examine the role of foreign venture capital and foreign business angels in companies' early internationalization based on the example of Polish ICT start-ups.

Research Design & Methods: We based the scientific argument on an analysis of the existing state of knowledge in this area and the empirical research conducted among 220 Polish start-ups, which founded our logistic regression model.

Findings: Based on the study, a positive relationship exists between the involvement of foreign venture capital funds in start-ups and their early internationalization.

Implications & Recommendations: Start-ups should cooperate with foreign institutions, such as venture capital funds, as their knowledge and experience can be a source of start-ups' early internationalization. We recommend that scholars conduct further in-depth panel studies on the impact of foreign investment funds on the early internationalization process.

Contribution & Value Added: The article covers research yet to be undertaken in research analyses in early internationalization and can serve as a starting point for further in-depth studies of the phenomenon, also based on start-ups from other countries.

Article type: research article

Keywords: venture capital; business angel; early internationalization; international entrepreneurship; financial capital

JEL codes: F23, G24, L26

Received: 21 June 2023

Revised: 20 September 2023

Accepted: 26 September 2023

Suggested citation:

Bigos, K., & Michalik, A. (2023). The role of foreign venture capital and foreign business angels in start-ups' early internationalization: The case of Polish ICT start-ups. *Entrepreneurial Business and Economics Review*, 11(4), 139-153. <https://doi.org/10.15678/EBER.2023.110409>

INTRODUCTION

Many business entities show increasing interest in international expansion because the domestic market often fails to meet their growth expectations. Internationalization offers numerous opportunities for each company, including market expansion and the desire to diversify operational risks. Over the past few decades, the research on business internationalization has intensified. Researchers typically analyse this phenomenon from various perspectives using *e.g.* organizational or strategic management theories (Ruzzier *et al.*, 2006; Kollmann & Dobrovič, 2022; Jalil *et al.*, 2022). Although researchers initially focused on the internationalization processes of large corporations (in the 1960s, 70s, and 80s), more recently, research on the internationalization of micro, small, and medium-sized enterprises (since the early 21st century) has become much more popular.

For decades, scholars have explained the internationalization of companies mainly sequentially. This approach became popular because of Swedish researchers Johanson and Vahlne (1974), who presented their model of internationalization known as the Uppsala internationalization model. A breakthrough in

such research occurred around the mid-1990s when Oviatt and McDougall (1994) and Cavusgil (1994) simultaneously demonstrated that not all companies follow an incremental internationalization path. Some of them can also 'leapfrog' certain stages of internationalization, not necessarily gradually increasing their involvement in foreign markets. Oviatt and McDougall (1994) were the first to define what is known as international new ventures, also referred to as international start-ups. According to researchers, some ventures may engage in their first international expansion shortly after their establishment. As a result, Oviatt and McDougall (1994) initiated the discourse on the early internationalization of micro, small, and medium-sized enterprises discussed within the context of the international entrepreneurship school (Machado & Bischoff, 2021). Scholars have revised the original version of the Uppsala model from 1977 several times. The first significant modification occurred under the influence of the development of the network approach to the internationalization processes of firms, as a result of which the network Uppsala model emerged in 2009. Hult, Gonzalez-Perez, and Lagerström see many potential applications of these revised models, especially the one published in 2017, in international business research, especially in such areas as technology entrepreneurship or the digitization of global business (Vahlne & Johanson, 2017; Wach, 2021). Vahlne (2020) claims that the Uppsala internationalization model changed from explaining internationalization to explaining evolution. According to the researcher, the profitability of ventures depends mainly on how to manage the acceptable risk level under conditions of uncertainty (Vahlne, 2020). As mentioned earlier, the latest version of the Uppsala model emphasizes the importance of evolution in accessing and developing knowledge. Consequently, in this article, we will show indirectly that the presence of foreign venture capital funds and foreign angel investors may impact the likelihood of early internationalization because of the access of start-up founders to the knowledge and experience that these entities have.

The international entrepreneurship school has revolutionized research on micro, small, and medium-sized enterprises (start-ups and born globals) within international business. Essentially, the occurrence of early internationalization stems from complex interactions between changes in the international market environment and the diffusion of knowledge among managers and entrepreneurs with a solid international vision for their companies (Zucchella *et al.*, 2007; Civelek, & Krajčík, 2022; Ključnikov *et al.*, 2022a; Pokrivcak & Toth, 2022; Szczepańska-Woszczyzna, & Gatnar, 2022) as well as the ongoing digitalization in the economy (Bilan *et al.*, 2023; Cavusgil & Knight, 2015; Lee *et al.*, 2019; Roshchik *et al.*, 2022; Androniceanu, 2023), which continually alters the business landscape. Early internationalization has somewhat challenged the foundations of the widely accepted stage theory of internationalization (Cavusgil, 1994; McDougall, 1989; Romanello & Chiarvesio, 2019) sparking a lively discourse in international business research (Reuber *et al.*, 2017). Li (2023) suggests that there are still unanswered questions in the literature about why start-ups choose to internationalize early. Li argues that researchers must pay greater attention to the collective effect of both individual and contextual antecedents and their interactions (Li, 2023; Yang *et al.*, 2020; Zhang *et al.*, 2016).

Scholars have adopted different approaches in discussions on the internationalization process of start-ups, generating diverse research directions in this field, resulting in extensive and fragmented studies on the described phenomenon (Morais & Ferreira, 2020). Consequently, there needs to be more consensus among many researchers regarding the course of this phenomenon. The absence of agreement deepens further because of the dynamically evolving economic transformations we are witnessing, including the digitization of the economy, which compels start-ups to continually adapt to new economic realities.

We aimed to verify whether the presence of foreign external entities (venture capital and business angels) in the ownership structures of ICT start-ups contributes to their higher propensity for early internationalization. In the cognitive context, the article presents the relationships between foreign venture capital funds and foreign business angels and the propensity of start-ups for early internationalization in the Polish cultural context. The article consists of theoretical and empirical parts. In the theoretical part, we will conduct a literature review presenting the potential relationship between venture capital and business angels and start-ups' early internationalization. In this part, we will apply a similar approach as Liang, Watters, and Lemański (2022) to identify the abovementioned relationship. The empirical part will present the results of empirical research conducted on 220 Polish start-ups.

In the article, we analysed impact of presence of foreign venture capital and foreign business angels in the ownership on propensity to early internationalization of polish ICT start-ups using a binomial logistic regression model. The structure of the article is as follows: (1) introduction, (2) literature review, (3) research methodology, (4) results and discussion, (5) conclusions.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Financial Capital and its Role in Start-up Development

Financial capital plays a crucial role in the development of a business unit. In line with the resource approach, the entrepreneurship literature identifies it as a determinant of the success of new ventures (Kirwan *et al.*, 2019; Ključnikov *et al.*, 2022b; Shkodra *et al.*, 2021; Tong & Serrasqueiro, 2021), and its lack is a key disincentive to starting a new business in the early stages of an organization's life cycle (Cassar, 2004; Clarysse & Bruneel, 2007; Karas & Režňáková, 2021).

