



ORIGINAL ARTICLE


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How do demographics and basic traits of an entrepreneur impact the internationalization of firms?

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Keywords: *entrepreneur; international entrepreneurship; internationalization; determinants of entrepreneurship; international business; traits; demographics*

Abstract

Research background: The theoretical basis of the study derives from the assumptions of international entrepreneurship combining theories of entrepreneurship and theories of international business. The identification of entrepreneurship determinants and attributes was based on the economic, socio — cultural, as well as psychological approach to entrepreneurship.

Purpose of the article: The aim of the article is to verify how demographic and basic traits of an entrepreneur affect the pace of the internationalization of firms from Poland.

Methods: The study was based on CATI method. The article uses data collected on the basis of a study conducted on a sample of 355 companies from Poland. The research methods applied are a critical analysis of prior research, which allowed to identify the research gap and develop research hypotheses. In the empirical part, statistical methods were applied, including descriptive statistics and multidimensional regression.

Findings & value added: The logistic regression estimation allows to confirm three hypotheses. With the age of the entrepreneur, the pace of internationalization of the firm increases. The pace of internationalization of the firm increases with the level of education of the entrepreneur. The fact that an entrepreneur belongs to a national minority increases the pace of the internationaliza-

tion of the firm. Results of two-sample t-test confirm that firms whose entrepreneurs have higher entrepreneurial competences internationalize faster and earlier. The added value of the article is the combination of socio-demographic and psycho-cognitive characteristics of the entrepreneur with internationalisation. Applying this approach to a sample of firms from Poland (CEE market) contributes to research on international entrepreneurship in a thematic and geographical sense. The results of the study are of an applied nature. They can be addressed to many recipients: entrepreneurs, policymakers, educators, entities responsible for shaping and promoting entrepreneurship on both the micro and macro levels.

Introduction

The phenomenon of entrepreneurship demographics and entrepreneurial traits attracted attention in entrepreneurship empirical studies a few decades ago, but it has been largely neglected in the still developing and even flourishing international entrepreneurship research (Baier-Fuentes *et al.*, 2019; Głodowska, 2019; Dankiewicz *et al.*, 2020; Zygmunt, 2020). This made us address that research gap in this article. First of all, the entrepreneurship empirical studies for ages have investigated entrepreneurship demographics, which include the entrepreneurs' age, sex or gender, immigrant status, and race, among others. These demographics impact entrepreneurial intentions, entrepreneurial recognition and exploitation of opportunities, and any entrepreneurial activities. Secondly, it is one of the oldest and well-established approaches in entrepreneurship research to link traits to entrepreneurship. The traits which have been investigated can be of general psychological nature, such as the entrepreneur's personality as well as his/her cognition or recognition, but can be also rooted in rich entrepreneurship theory focusing on entrepreneurial competences or entrepreneurial skills.

Only recently some articles have been published combining these variables typical for entrepreneurship research in research into internationalization, thus expanding the spectrum of international entrepreneurship. Vahlne and Johanson (2017) revised their model, stressing the importance of the impact of an individual on the internationalisation process. In this context, Coviello *et al.* (2017) say straightforwardly about an "individual as a core microfoundation of the internationalization process" (2017, p. 1151). Domurath and Patzelt (2020) proved a negative effect of prior experience in conducting business activity in the country on the internationalisation pace. Therefore, we believe that it is worth continuing research into the role of the founder in international entrepreneurship. Another demographic characteristic of the entrepreneur is his or her ethnicity (national minority or ethnic minority). There are numerous empirical studies showing and exploring this phenomenon. Jiang *et al.* (2020) proved that entrepreneurs — immigrants positively affect the process of a firm's internationalisation. Similar

conclusions were drawn by Drechsler *et al.* (2019) on a sample of entrepreneurs from the US. The findings of the research conducted by Lamotte and Colovic (2015) confirm that managers' education level has a positive impact on revenues from the early internationalisation of firms. Rialti *et al.* (2017), considering the results of their research from Croatia, observed that entrepreneurial education positively influences internationalisation. Matusinaite and Sekliuckiene (2015) in their theoretical deliberations postulated to undertake research into the impact of demographic characteristics and an entrepreneur's traits on the process of fast internationalization.

Numerous research and empirical evidence in domestic entrepreneurship (e.g. Sarwoko & Nurfarida, 2021; Basuki *et al.*, 2021; Reissová *et al.*, 2020) inclined us to search for the answer to the question how these issues take place, whether they manifest themselves in international entrepreneurship. As these are new ventures or born globals that are the emanation of entrepreneurship in international business, internationalization pace, that is the speed of the internationalization of firms, became our research interest. Thereby, by undertaking this research subject and the problem of the impact of demographics and the entrepreneur's traits on early internationalization, we would like to fill the visible research gap. The more so that Buzavaite and Korsakiene (2019), based on the overview of literature on human capital and internationalisation, showed that there is three times less research in the area of emerging and developing markets than in developed markets. It means that this article fills the second research gap — Poland being a country in Central Europe as a converting emerging market (Wach *et al.*, 2018).

The aim of the article is to verify how demographic characteristics and basic traits of the entrepreneur affect the pace of internationalization of firms from Poland. To accomplish this aim, we pose two research questions in the article:

RQ1: How do selected demographic characteristics of the entrepreneur influence the speed of the internationalisation of firms?

RQ2: How do selected entrepreneurial traits influence the speed of the internationalisation of firms?

The article starts with explaining the novelty of this study, which is followed by the overview of the extant literature and prior empirical studies, which allows to develop research hypotheses. Then, in the methodology section, we explain the sampling and the applied research methods. Empirical findings are the core of the article, which are followed by the scientific

discussion, which is a comparison of these results with the previous studies. We conclude with the results summary, managerial implications, research limitations and suggestions for further empirical research.

Literature review and hypotheses development

The theoretical foundation of research into the relationship between an entrepreneur's traits and the internationalization process arises from the internationalization theory on the basis of which we can identify internationalisation factors and against this background position the role of an entrepreneur and his/her attributes. In the existing literature, they are typologized in different ways. The basic classification enables to differentiate between proactive and reactive factors of internationalization (Albaum *et al.*, 1994), developed then to the matrix considering their internal and external dimensions (Albaum *et al.*, 2002). Hollensen (2007), on the basis of management studies, organisation theory and economic theory, mentions four major groups of internationalization factors: 1) internal factors, 2) transaction — specific factors, 3) desired mood factors, 4) external factors. Within those four groups 16 factors are distinguished, pointing to their stimulating or destimulating effect on the internationalization process. Developing the concept by Albaum *et al.* (2002), four groups of internationalization determinants are identified, such as (i) push factors, (ii) pull factors, (iii) chance factors, (iv) entrepreneurial factors. According to the OECD classification (2009), factors motivating to internationalise can be divided into 4 groups: 1) growth factors, 2) factors related to the knowledge of the firm, 3) factors reflecting social bonds, networks, relationships in the supply chain, 4) factors related to the domestic market or a foreign market. In view of the visible differentiation of internationalization factors, the integrated approach seems justified, one that considers postulates of various research approaches to internationalization. International marketing approach focuses on external factors, both the strategic approach and the network approach emphasize intermediate factors, while internal factors are the focal points of such streams as the strategic approach, the resource-based approach or the international entrepreneurship approach.

When positioning the role of the entrepreneur and his/her specific traits in the internationalization of a firm against this background, we should focus on internal factors. Within the resource-based view (RBV) and the international entrepreneurship (IE) perspective, we can theoretically prove the link of socio-demographic characteristics and psycho-cognitive traits of the entrepreneur with internationalization (Daszkiewicz, 2018) (Figure 1).

According to resource-based view, internal resources and the capabilities of the firm create and generate comparative advantages (Barney, 2001; Cieřlik *et al.*, 2019). Internal resources of a firm can be classified as human capital, physical capital and organisational capital (Barney, 1991). Another classification divides them into tangible and intangible assets (Galbreath, 2005; Essel *et al.*, 2019). Within tangible assets the following are mentioned: human capital, financial capital and technological capital. Knowledge, skills, capabilities and reputation are treated as intangible assets. Both in the first approach (RBV) and in the other approach (IE) the entrepreneur and his/her specific traits related to demographic and personality characteristics can be allocated (Essel *et al.*, 2019). First of all, entrepreneurs create the aforementioned human capital understood as a knowledge resource and skills an individual acquires in the process of education and in the job. It is also a resource of health and vital energy. Therefore, it is naturally integrated with a human being — an entrepreneur and his/her qualities, capabilities and skills (Becker, 1994; Ključnikov *et al.*, 2021; Civelek *et al.*, 2021).