Many studies have shown that the development of start-ups is limited by the lack of access to traditional financing sources (*e.g.* Aga & Reilly, 2011; Akyüz *et al.*, 2006), which in turn is due to market failures underlying new ventures and is associated with significant information asymmetries (Kirwan *et al.*, 2019; Robb & Robinson, 2014; Waleczek *et al.*, 2018). Start-ups struggle to raise external capital (Hamilton & Fox, 1998; Westhead *et al.*, 2001). Hence, many studies mention the financing gap that small businesses face in attracting long-term financing from market players such as banks and venture capital firms. This is particularly relevant for start-ups operating in the high-tech industry, which experience high uncertainty related mainly to research and development activities (Carpenter & Petersen, 2002). Moreover, start-ups lack a spectacular track record on which they can base their bargaining power in negotiations with investors (Kirwan *et al.*, 2019).

Many start-ups operate in an era of noticeably rapid global technological development. Thus, these ventures function in the information and communications technology (ICT) industry, offering products or services that revolutionize international trade and accelerate their internationalization process (Deng *et al.*, 2022). Considerable start-up founders discover cross-border opportunities (Jiang, *et al.*, 2020); therefore, the internationalization of ICT start-ups occurs early, as they offer many products or services that are unique and desired by the international community. Difficult (or even often lacking) access to financing for start-ups has led to the emergence of many organizations that provide financial support for such ventures (Kirwan *et al.*, 2019; Kézai & Konczos Szombathelyi, 2021). Over the past decades, many public and private institutions have emerged that continue to provide capital to innovative enterprises, such as start-ups (Kirwan *et al.*, 2019). Nowadays, traditional models of entrepreneurial financing primarily include informal investments by the founders themselves (*i.e.* financial bootstrapping) (Ebben, 2009; Ebben & Johnson, 2006) - including loans from friends, family, and colleagues (Zavatta, 2008), public financing (seed fund; from seed capital) and venture capital investments in promising entrepreneurial companies, especially in developed countries (Fernandez, 2021). Moreover, there are other new alternative procedures for accessing start-up financings, such as business angels (Zinecker *et al.*, 2021) and crowdfunding (Cumming *et al.*, 2019; Cumming & Groh, 2018; Fernandez, 2021).

The Link Between Source of Financing and Early Internationalization

Venture Capital

One source of start-up funding is venture capital (Dalal, 2022; Zbierowski & Gojny-Zbierowska, 2022). This fund invests mainly in small, young, and innovative companies by providing them with the financial capital they need to grow internationally (Park & LiPuma, 2020) in exchange for shares (Drover *et al.*, 2017). Scholars usually see venture capital as an active and temporary (5 to 10 years) partner in the ventures in which it invests and is usually a minority shareholder. This type of entity earns a rate of return mainly through a capital gain through an exit rather than through dividend income (Landström, 2007). Furthermore, venture capitals are usually managed by individuals with extensive international business experience. Hence, they transfer business knowledge to start-ups (Clercq & Manigart, 2007; Cumming & MacIntosh, 2003), facilitating the internationalization of new ventures (Fernhaber & McDougall, 2009; Fernhaber *et al.*, 2009).

Over the past few years, more and more studies on the internationalization of start-ups financed through venture capital have appeared (e.g. Clercq *et al.*, 2012; Fernhaber *et al.*, 2009; Park & LiPuma, 2020; Woo, 2020). George *et al.* (2005) note that the presence of equity capital in start-ups could influence management attitudes towards internationalization risk. The researchers found that start-ups whose shareholders are venture capitalists exhibit less risk aversion and are more inclined to increase the scale and scope of internationalization (George *et al.*, 2005). Zahra *et al.* (2007) conducted a similar study. They verified the impact of the presence of venture capital in the ownership structure of a start-up on its internationalization. They found that the participation of venture capital in the ownership structure of a start-up can be positively related to the venture's global knowledge resources and consequently impact the entity's internationalization (Zahra *et al.*, 2007). Fernhaber and McDougall (2009) hold a similar view. They believe that the international knowledge held by venture capital influences the internationalization of start-ups, as they indirectly use it and thus enrich the venture's resource base.

Moreover, Fernhaber and McDougall (2009) noted that the impact of venture capital's international knowledge on the internationalization of a new venture is more significant when the venture capital is a reputable entity.

Interestingly, among early-stage enterprises (start-ups), the resources held by venture capital play a more significant role than for other entities (Lockett *et al.*, 2008). On the other hand, based on empirical results, Woo (2020) found that the foreign origin of venture capital is positively related to the internationalization of start-ups in terms of both the probability of internationalization and the intensity of foreign sales. St-Pierre *et al.* (2018) also note that venture capital in smaller business entities facilitates foreign operations. The results of the study showed that entities in which venture capital has been invested gain credibility in the eyes of financial institutions by making it easier to obtain financing for export activities (St-Pierre *et al.*, 2018). Rossi *et al.* (2018) observe that European small and medium-sized entities show a higher propensity to export when owned by venture capital, which may, for example, be since funds are more likely to create business networks. These findings are consistent with Humphery-Jenner and Suchard's (2013) research on Chinese ventures. Foreign venture capitalists assist smaller entities in overseas expansion by leveraging their connections, financial resources, and institutional knowledge. Based on the above considerations, a start-up will have a greater propensity for early internationalization if foreign venture capital is included in its structures. Accordingly, we hypothesised:

- H1:** Foreign venture capital funds' presence in the start-ups' structures increases the likelihood of their early internationalization.

Business Angels

The practice of wealthy individuals investing in high-risk start-up projects has existed since the early days of economic activity in society (Landström, 2007). In the literature, such investors as business angels are willing to invest their capital in unlisted young ventures (Drover *et al.*, 2017; Kościółek, 2022), usually in exchange for convertible debt or shares (Grilli, 2019). Business angels are mainly ex-entrepreneurs who seek to fund and add value to start-ups through extensive advice in their area of expertise (Drover *et al.*, 2017) - e.g. support in business management, bringing extensive business contacts to the start-up (Zinecker *et al.*, 2021). According to White and Dumay (2017), these types of investors represent the largest funding source for early-stage pre-ventures, *i.e.* start-ups. They fill a critical funding gap between funds from family and friends and institutional funds (venture capital), which is why some researchers equate business angels to informal venture capital for a good reason (Mason, *et al.*, 2019; Zinecker *et al.*, 2021).

Typically, start-ups try to reach out to an angel investor who can add value to the venture (other than what venture capital offers), such as their experience, networks, and connection to other investors, especially foreign investors (Crick & Crick, 2018). This can result in the beginning of international cooperation for them. Moen *et al.* (2008) indicate a lack of research in the literature on investors with a global orientation. Business angels mainly include experienced successful entrepreneurs (Ramadani, 2009) and high-level corporate executives (Kelly, 2007) who would like to allocate part of their savings to a venture with high growth potential. Hence, we may assume that

such individuals have extensive international experience, which may be the main reason for early internationalization (Paul & Rosado-Serrano, 2019). Thus, we hypothesised:

H2: Foreign business angels' presence in the start-ups' structures increases the likelihood of their early internationalization.

RESEARCH METHODOLOGY

Data Collection and Research Sample

We conducted the study among Polish start-ups, characterized as new, young micro- and small enterprises operating in the information and communication technology (ICT) sector. We selected potential start-ups for the study through the ORBIS portal, which gathers comprehensive information on hundreds of millions of private and public enterprises worldwide. From this database, we selected enterprises established between 2017 and 2021 belonging to the IT/ICT industry (NACE codes: 26.1, 26.2, 26.3, 26.4, 26.8; 58.2, 61-62, 63.11). Additionally, the study considered micro and small ventures originating from Poland based on their size classification, according to the European Commission. Therefore, these entities in the classification context had to meet the following criteria: (1) employ fewer than 50 workers¹ and (2) the total sales turnover or the total sum of assets is at most 10 million EUR per year. Furthermore, we excluded from the analysis those entities which established a company only to settle work time with the current employer (we asked about it at the beginning of each interview).

We conducted the quantitative research in two phases. In the first phase, we conducted a pilot study using the computer-aided web interview (CAWI) technique. As a result, we obtained 45 responses. Subsequently, several months later, we initiated the main study, which we conducted using the CATI (computer-aided telephone interview) technique among 200 randomly selected Polish start-ups. Ultimately, we obtained 245 responses, of which 25 were invalid/outliers. Therefore, in the final analysis, we considered 220 responses from founders of Polish start-ups.

In spatial terms, the relatively largest group comprised entities established in 2018, accounting for 28.6% of the total sample. The next groups were start-ups founded in 2017 (27.3% of the total sample), in 2019 (20.9%), in 2020 (15.9%), and in 2021 (7.3%).

Table 1. Simple statistics

Variable	N	Mean	Standard deviation	Coefficient of variation
1. EARLY_INTERN	220	0.43	0.50	116.28
2. GENDER	220	0.79	0.41	51.90
3. AGE	220	35.68	7.79	21.83
4. R_D	220	0.47	0.50	106.38
5. FOR_VENT_CAP	220	0.04	0.19	475.00
6. FOR_BUS_ANG	220	0.03	0.16	533.33

Source: own elaboration in PQStat.

Table 1 shows that over half of the research sample consisted of companies oriented towards domestic sales (57.3% of the total sample). Consequently, 42.7% were companies oriented towards international sales. Regarding the gender of the leading startup founder, we noted that over three out of four founders were men, and the average age of the startup founder was nearly 36 years. Close to half of the analysed startups engaged in research and development activities, while relatively few of them financed their operations using foreign venture capital funds or funds offered by foreign business angels.

Research Model

We verified the two research hypotheses proposed in the study based on a created logistic regression model. This model type verifies relationships between dichotomous independent variables and the dependent variable as it is based on the so-called 'logarithm of odds' (Hosmer *et al.*, 2013).

¹ We measured this indicator in annual work units (AWU).

Based on Figure 1, we observed that the proposed research model suggests a positive relationship between the dependent variable describing early internationalization and the presence of two sources of financial capital, namely foreign venture capital funds and foreign business angels within startup structures.



Figure 1. Proposed research model

Source: own elaboration.

Measures

The study's dependent variable (EARLY_INTERN) was early internationalization, which is measured as a binary variable (0 or 1). The literature extensively defines early internationalization. Moreover, scholars typically operationalize it as realizing the first foreign sale within three to four years of establishment or commencement of business activities. While some researchers (*e.g.* Wach & Głodowska, 2021) argue that early internationalization typically occurs within three years of start-up establishment (*e.g.* Zucchella *et al.*, 2007), there are also voices suggesting that this period may be slightly longer (*e.g.* Capik & Brockhoff, 2017). In this article, we assumed that early internationalization occurs within four years of start-up establishment, consistent with Hewerdine, Rumyantseva, and Welch (2014), if a start-up achieved such foreign sales, we assigned it the value of 1; otherwise, we assigned the value of 0.

We mention two independent variables: the presence of foreign venture capital (FOR_VENT_CAP) and foreign business angels (FOR_BUS_ANG) within start-up structures. Similar to the dependent variable, these variables are dichotomous. If a respondent positively indicated the presence of foreign venture capital and/or foreign business angels within the start-up structures, we assigned them the value of 1; otherwise – 0. Some other scholars proposing similar independent variables are *e.g.* Woo (2020) and Baier Baier-Fuentes *et al.* (2018).

We included three control variables that could potentially affect the estimation results of the other variables in the model.

- GENDER of the leading start-up founder (dummy variable: 1 – men, 0 – woman).
- AGE of the leading start-up founder (continuous variable).
- R_D (Q: Does the start-up conduct research and development activities? 1 – yes, 0 – no).

The first control variable was GENDER, because we believe that the main start-up founder's gender can affect its propensity to internationalize early. Typically, men demonstrate a higher proclivity for risky ventures than women, who are characterized by a higher degree of risk aversion. The second control variable was AGE, because we believe that older people have relatively more work experience and, therefore, are better competent to evaluate economic facts. The last control variable was R_D, because we believe that the internationalization process requires ventures to take an innovative approach, so R&D activities may favour the early internationalization of start-ups.

RESULTS AND DISCUSSION

Based on the results of the likelihood ratio test, it showed the desired statistical significance (model 1: chi-square = 15.277, $p < 0.01$; model 2: chi-square = 15.028, $p < 0.01$; model 3: chi-square = 12.127, $p < 0.01$; model 4: chi-square = 29.087, $p < 0.01$). However, in the case of the Hosmer-Lemeshow test, we also observed its lack of significance, which is an expected result (model 1: chi-square = 4.323, $p =$

0.827; model 2: chi-square = 9.339, $p = 0.315$; model 3: chi-square = 6.694, $p = 0.570$; model 4: chi-square = 3.839, $p = 0.871$). Regarding the Akaike information criterion, out of the four analysed econometric models, model 2 is relatively the best fit. Based on the above statistical tests, we can conclude that the estimated econometric models are well-fitted to the data.