International entrepreneurship defines the entrepreneur as a key factor in the internationalization process, in addition to two other factors: the external environment and the entrepreneurial process. It is a kind of a triad of international entrepreneurship or entrepreneurial internationalization (Wach & Maciejewski, 2019). The theoretical foundation of international entrepreneurship arises from the contamination of two conceptual areas: entrepreneurship and international business. Within the first area entrepreneurship can be perceived as the personality function, thus refer to human traits of the entrepreneur (Wach, 2015). In such a dimension, the entrepreneur can be discussed in the economic, psychological, socio-cultural and managerial context (Veciana, 2007).

The knowledge about the role of the entrepreneur, established by the theoretical bases, has been used in international business, which justifies discussing the role of entrepreneur also within international entrepreneurship. Theorising, we can suppose that the new generation of entrepreneurs and managers, better educated and internationally-oriented as a result of more extended use of IT tools, more frequent travels, studies abroad, better knowledge of foreign languages, and generally more global mindset (McDougall & Oviatt, 2005; Zhou *et al.*, 2010; Zucchella & Magnani, 2016). What is more, what results from the process approach to international entrepreneurship is the importance of dynamic factors among which human resources are of crucial significance for the organisational learning process. Unique attitudes and skills transferred to the organisation and

transformed into organisational procedures can be substantial for the internationalization of the firm (Zucchella & Magnani, 2016).

So far, it has been documented in the literature that the entrepreneur's attributes are connected with the propensity to conduct business activity (Thomas & Mueller, 2000; Melen & Nordman, 2009). A strong relationship has been proven between demographic characteristics of entrepreneurs: (i) age, (ii) gender and (iii) education, and the performance of firms (Reynolds *et al.*, 2002; Harada, 2003; Jones, 2004; Barringer *et al.*, 2005; Melen & Nordman, 2009). Kautonen *et al.* (2014) proved a triple relationship between the age and entrepreneurial activity. According to the authors, the probability of starting business activity, establishing a business increases with age but only up to a certain moment, and then it decreases. Therefore, the occurring relationship is of inversed U-shape (Barłózewski & Trąpczyński, 2021). The second relationship concerns the age and self-employment, the authors prove that this form of entrepreneurship grows with age as a result of the accumulation of entrepreneurial resources: knowledge, experience and finance. The third relationship shows that for those who are urged to be self-employed (reluctant entrepreneurs), the age does not play an important role when such people take a decision about conducting business activity (Kautonen *et al.*, 2014). These numerous positive empirical research findings into domestic entrepreneurship prompted us to transfer these experiences into the dimension of international entrepreneurship and formulate the following hypothesis:

H1: With the entrepreneur's age the pace of internationalization of his/her firm increases.

A lot of prior research confirms a positive relationship between the age and education and business success (Reynolds *et al.*, 2001; Kristiansen *et al.*, 2003; Harada, 2003; Littunen & Virtanen, 2006). Education is of special importance for the development of entrepreneurial intentions (Kim *et al.*, 2008; Essel *et al.*, 2019; Wardana *et al.*, 2021). Entrepreneurs with higher education are more flexible, innovative, creative and adapt better to new conditions (Yusuf, 1997; Jones, 2004; Kim *et al.*, 2008; Kurczewska *et al.*, 2020). As in the case of the previous hypothesis, by transferring this issue to the international entrepreneurship dimension we put forward the following hypothesis:

H2: With the entrepreneur's education level, the pace of the internationalization of his/her firm increases.

Recently, a lot of research has been conducted into ethnic and immigrant entrepreneurship, indicating that people from an ethnic minority, mainly immigrants, are more entrepreneurial than natives or indigenous people (Dabić *et al.*, 2020). Such entrepreneurs see and recognize market opportunities more easily (Sundararajan & Sundararajan, 2015), however, international immigrant entrepreneurs require some institutional and financial support to overcome local obstacles (Cruickshank & Dupuis, 2015). Therefore, we suggest the following hypothesis:

H3: The entrepreneur's affiliation to a national minority increases the pace of the internationalization of his/her firm.