We conducted the verification of the quality assessment of the estimated econometric models based on the analysis of pseudo-R-squared values measured using Nagelkerke's method and the Cox-Snell method (Table 3). In the case of the first analysed econometric model, we observed that the pseudo-R-squared coefficient measured by Nagelkerke's method was 0.090, while when measured by the Cox-Snell method, it was slightly lower, precisely 0.067. Similarly, the coefficients appeared in the next logistic regression model, in which Nagelkerke's pseudo-R-squared was 0.089, while the Cox-Snell pseudo-R-squared was 0.066. We recorded slightly lower values of the pseudo-R-squared coefficients in the case of the third estimated logistic regression model, in which Nagelkerke's pseudo-R-squared coefficient and the Cox-Snell pseudo-R-squared coefficient were 0.072 and 0.054, respectively. In the last econometric model, the pseudo-R-squared coefficients measured by Nagelkerke's and Cox-Snell methods were 0.106 and 0.079, respectively.

In this part of the study, we also verified associations between nominal variables. For this purpose, we used V-Cramer coefficients (Table 2). Among the analysed independent variables, the variable AGE was relatively more strongly associated with the variable EARLY_INTERN ($v = 0.359$, chi-square = 28.496), but we found statistically significant associations for the variables R_D ($v = 0.184$, chi-square = 7.447, $p < 0.01$) and FOR_VENT_CAP ($v = 0.127$, chi-square = 3.533, $p < 0.1$). The remaining variables were relatively less strongly associated with the dependent variable. Regarding the control variables, we observed that the variable R_D was significantly associated with the variable FOR_BUS_ANG to a relatively higher degree ($v = 0.123$, chi-square = 3.303, $p < 0.1$), and the variable FOR_VENT_CAP was associated with the variable FOR_BUS_ANG ($v = 0.266$, chi-square = 15.524, $p < 0.001$).

Table 2. V-Cramer coefficients

Variable	1	2	3	4	5	6
1. EARLY_INTERN	1					
2. GENDER	0.024	1				
3. AGE	0.359	0.422	1			
4. R_D	0.184**	0.067	0.375	1		
5. FOR_VENT_CAP	0.127+	0.077	0.373	0.062	1	
6. FOR_BUS_ANG	0.081	0.049	0.339	0.123+	0.266***	1

Note: significant codes were: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: own elaboration in PQStat.

The logistic regression models included three control variables: GENDER, AGE, and R_D. Regarding the control variable AGE, it was negatively associated with the dependent variable in all models. We observed a similar relationship in the context of the GENDER variable, but it was not statistically significant (Table 3). As for the control variable related to research and development activities (B_R), we observed that it was positively associated with the likelihood of early internationalization and was statistically significant.

Based on the information provided in Table 3, we observed that the presence of foreign venture capital funds in the structures of the investigated ventures positively influenced the likelihood of early internationalization (model 1: $\exp(b) = 4.263$, $p < 0.1$; model 2: $\exp(b) = 4.577$, $p < 0.1$; model 4: $\exp(b) = 9.708$, $p < 0.05$). In models 1 and 2, it occurred over four times more frequently in start-ups with such funds in their ownership structure than in other ventures. However, in model 4, the probability of early internationalization was even higher among those ventures that also had foreign business angels in their structures (almost ten times higher). Based on model 4, we observed that the variable FOR_BUS_ANG served as a moderator in the relationship between the variables FOR_VENT_CAP and EARLY_INTERN, as evidenced by the statistically significant interaction between the variables FOR_BUS_ANG and FOR_VENT_CAP. This means that the presence of foreign business angels in the start-up's structure in-

creased the strength of the relationship between the dependent variable describing early internationalization and the independent variable referring to the presence of foreign venture capital funds. Based on the above considerations, we could finally accept H1, according to which in start-ups with at least one foreign venture capital fund, the likelihood of early internationalization is higher than in other ventures.

Table 3. The list of estimated models

Variable	Model 1	Model 2	Model 3	Model 4
const.	0.699 (0.788)	0.701 (0.787)	0.652 (0.779)	0.840 (0.799)
GENDER	-0.015 (0.356)	-0.025 (0.355)	-0.052 (0.352)	0.054 (0.364)
AGE	-0.039* (0.019)	-0.039* (0.019)	-0.036+ (0.019)	-0.045* (0.020)
R_D	0.740** (0.286)	0.757** (0.284)	0.749** (0.283)	0.701* (0.288)
FOR_VENT_CAP	1.450+ (0.871)	1.521+ (0.853)	–	2.273* (1.140)
FOR_BUS_ANG	0.464 (0.942)	–	0.781 (0.888)	1.389 (1.188)
FOR_VENT_CAP x FOR_BUS_ANG	–	–	–	-3.695+ (2.223)
<i>Likelihood ratio test</i>	15.277**	15.028**	12.127**	18.087**
<i>H.-L. test</i>	4.323 ($p = 0.827$)	9.339 ($p = 0.315$)	6.694 ($p = 0.570$)	3.839 ($p = 0.871$)
<i>R2 (Nagelkerke)</i>	0.090	0.089	0.072	0.106
<i>R2 (Cox-Snell)</i>	0.067	0.066	0.054	0.079
AIC	295.037	293.285	296.127	294.226
N	220	220	220	220

Note: significant codes were + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard error in parentheses.

Source: own elaboration in PQStat.

Regarding foreign business angels (private investors), we observed that having such investors in the structures results in a higher inclination of these ventures towards early internationalization (model 1: $\exp(b) = 1.590$; model 3: $\exp(b) = 2.184$; model 4: $\exp(b) = 4.011$). Based on the econometric models presented in Table 3, we noticed a positive relationship between the variables FOR_BUS_ANG and EARLY_INTERN. However, the analysed independent variable was not statistically significant in all econometric models. Thus, we had no basis to accept or reject H2.

During the conducted study, we observed that the results were consistent with Woo (2020) who noted that investments from foreign venture capital funds are positively related to the likelihood of internationalization in ventures, in which scholars have invested such funds. According to Woo, foreign venture capital funds provide practical knowledge about foreign markets to the companies in which they hold shares. Internationalization can create several benefits for young start-ups, such as reducing their dependence on domestic market conditions (Woo, 2020). Therefore, foreign venture capital funds are entities with extensive investment experience (Park & LiPuma, 2020). Empirical evidence also suggests that the international experience of venture capital investors assists start-ups in international expansion (e.g. Fernhaber & McDougall, 2009; Guler & Guillén, 2010; Meuleman & Wright, 2011).

In this study, we found no direct relationship between the presence of foreign business angels/industry investors and the propensity of start-ups for early internationalization (H2). However, we observed that the variable FOR_BUS_ANG moderates the relationship between variables related to the presence of foreign venture capital funds and the propensity of start-ups for early internationalization. Croce, Schwienbacher, and Ughetto (2023) indicate the existence of a relationship between the propensity of business angels to internationalize their investments and the presence of a foreign business angel in the structure

of their venture. Indirectly, this may suggest a connection between the propensity of start-ups for early internationalization and the presence of a foreign business angel in their structure.

CONCLUSIONS

The results indicate that the collaboration between Polish start-ups and foreign venture capital funds (H1) translates into their propensity for early international expansion. We confirmed this with the statistically significant parameter values in logistic regression models 1, 2, and 4, which allowed us to accept H1. The collaboration of start-ups with foreign venture capital funds facilitates the sharing of business experience, including the area of internationalization.

During the study, we found no statistically significant relationship between early internationalization and foreign business angels in the start-up's structure. Thus, we had no grounds to accept or reject H2. However, we noted that the presence of such investors may enhance the involvement of foreign venture capital funds in a given start-up. At this point, there may also be a potential reverse causality in the study, namely, a start-up that has internationalized will attract foreign investors. Nevertheless, we did not verify this relationship due to the study's limitations.

Like all empirical studies, this study has several limitations. Firstly, we conducted it using two methods, namely CAWI and CATI. In such studies, there is a risk that respondents could have provided dishonest answers to the questions, which could distort the objectivity of the obtained results. Another limitation was the sample size ($n = 220$). Despite using random selection, there is always a risk of lack of representativeness in this type of research. The results obtained in this study are difficult to generalize, because they are based on responses from a relatively small group of start-ups belonging to the information and communication technology industry.

Furthermore, we conducted the research in a Polish cultural context. Hence, we should treat the obtained results cautiously, especially regarding their generalizability, which scholars often emphasize in the case of such research (*e.g.* Abdullahi *et al.*, 2022). Furthermore, the study omitted the stage of start-up development, which unfortunately may have resulted in the need for more definitive results, particularly in financing through foreign business angels. Moreover, dichotomizing variables (presenting variables on a weak scale) may raise particular concerns.

We based this empirical study on a relatively small sample of 220 Polish start-ups. Thus, future research should include more respondents. It would also be beneficial to conduct panel surveys of the studied start-ups since early internationalization is a dynamic phenomenon that changes over time. This would enable capturing the evolving trends in the continuously evolving theory of internationalization. Furthermore, while quantitative research allows for some objectivity in responses, it would be valuable to incorporate qualitative or mixed methods in the research on early internationalization, as emphasized in the literature (*e.g.* Onkelinx & Sleuwaegen, 2010; Rialp *et al.*, 2005), which would shed further light on the internationalization process. Future researchers could expand this study to other institutional contexts, including emerging markets and developing economies, thereby broadening our knowledge of the impact of foreign venture capital funds and business angels on early internationalization. Onkelinx *et al.* (2016) and Sekliuckeine (2015) have similar suggestions in this regard. It would also be worth conducting research in a different cultural context to confirm whether our results allow for generalization and replicability. In future research, it would undoubtedly be necessary, especially in the context of financial capital, to consider the stage of development of the analysed start-ups since some studies indicate that the source of financial capital may differ depending on the stage of development of a given start-up (*e.g.* Klačmer *et al.*, 2014).

The study has several practical implications. Suppose new entrepreneurs need more solid international experience and networks. In that case, acquiring them by hiring qualified managers in this area and supporting activities focused on developing cooperation in various entrepreneurial organizations is beneficial. This can enable founders to have easier access to external investors. In terms of financial capital, operationalized in this study through the variables FOR_VENT_CAP and FOR_BUS_ANG, governments of individual countries should try to eliminate barriers to accessing financing for international business activities for start-ups.

REFERENCES

- Abdullahi, I., Lemański, M.K., Kapogiannis, G., & Jimenez-Bescos, C. (2022). Identifying and assessing complexity emergent behaviour during mega infrastructure construction in Sub-Saharan Africa. *Entrepreneurial Business and Economics Review*, 10(3), 7-22. <https://doi.org/10.15678/EBER.2022.100301>
- Aga, G.A., & Reilly, B. (2011). Access to credit and informality among micro and small enterprises in Ethiopia. *International Review of Applied Economics*, 25(3), 313-329. <https://doi.org/10.1080/02692171.2010.498417>
- Akyüz, K.C., Akyüz, İ., Serin, H., & Cindik, H. (2006). The financing preferences and capital structure of micro, small and medium sized firm owners in forest products industry in Turkey. *Forest Policy and Economics*, 8(3), 301-311. <https://doi.org/10.1016/j.forpol.2004.09.003>
- Androniceanu, A. (2023). The new trends of digital transformation and artificial intelligence in public administration. *Administratie si Management Public*, 40, 147-155. <https://doi.org/10.24818/amp/2023.40-09>
- Baier-Fuentes, H., Hormiga, E., Amorós, J.E., & Urbano, D. (2018). The influence of human and relational capital on the rapid internationalization of firms. *Academia Revista Latinoamericana De Administración*, 31(4), 679-700. <https://doi.org/10.1108/ARLA-12-2016-0333>
- Bilan, Y., Oliinyk, O., Mishchuk, H., & Skare, M. (2023). Impact of information and communications technology on the development and use of knowledge. *Technological Forecasting and Social Change*, 191, 122519. <https://doi.org/10.1016/j.techfore.2023.122519>
- Capik, P., & Brockerhoff, A. (2017). The Role of Strategic Partnerships in the Internationalisation of Small Born Global Firms. *Entrepreneurial Business and Economics Review*, 5(3), 49-77. <https://doi.org/10.15678/EBER.2017.050303>
- Carpenter, R.E., & Petersen, B.C. (2002). Capital Market Imperfections, High-Tech Investment, and New Equity Financing. *The Economic Journal*, 112(477), F54-F72. <https://doi.org/10.1111/1468-0297.00683>
- Cassar, G. (2004). The financing of business start-ups. *Journal of Business Venturing*, 19(2), 261-283. [https://doi.org/10.1016/S0883-9026\(03\)00029-6](https://doi.org/10.1016/S0883-9026(03)00029-6)
- Cavusgil, S.T. (1994). Born globals: a quiet revolution among Australian exporters. *Journal of International Marketing*, 2(3), 4-6.
- Cavusgil, S.T., & Knight, G. (2015). The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization. *Journal of International Business Studies*, 46(1), 3-16. <https://doi.org/10.1057/jibs.2014.62>
- Civelek, M., & Krajčík, V. (2022). How do SMEs from different countries perceive export impediments depending on their firm-level characteristics? System approach. *Oeconomia Copernicana*, 13(1), 55-78. <https://doi.org/10.24136/oc.2022.002>
- Clarysse, B., & Bruneel, J. (2007). Nurturing and growing innovative start-ups: the role of policy as integrator. *R&D Management*, 37(2), 139-149. <https://doi.org/10.1111/j.1467-9310.2007.00463.x>
- Clercq, D. de, & Manigart, S. (2007). The Venture Capital Post-investment Phase: Opening the Black Box of Involvement. In H. Landström (Ed.), *Handbook of Research on Venture Capital* (pp. 193-218). Cheltenham, UK, Northampton, MA, USA: Edward Elgar Publishing. <https://doi.org/10.4337/9781847208781.00015>
- Clercq, D. de, Sapienza, H.J., Yavuz, R.I., & Zhou, L. (2012). Learning and knowledge in early internationalization research: Past accomplishments and future directions. *Journal of Business Venturing*, 27(1), 143-165. <https://doi.org/10.1016/j.jbusvent.2011.09.003>
- Crick, J.M., & Crick, D. (2018). Angel investors' predictive and control funding criteria. *Journal of Research in Marketing and Entrepreneurship*, 20(1), 34-56. <https://doi.org/10.1108/JRME-11-2016-0043>
- Croce, A., Schwienbacher, A., & Ughetto, E. (2023). Internationalization of business angel investments: The role of investor experience. *International Business Review*, 32(1), 102033. <https://doi.org/10.1016/j.ibusrev.2022.102033>
- Cumming, D.J., & Groh, A.P. (2018). Entrepreneurial finance: Unifying themes and future directions. *Journal of Corporate Finance*, 50, 538-555. <https://doi.org/10.1016/j.jcorpfin.2018.01.011>
- Cumming, D.J., & MacIntosh, J.G. (2003). Venture-Capital Exits in Canada and the United States. *The University of Toronto Law Journal*, 53(2), 101-199. <https://doi.org/10.2307/3650880>
- Cumming, D.J., Deloof, M., Manigart, S., & Wright, M. (2019). New directions in entrepreneurial finance. *Journal of Banking & Finance*, 100, 252-260. <https://doi.org/10.1016/j.jbankfin.2019.02.008>