In addition to research into the entrepreneur's demographics, numerous research is being conducted into the entrepreneur's traits, both in the psychological or personality dimension (psychological school in entrepreneurship), and in the managerial dimension, also in accordance with resource-based view (managerial school in entrepreneurship). Currently, there is more and more empirical research exploring those issues in the international context embedded in international entrepreneurship. At present, the attention of researchers concentrates mainly on the dimensions of entrepreneurial orientation which includes (i) innovativeness, (ii) proactiveness, (iii) risk-taking, (iv) autonomy, (v) competitive aggressiveness (Rwehumbiza & Marinov, 2020; Wach *et al.*, 2018). The confirmed relationship between entrepreneurs' traits and the effectiveness of business activity suggests that similar feedback also takes place in the case of activity on foreign markets. However, empirical evidence is not so numerous. Zucchella and Magnani (2016) emphasise that it is still not a really recognized problem in literature.

Admittedly, there are papers focusing on links between entrepreneurs and internationalisation (Oviatt & McDougall, 1997; Weerawardena *et al.*, 2017), but they basically skip the case of emerging countries, with few exceptions (Wach, 2014). In the research on a sample of developed markets, it is reported that entrepreneurial orientation and propensity, as well as social capital, including the ability to develop networks, are very important in developing an internationalisation strategy. Various researchers stress the fact that it is important to young firms in particular, as they do not have other resources such as financial or tangible resources at their disposal (Knight & Cavusgil, 2004; Jones *et al.*, 2011). With regard to developing markets, Gonzalez-Perez *et al.* (2018) proved on a sample of small and medium-sized enterprises (SMEs) from Colombia that the traits of firms' owners and founders, such as propensity for entrepreneurship, international

orientation, social capital and knowledge are crucial for early internationalisation and future results of international expansion. On the other hand, Figueiredo and Brochado (2015) on the example of Portugal proved that early entrepreneurship is related to younger men (25–34 years old) who have a medium or higher level of income and are educated. They believe that they have entrepreneurial skills and a low level of risk perception, as well as a positive attitude to innovation.

The importance of the entrepreneur was emphasised particularly in fast and early internationalization, that is in the case of born globals and international new ventures (Bigos & Michalik, 2020; Bigos & Wach, 2021). It was recognized that international new ventures are created by innovative, proactive and risk-searching entrepreneurs who are stimulated by technological, IT and communication technologies and global network links (McDougall & Oviatt, 2000). In the internationalization of those firms the entrepreneurs' traits were emphasised, and international experience and the global mindset in particular. It is also connected with the ability to identify opportunities and use them by entrepreneurs, which is an effect of entrepreneurs' cognitive process (Liesch *et al.*, 2003; Zahra *et al.*, 2005).

It, therefore, seems evident that entrepreneurial competence is inherently an attribute of every entrepreneur. On the other hand, the literature characterizes a wide variety of skills that make up entrepreneurial competence and determine an entrepreneur's actions in various fields. Therefore, it is less obvious to understand the impact of entrepreneurial competence on the effectiveness of entrepreneurial activities, e.g., internationalization. After all, entrepreneurial success varies, and internationalization itself is often a coincidence of many factors (Barłożewski & Trąpczyński, 2021). It raises the question of the role of entrepreneurial competence against this background. Especially since Nummela *et al.* (2020) write about non-entrepreneurial internationalization, and Matusinaite and Sekliuckiene (2015, p. 26) state that "*entrepreneur by itself doesn't determine the successful performance of a company.*" On the other hand, Sarwoko and Nurfarida (2021) talk about the so-called entrepreneurial marketing as the primary and direct factor influencing the effectiveness of entrepreneurial activities, and entrepreneurial personality traits are only needed to support this process. Furthermore, Basuki *et al.* (2021) point out that the entrepreneur's cognitive profile is changing significantly under the influence of digital technologies (e.g., the millennial generation). It therefore raises some doubts about the relevance of seemingly obvious socio-demographic and psycho-cognitive factors for internationalization.

The above research overview inclines us to propose the hypothesis that:

H4: Entrepreneurial competences have a positive impact on the pace and speed of internationalisation of firms.

Based on the indicated theoretical premises and the obligation articulated in literature to conduct research into the relationship between entrepreneurs' traits and internationalisation, we are attempting to verify the research hypothesis put forward above on a sample of firms from Poland.