- Dalal, A. (2022). Meta-analysis of determinants of venture capital activity. *Entrepreneurial Business and Economics Review*, 10(1), 113-128. <https://doi.org/10.15678/EBER.2022.100108>
- Deng, Z., Zhu, Z., Johanson, M., & Hilmersson, M. (2022). Rapid internationalisation and exit of exporters: The role of digital platforms. *International Business Review*, 31(1), 101896. <https://doi.org/10.1016/j.ibusrev.2021.101896>
- Drover, W., Busenitz, L., Matusik, S., Townsend, D., Anglin, A., & Dushnitsky, G. (2017). A Review and Road Map of Entrepreneurial Equity Financing Research: Venture Capital, Corporate Venture Capital, Angel Investment, Crowdfunding, and Accelerators. *Journal of Management*, 43(6), 1820-1853. <https://doi.org/10.1177/0149206317690584>
- Ebben, J. (2009). Bootstrapping and the financial condition of small firms. *International Journal of Entrepreneurial Behavior & Research*, 15(4), 346-363. <https://doi.org/10.1108/13552550910967930>
- Ebben, J., & Johnson, A. (2006). Bootstrapping in small firms: An empirical analysis of change over time. *Journal of Business Venturing*, 21(6), 851-865. <https://doi.org/10.1016/j.jbusvent.2005.06.007>
- Fernandez, V. (2021). The role of trust and social commitment in start-up financing. *International Review of Financial Analysis*, 75, 101722. <https://doi.org/10.1016/j.irfa.2021.101722>
- Fernhaber, S.A., & McDougall, P.P. (2009). Venture Capitalists as Catalysts to New Venture Internationalization: The Impact of Their Knowledge and Reputation Resources. *Entrepreneurship Theory and Practice*, 33(1), 277-295. <https://doi.org/10.1111/j.1540-6520.2008.00289.x>
- Fernhaber, S.A., McDougall, P.P., & Shepherd, D. A. (2009). International entrepreneurship: leveraging internal and external knowledge sources. *Strategic Entrepreneurship Journal*, 3(4), 297-320. <https://doi.org/10.1002/sej.76>
- George, G., Wiklund, J., & Zahra, S.A. (2005). Ownership and the Internationalization of Small Firms. *Journal of Management*, 31(2), 210-233. <https://doi.org/10.1177/0149206304271760>
- Grilli, L. (2019). There must be an angel? Local financial markets, business angels and the financing of innovative start-ups. *Regional Studies*, 53(5), 620-629. <https://doi.org/10.1080/00343404.2018.1479524>
- Guler, I., & Guillén, M.F. (2010). Institutions and the internationalization of US venture capital firms. *Journal of International Business Studies*, 41(2), 185-205. <https://doi.org/10.1057/jibs.2009.35>
- Hamilton, R.T., & Fox, M.A. (1998). The financing preferences of small firm owners. *International Journal of Entrepreneurial Behavior & Research*, 4(3), 239-248. <https://doi.org/10.1108/13552559810235529>
- Hewerdine, L.J., Rumyantseva, M., & Welch, C. (2014). Resource scavenging. *International Marketing Review*, 31(3), 237-258. <https://doi.org/10.1108/IMR-11-2012-0194>
- Hosmer, D.W., Lemeshow, S., & Sturdivant, R.X. (2013). *Applied logistic regression* (Third edition). Hoboken, NJ: John Wiley & Sons. <https://doi.org/10.1002/9781118548387>
- Humphery-Jenner, M., & Suchard, J.-A. (2013). Foreign venture capitalists and the internationalization of entrepreneurial companies: Evidence from China. *Journal of International Business Studies*, 44(6), 607-621. <https://doi.org/10.1057/jibs.2013.22>
- Jalil, M.F., Ali, A., & Ahmed, Z. (2022). Microfinance services and MSE growth in Pakistan: The mediating perspective of social and psychological capital. *Journal of Entrepreneurship, Management, and Innovation*, 18(1), 93-129. <https://doi.org/10.7341/20221814>
- Jiang, G., Kotabe, M., Zhang, F., Hao, A.W., Paul, J., & Wang, C.L. (2020). The determinants and performance of early internationalising firms: A literature review and research agenda. *International Business Review*, 29(4), 101662. <https://doi.org/10.1016/j.ibusrev.2019.101662>
- Johanson, J., & Vahlne, J.-E. (1974). *The internationalization Process of the Firm*. Mimeographed Working Paper. Uppsala: Department of Business Administration.
- Karas, M., & Režňáková, M. (2021). The role of financial constraint factors in predicting SME default. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 16(4), 859-883. <https://doi.org/10.24136/eq.2021.032>
- Kelly, P. (2007). Business Angel Research: The Road Traveled and the Journey Ahead. In H. Landström (Ed.), *Handbook of Research on Venture Capital* (pp. 315-331). Cheltenham, UK, Northampton, MA, USA: Edward Elgar Publishing.
- Kézai, K.P., & Konczos Szombathelyi, M. (2021). Factors effecting female startupper in Hungary. *Economics and Sociology*, 14(4), 186-203. <https://doi.org/10.14254/2071-789X.2021/14-4/11>
- Kirwan, P., Ratinho, T., van der Sijde, P., & Groen, A.J. (2019). The early development of International New Ventures: a multidimensional exploration. *International Journal of Entrepreneurial Behavior & Research*, 25(6), 1340-1367. <https://doi.org/10.1108/IJEER-12-2017-0508>

- Ključnikov, A., Civelek, M., Klimeš, C., & Farana, R. (2022a). Export risk perceptions of SMEs in selected Visegrad countries. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 17(1), 173-190. <https://doi.org/10.24136/eq.2022.007>
- Ključnikov, A., Civelek, M., Krajčík, V., Novák, P., & Červinka, M. (2022b). Financial performance and bankruptcy concerns of SMEs in their export decision. *Oeconomia Copernicana*, 13(3), 867-890. <https://doi.org/10.24136/oc.2022.025>
- Kollmann, J., & Dobrovič, J. (2022). Key factors of organizational and management structures in the formation of competitive strategy. *Journal of International Studies*, 15(3), 130-144. <https://doi.org/10.14254/2071-8330.2022/15-3/9>
- Kościołek, S. (2022). Heterogeneity of motivations among crowdinvestors: Evidence from the football industry. *Journal of Entrepreneurship, Management, and Innovation*, 18(4), 157-183. <https://doi.org/10.7341/20221845>
- Landström, H. (2007). Pioneers in venture capital research. In H. Landström (Ed.), *Handbook of Research on Venture Capital* (pp. 3-65). Cheltenham, UK, Northampton, MA, USA: Edward Elgar Publishing.
- Lee, Y.Y., Falahat, M., & Sia, B.K. (2019). Impact of digitalization on the speed of internationalization. *International Business Research*, 12(4), 1-11. <https://doi.org/10.5539/ibr.v12n4p1>
- Li, T. (2023). International competitiveness readiness, home country institutions and early internationalisation. *Management Decision*, 61(3), 838-860. <https://doi.org/10.1108/MD-12-2021-1560>
- Liang, Y., Watters, C., & Lemański, M.K. (2022). Responsible Management in the Hotel Industry: An Integrative Review and Future Research Directions. *Sustainability*, 14(24), 17050. <https://doi.org/10.3390/su142417050>
- Lockett, A., Wright, M., Burrows, A., Scholes, L., & Paton, D. (2008). The export intensity of venture capital backed companies. *Small Business Economics*, 31(1), 39-58. <https://doi.org/10.1007/s11187-008-9109-y>
- Machado, M.A., & Bischoff, V. (2021). The use and knowledge of export promotion programs in the early internationalization of Brazilian SMEs. *International Journal of Emerging Markets*. Advance online publication. <https://doi.org/10.1108/IJOEM-09-2020-1114>
- Mason, C., Botelho, T., & Harrison, R. (2019). The changing nature of angel investing: some research implications. *Venture Capital*, 21(2-3), 177-194. <https://doi.org/10.1080/13691066.2019.1612921>
- McDougall, P.P. (1989). International versus domestic entrepreneurship: New venture strategic behavior and industry structure. *Journal of Business Venturing*, 4(6), 387-400. [https://doi.org/10.1016/0883-9026\(89\)90009-8](https://doi.org/10.1016/0883-9026(89)90009-8)
- Meuleman, M., & Wright, M. (2011). Cross-border private equity syndication: Institutional context and learning. *Journal of Business Venturing*, 26(1), 35-48. <https://doi.org/10.1016/j.jbusvent.2009.06.003>
- Moen, Ø., Sørheim, R., & Erikson, T. (2008). Born Global Firms and Informal Investors: Examining Investor Characteristics. *Journal of Small Business Management*, 46(4), 536-549. <https://doi.org/10.1111/j.1540-627X.2008.00255.x>
- Morais, F., & Ferreira, J.J. (2020). SME internationalisation process: Key issues and contributions, existing gaps and the future research agenda. *European Management Journal*, 38(1), 62-77. <https://doi.org/10.1016/j.emj.2019.08.001>
- Onkelinx, J., & Sleuwaegen, L. (2010). Internationalization strategy and performance of small and medium sized enterprises. *NBB Working Paper Research*, 197, 1-45.
- Onkelinx, J., Manolova, T.S., & Edelman, L.F. (2016). The human factor: Investments in employee human capital, productivity, and SME internationalization. *Journal of International Management*, 22(4), 351-364. <https://doi.org/10.1016/j.intman.2016.05.002>
- Oviatt, B.M., & McDougall, P.P. (1994). Toward a Theory of International New ventures. *Journal of International Business Studies*, 25(1), 45-64. <https://doi.org/10.1057/palgrave.jibs.8490193>
- Park, S., & LiPuma, J.A. (2020). New venture internationalization: The role of venture capital types and reputation. *Journal of World Business*, 55(1), 101025. <https://doi.org/10.1016/j.jwb.2019.101025>
- Paul, J., & Rosado-Serrano, A. (2019). Gradual Internationalization vs Born-Global/International new venture models. *International Marketing Review*, 36(6), 830-858. <https://doi.org/10.1108/IMR-10-2018-0280>
- Pokrivčák, J., & Tóth, M. (2022). Financing Gap of Agro-food Firms and the Role of Policies. *AGRIS on-line Papers in Economics and Informatics*, 14(665-2022-1002), 85-96.
- Ramadani, V. (2009). Business angels: who they really are. *Strategic Change*, 18(7-8), 249-258. <https://doi.org/10.1002/jsc.852>