Research methodology

We applied the quantitative research design. For empirical research, a survey was applied with the use of CATI. Telephone interviews were conducted by a professional market research company (We realized the empirical project till 17 July 2018.). The survey questionnaire used the managerial perception which provides acceptable accuracy and reliability and, above all, is superior to other methods with regard to practical application, and will be used as the operationalisation method. The research sample was selected based on firms registered in Poland in REGON (National Business Registry), of which 7,100 firms were randomized and the survey questionnaire was sent to them. However, the actual population included 3,313 businesses, as contact details of the remaining firms were out of date and no contact was possible with them. Of these firms, only 355 agreed to take part in the survey (the return rate of 5%, but the real return rate was 10.7%). The stratified random sampling was applied, in accordance with two main criteria:

- the sample included only internationalized firms (which were at least exporters),
- the sample included firms of different size, but with the reflection of the research needs, namely: (i) with a small share of micro-enterprises as the least internationalized although they are the most numerous group in the studied population, (ii) with a relatively small share of large enterprises which, although they constitute the smallest group in the population, they are the most typical research objects in the subject of internationalization, but it was assumed that each of those groups should be about 10-15% of the research sample, (iii) with a relatively large share of both small and medium-sized enterprises, which, according to the assumption, should be 25–45% of the sample.

An initial analysis showed significant differentiation of the population as for the time of conducting business activity and the declared time interval between establishing the firm and the time of internationalization.

In the research sample, there were similar numbers of family firms (45.1%) and non-family firms (54.9%). In the analysed cross-section the biggest group of family firms were small and medium-sized enterprises. Sectors of economy in the research sample reflected the structure of the Polish economy well. In the research sample, the second sector prevailed (industry and construction) and the third sector (trade and services), whereas the first sector (agriculture) was its small part. The age of the firms was between 1 and 183 years, while the age of one-fourth (lower quartile) did not exceed 14 years. 61.5% of firms declared early internationalization (up to 3 years from their inception). What is more, in half of the cases (median) the firms internationalized within one year or less.

As for the responders' characteristics, we surveyed only among owners, entrepreneurs and top managers for larger firms. Males amounted to 78.3% and females 21.7%. The level of their education was as follows: 2.% primary, 15.1% vocational, 79.1% secondary, 3.7% higher education. Most of the surveyed entrepreneurs were of Polish origin (92.2%), and only 4.9% declared being an immigrant (2.9% refused to answer). Ethnic minority was declared by 2.6% of studied entrepreneurs (94.8% declared no ethnic minority, 2.6% refused to answer that sensitive question). The age of the respondents was very diversified: 28.4% declared 51-60 years old, 27.8% 41-50, 22.6% 31-40, 15.9% 61-70, while the share of entrepreneurs below 30 and above 70 was marginal.

Based on the survey questionnaire (see the Appendix for selected questions applied for all used variables in this article) various types of variables were used (continuous, nominal, ordinal variables) (Table 1). We used such statistical inference as (i) chi-squared independence test (it checks whether there is an association between categorical variables), (ii) Cramér's V (for nominal variables, no intrinsic order), , (iii) a two-sample t-test (also known as independent samples t-test) with equal variances (it tests whether the unknown population means of two groups are equal or not) and (iv) logistic regression (a predictive model, where the dependent variable is dichotomous, which predicts the presence or absence of a characteristic or outcome based on values of a set of predictor variables).

Results

The results of statistical calculations with the use of the logistic regression with regard to the impact of the entrepreneur's demographics on the internationalization speed (Int_Speed_2) are positive (Table 2). The older the surveyed entrepreneur, the faster internationalization takes place. If the entrepreneur belongs to the national minority, internationalization progresses significantly faster. On the other hand, the research findings suggest that the lower the education level, the longer internationalization process, namely, it is slower. The findings proved that the hypotheses H1-H3 were confirmed.

The obtained results (Table 3) do not confirm the relationship in the case of gender as one of the demographic traits of the entrepreneur. Among firms run by men, the percentage of early internationalization is equal to 60.0%, and for women it is 62.7%. Therefore, there are no statistically significant differences as for gender.