- Reuber, A.R., Dimitratos, P., & Kuivalainen, O. (2017). Beyond categorization: New directions for theory development about entrepreneurial internationalization. *Journal of International Business Studies*, 48(4), 411-422. <https://doi.org/10.1057/s41267-017-0070-3>
- Rialp, A., Rialp, J., & Knight, G.A. (2005). The phenomenon of early internationalizing firms: what do we know after a decade (1993-2003) of scientific inquiry?. *International Business Review*, 14(2), 147-166. <https://doi.org/10.1016/j.ibusrev.2004.04.006>
- Robb, A.M., & Robinson, D.T. (2014). The Capital Structure Decisions of New Firms. *Review of Financial Studies*, 27(1), 153-179. <https://doi.org/10.1093/rfs/hhs072>
- Romanello, R., & Chiarvesio, M. (2019). Early internationalizing firms: 2004-2018. *Journal of International Entrepreneurship*, 17(2), 172-219. <https://doi.org/10.1007/s10843-018-0241-8>
- Roshchuk, I., Oliinyk, O., Mishchuk, H., & Bilan, Y. (2022). IT Products, E-Commerce, and Growth: Analysis of Links in Emerging Market. *Transformations in Business & Economics*, 21(1), 209-227.
- Rossi, S.P.S., Bonanno, G., Giansoldati, M., & Gregori, T. (2018). Are Venture Capital SMEs more likely to start exporting?. *Economics Bulletin*, 38(3), 1613-1622.
- Ruzzier, M., Hisrich, R.D., & Antoncic, B. (2006). SME internationalization research: past, present, and future. *Journal of Small Business and Enterprise Development*, 13(4), 476-497. <https://doi.org/10.1108/14626000610705705>
- Shkodra, J., Ymeri, P., & Ibishi, L. (2021). Role of microfinance institutions for developing women entrepreneurship – the case study of Kosovo. *Economics and Sociology*, 14(1), 120-129. doi:10.14254/2071-789X.2021/14-1/8
- St-Pierre, J., Sakka, O., & Bahri, M. (2018). External Financing, Export Intensity and Inter-Organizational Collaborations: Evidence from Canadian SMEs *Journal of Small Business Management*, 56, 68-87. <https://doi.org/10.1111/jsbm.12390>
- Szczepańska-Woszczyńska, K., & Gatnar, S. (2022). Key competences of research and development project managers in high technology sector. *Forum Scientiae Oeconomia*, 10(3), 107-130. https://doi.org/10.23762/FSO_VOL10_NO3_6
- Tong, Y., & Serrasqueiro, Z. (2021). Predictions of failure and financial distress: A study on Portuguese high and medium-high technology small and mid-sized enterprises. *Journal of International Studies*, 14(2), 9-25. <https://doi.org/10.14254/2071-8330.2021/14-2/1>
- Vahlne, J.-E. (2020). Development of the Uppsala model of internationalization process: From internationalization to evolution. *Global Strategy Journal*, 10(2), 239-250. <https://doi.org/10.1002/gsj.1375>
- Vahlne, J.-E., & Johanson, J. (2017). From internationalization to evolution: The Uppsala model at 40 years. *Journal of International Business Studies*, 48(9), 1087-1102. <https://doi.org/10.1057/s41267-017-0107-7>
- Wach, K. (2021). The evolution of the Uppsala model: Towards non-linearity of internationalization of firms. *International Entrepreneurship Review*, 7(2), 7-19. <https://doi.org/10.15678/IER.2021.0702.01>
- Wach, K., & Głodowska, A. (2021). How do demographics and basic traits of an entrepreneur impact the internationalization of firms?. *Oeconomia Copernicana*, 12(2), 399-424. <https://doi.org/10.24136/oc.2021.014>
- Waleczek, P., Zehren, T., & Flatten, T.C. (2018). Start-up financing: How founders finance their ventures' early stage. *Managerial and Decision Economics*, 39(5), 535-549. <https://doi.org/10.1002/mde.2925>
- Westhead, P., Wright, M., & Ucbasaran, D. (2001). The Internationalization of New and Small Firms: A Resource-Based View. *Journal of Business Venturing*, 16(4), 333-358.
- White, B.A., & Dumay, J. (2017). Business angels: a research review and new agenda. *Venture Capital*, 19(3), 183-216. <https://doi.org/10.1080/13691066.2017.1290889>
- Woo, H. (2020). Foreign venture capital firms and internationalization of ventures. *Multinational Business Review*, 28(3), 381-399. <https://doi.org/10.1108/MBR-09-2019-0104>
- Yang, M.M., Li, T., & Wang, Y. (2020). What explains the degree of internationalization of early-stage entrepreneurial firms? A multilevel study on the joint effects of entrepreneurial self-efficacy, opportunity-motivated entrepreneurship, and home-country institutions. *Journal of World Business*, 55(6), 101114. <https://doi.org/10.1016/j.jwb.2020.101114>
- Zahra, S.A., Neubaum, D.O., & Naldi, L. (2007). The Effects of Ownership and Governance on SMEs' International Knowledge-based Resources. *Small Business Economics*, 29(3), 309-327. <https://doi.org/10.1007/s11187-006-9025-y>
- Zavatta, R. (2008). *Financing Technology Entrepreneurs and SMEs in Developing Countries*. Washington, DC: The World Bank.

- Zbierowski, P., & Gojny-Zbierowska, M. (2022). Talented enough to be a business leader? An alternative approach to entrepreneurs' traits. *Entrepreneurial Business and Economics Review*, 10(1), 175-187. <https://doi.org/10.15678/EBER.2022.100112>
- Zhang, X., Ma, X., Wang, Y., Li, X., & Huo, D. (2016). What drives the internationalization of Chinese SMEs? The joint effects of international entrepreneurship characteristics, network ties, and firm ownership. *International Business Review*, 25(2), 522-534. <https://doi.org/10.1016/j.ibusrev.2015.09.001>
- Zinecker, M., Skalicka, M., Balcerzak, A.P., & Pietrzak, M.B. (2021). Business angels in the Czech Republic: characteristics and a classification with policy implications. *Economic Research-Ekonomska Istraživanja*, 1-26. <https://doi.org/10.1080/1331677X.2021.1890179>
- Zucchella, A., Palamara, G., & Denicolai, S. (2007). The drivers of the early internationalization of the firm. *Journal of World Business*, 42(3), 268-280. <https://doi.org/10.1016/j.jwb.2007.04.008>


Authors

The contribution share of authors is equal and amounted to 50% for each of them.

Krystian Bigos

Assistant Professor at Krakow University of Economics, Department of International Trade at College of Economics, Finance and Law. His research interests include early and rapid internationalisation, international start-ups, and international entrepreneurship.


Correspondence to: Krystian Bigos, PhD, Department of International Trade, Krakow University of Economics, ul. Rakowicka 27, 31-510 Kraków, Poland, e-mail: bigosk@uek.krakow.pl

ORCID  <http://orcid.org/0000-0001-6030-4119>

Adam Michalik

Assistant Professor at Krakow University of Economics, Department of International Trade at College of Economics, Finance and Law. His research interests include entrepreneurship, foreign investments, and the security of business transactions.

Correspondence to: Adam Michalik, PhD, Department of International Trade, Krakow University of Economics, ul. Rakowicka 27, 31-510 Kraków, Poland, e-mail: michalia@uek.krakow.pl

ORCID  <http://orcid.org/0000-0002-9333-408X>

Acknowledgements and Financial Disclosure

The article was written as part of the PRELUDIUM-18 project entitled 'The Role of Intellectual and Financial Capital in the Early and Rapid Internationalization of Polish Startups,' realized at the College of Economics, Finance and Law of Krakow University of Economics in the years 2020-2023. The research project was financed from the funds of the National Science Centre, Poland (NCN), project no. 2019/35/N/HS4/02832.

We would like to thank the anonymous referees for their useful comments, which allowed us to increase the article's value. We would like to express our gratitude to Prof. Krzysztof Wach for his valuable comments on the draft version of this article and his inspiration for further research study.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright and License



This article is published under the terms of the Creative Commons Attribution (CC BY 4.0) License <http://creativecommons.org/licenses/by/4.0/>

Published by Krakow University of Economics – Krakow, Poland



Ministry of Education and Science
Republic of Poland

The journal is co-financed in the years 2022-2024 by the Ministry of Education and Science of the Republic of Poland in the framework of the ministerial programme "Development of Scientific Journals" (RCN) on the basis of contract no. RCN/SP/0583/2021/1 concluded on 13 October 2022 and being in force until 13 October 2024.