We created a composite index based on five different elements, namely: (i) managerial knowledge, (ii) professional knowledge, (iii) conceptual skills, (iv) social skills and, last but not least (v), proactive attitude of investigated entrepreneurs. Each element was self-evaluated by the studied entrepreneurs on the 5-point Likert scale. The results sum up and were calculated on the standardised scale from 1-100, so this was a quasi-continuous variable. The results of two-sample t-test with equal variances positively confirm average differences in the values of the entrepreneur's entrepreneurial competences index among the group of early and slowly internationalized firms. Entrepreneurial competences are statistically significantly higher in the case of firms internationalised early. Therefore, we can regard H4 hypothesis confirmed (Table 4).

As for managerial traits of the studied managers in detail, managerial perception and entrepreneurs' self-evaluation on the 5-point Likert scale were applied, as mentioned before. Nine entrepreneurial traits were selected. The results of two-sample t-test with equal variances positively confirm basically statistically significant differences in those traits as for two groups of internationalisation speed: early (up to 3 years from the establishment, which is born global) and slow (more than 3 years, gradual internationalization). The results are not surprising, as they are compliant with the literature of the subject and are as follows (Table 5, Table 6):

- for early internationalized firms general managerial knowledge was significantly higher,
- for early internationalized firms entrepreneur's particular industry expertise was significantly higher,

- for early internationalised firms entrepreneur's conceptual skills were significantly higher,
- for early internationalized firms statistical skills were significantly higher,
- for early internationalized firms entrepreneur's foreign languages ability was significantly higher,
- for early internationalized firms international markets expertise was significantly higher,
- for early internationalized firms entrepreneur's previous experience in international business was significantly higher,
- for early internationalized firms previous international work experience was significantly higher,
- for early internationalized firms foreign education previously received by entrepreneur was significantly higher.

Discussion

The research on the sample of internationalized firms from Poland proved that age, education, belonging to a national minority and entrepreneurial competences have a positive impact on the internationalization speed. Our observations prove results obtained before, but at the same time they differ from the observations of other researchers. We have proved that entrepreneur's age is not indifferent to internationalization, as the older the entrepreneur is, the faster internationalization runs. It is compliant with previous research by Wach (2014) who proved that the level or intensity of internationalisation depends on entrepreneur's age. Wach (2014) justifies that with greater openness to international markets, global orientation, and better motivation of older entrepreneurs. Likewise, other authors confirm that managerial competences, maturity in undertaking operating and strategic activities are the function of time, that is they increase with the entrepreneur's age (Driesch *et al.*, 2015; Amorós *et al.*, 2016). However, prior to that, Leonidou *et al.* (1998) proved that it is young managers who are more open, cosmopolitan, and thus internationally oriented. Also Pinho *et al.* (2015) conducted their research in this direction, treating age as a regressor of the internationalization of small firms from Asian countries. Ultimately, this factor has never become statistically significant in the models tested by the authors (Pinho *et al.*, 2015).

However, it should be noted that the subject of entrepreneur's age as such in the context of internationalization is practically omitted in the literature on international entrepreneurship. The existing research concen-

trates more generally on human capital or dynamic capabilities (Domurath & Patzelt, 2019), which are undoubtedly related to the age (Lee, 2019). This direction of research is worth considering, even in the more complex human capital model considering its determinants, including age (Buzavaite & Korsakiene, 2019).

Human capital in literature is often expressed through the level of education, in our case it is the education of entrepreneurs which we considered in the research. Domurath and Patzelt (2019) believe that entrepreneurs can possess two forms of human capital influencing internationalization, namely general human capital and specific human capital. The first one is achieved through formal education and can be used in many contexts in a more universal way. It is also easily transferable. The other one, namely the specific capital, are skills and experiences which are more difficult to transfer and their application depends on the context (Domurath & Patzelt, 2019). Our research findings indicate that the higher the education level of the studied entrepreneurs, the faster the internationalisation process progresses. It should be emphasised that we treated education as one of the basic demographic characteristics, but it should be remembered that education has a lot of dimensions. Rialti *et al.* (2017) indicated that entrepreneurship education is a facilitator of firms' internationalisation process. Lamotte and Colovic (2015) in their empirical studies proved the positive effect of education level on the probability of early internationalization. Education can determine various aspects of internationalisation. For example, Mozas-Moral *et al.* (2016) prove that the decision about internationalization itself depends on the entrepreneur's education. On the other hand, according to Buzavaite and Korsakiene (2019), business or technical education does not affect the propensity to export, but it definitely affects the intensity of export. Pinho *et al.* (2015) confirm that the internationalization of small firms is more probable when entrepreneurs are better educated. The higher the education level, the higher the propensity of firms to internationalize their activity (Amorós *et al.*, 2016).

As for our findings with regard to the entrepreneur's affiliation to a national minority, they are convergent with the latest literature of the subject. Jiang *et al.* (2020) confirmed the positive impact of entrepreneurs-migrants on the internationalisation of a firm. They proved that new ventures with a bigger number of entrepreneurs-migrants in the founding team implement strategies generating higher revenues. Moreover, new ventures with a founding team which is ethnically more diverse have two more advantages, namely, they better adapt available resources and increase the performance of the venture. Likewise, Drechsler *et al.* (2019) on a sample

of US entrepreneurs observe that founders of other nationalities play the key role in international efforts of newly-established firms.

Relatively more attention in the literature on international entrepreneurship so far has been devoted to entrepreneurial competences. In our research on the example of Polish firms it can be seen that entrepreneurial competences influence both the pace of internationalisation and early internationalisation. Those observations correspond with and in a sense complete our previous research into the impact of different types of entrepreneurial knowledge and orientation in the internationalization process, from which it arises that entrepreneurial knowledge stimulates the entrepreneurial orientation level and is used more on the stage of mature internationalization (Wach *et al.*, 2018). It is of great importance for internationalization, as it refers to the recognition of market opportunities and the ways of using them. The application of entrepreneurial knowledge on the international market grows with gaining experience (Głodowska *et al.*, 2019). Likewise, Neubert and Krogt (2019) paid attention to the fact that acquiring knowledge through experience is positively correlated with successful internationalization. Saghebi *et al.* (2019) proved that the higher the level of education and knowledge of active entrepreneurs on the international market grow, the more the speed and scope of internationalisation increase. On the other hand, Buzavaite and Korsakiene (2019), based on the literature query, come to the conclusion that various research shows contradictory conclusions as for the professional expertise and experience and internationalization. They postulate the need for future research taking into consideration the propensity and intensity of internationalization. Different conclusions are drawn by Domurath and Patzelt (2020), who empirically proved that previous experiences of entrepreneurs related to the establishment of the firm in the country delay the first internationalization, and prior experience in working in the country is negatively connected with the level of international sales.

Conclusions

The research on the stratified random sample of 355 firms from Poland has showed that selected attributes of entrepreneurs are significant for the effectiveness of internationalization, especially for its speed. Demographic factors (age, gender) as well as education are of particular importance. The value added of the study is the analysis of entrepreneurial features and their role in internationalization, taking into account determinants other than economic ones. The prior literature is dominated by research on the eco-

conomic aspects of entrepreneurship. In addition, most of it is on developed economies. The analysis on the sample of firms from Poland is a contribution to the research focusing on developing economies from Central and Eastern Europe (CCE).

As every empirical research, also the one presented in this article has its limitations, and they mainly arise from the selection of the research sample and the applied data collection tool. Firstly, the research sample is not representative of the whole population of firms from Poland, which makes it impossible to generalise the conclusions and absolutise the results. Secondly, the applied research tool — a survey and managerial perception, has its defects. Data are not objective or comparable, what is more, the self-evaluation of entrepreneurs-managers significantly inflates the data values, which in turn affects the statistical calculations and the inference process. Thirdly, the scope of the survey questionnaire should be broader and include more traits typical for entrepreneurship.

In spite of these limitations, it is unquestionable that our research enriches the literature on international entrepreneurship. Due to the exploratory nature of our research, we can deepen knowledge and provide extra evidence confirming the influence of demographic and basic traits on internationalisation. Moreover, it extends the geographical range of research conducted in the strand of international entrepreneurship going beyond developed countries.

The obtained research findings can be used in economic and business practice, they can be the point of deliberations for educators. Poland is regarded as a fast-developing emerging market and the fastest developing economy in the CEE region. It is playing a bigger and bigger role on international markets, particularly on the European market, and in some industries it already plays the role of a leader. Our research focuses on internationalization, which is extremely important to Poland, both from the micro and macro perspective. On the micro level, it is recommended for entrepreneurs who are planning or already conduct activity on the international market to concentrate particularly on education and development of managerial competences or to hire educated managers, with international orientation and positive attitude to foreign markets. It is also important to learn through experience, it can also concern participation in appropriate educational programmes developing entrepreneurial skills and competences. At the same time, it is a postulate to decision makers creating training and didactic programmes and courses. On the basis of our research it can be seen that their effectiveness would surely be higher through involving international experts, specialists and entrepreneurs from other countries. On the macro level, the addressee of our recommendations could be economic

decision makers who can treat the research findings as a starting point to identify potential guidelines for the system of incentives for young entrepreneurs to internationalize, programmes supporting entrepreneurship of national minorities and raising awareness of the importance of education and managerial competences.

Our research also shows the areas which require further scientific exploration. First of all, it is the deficiency of international comparative studies, therefore it is recommended to conduct further research into demographic and basic traits and internationalization in the international cross-section. It is worth conducting a more in-depth analysis of internationalization factors as the coincidence of individual, organisational and institutional components, at the same time showing their hierarchy and relationships occurring between them. We also suppose that the impact of demographic and basic traits on internationalization can differ depending on the industry. For example, the age or education and specialist knowledge of an entrepreneur has probably different significance in traditional industries than in industries based on modern technologies. We perceive the implications indicated above as the encouragement to develop the promising area of future research into the relationships between demographic and basic traits and internationalization.

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Annex

Table 1. Variables used in empirical calculations

Abbreviation	Full name	Measures	Scale
Int_Speed	Internationalization speed	In years after establishment	continuous variable
Int_Speed 2	Internationalization speed 2 categories	–Early (up to 3 years) –Slow (more than 3 years)	nominal variable
Ent_Edu	Education level of entrepreneur	– primary – vocational – secondary – higher	ordinal variable (typical)
Ent_Age	Age of entrepreneur	In years	continuous variable
Ent_Min	National minority entrepreneur	yes/no	dummy variable
Ent_Com	Entrepreneurial competences of the entrepreneur	A composite index based on 7-point Likert scale for five elements: managerial and professional knowledge, conceptual and social skills, proactive attitude.	quasi-continuous variable
	General managerial knowledge	7-point Likert scale	ordinal variable
	Particular industry expertise	7-point Likert scale	ordinal variable
	Conceptual skills	7-point Likert scale	ordinal variable
	Social skills	7-point Likert scale	ordinal variable
	Foreign languages ability	7-point Likert scale	ordinal variable
	International markets expertise	7-point Likert scale	ordinal variable
	International business experience	7-point Likert scale	ordinal variable
	International work experience	7-point Likert scale	ordinal variable
	Foreign education	7-point Likert scale	ordinal variable

Table 2. Logistic regression estimations for the internationalization speed (Int_Speed_2) and selected entrepreneurial demographics

Int_Speed	Coef.	Std. err.	t	P > t	[95% Conf.	Interval]
<i>cons</i>	-4.923	6.413	-0.77	0.443	-17.538	7.692
Ent_Edu	2.475	1.590	1.56	0.121	-0.653	5.604
Ent_Age	1.772	0.677	2.62	0.009	0.440	3.104
Ent_Min	-3.571	2.030	-1.76	0.080	-7.565	0.423

	Observations	344
	F(5,338)	2.15
	Prob > F	0.0592
	R-squared	0.0305
	Adj R-squared	0.0220
	Root MSE	14.361

Source	SS	df	MS
Model	2208.08	3	736.03
Residual	70125.47	340	206.25
Total	72333.55	343	210.88

Table 3. Frequency distribution of the entrepreneur's gender and the internationalization speed (Int_Speed_2)

Int_Speed_2	Entrepreneur's gender		Total
	Female	Male	
Early	47	162	209
Slow	28	108	136
Total	75	270	345

Likelihood-ratio chi-squared = 0.1756, p = 0.675
Cramér's V = 0.0225

Table 4. Results of two-sample t test-with equal variances for the internationalization speed and entrepreneurial competences

Group	Obs.	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Early	212	5.623	0.068	0.995	5.489 5.758
Slow	133	5.334	0.088	1.019	5.159 5.509
Combined	345	5.512	0.054	1.013	5.405 5.619
diff		0.289	0.111		0.070 0.508

diff = mean(early) - mean(slow) t = 2.603
Ho: diff = 0 df = 343

Ha: diff < 0 p (T < t) = 0.995
Ha: diff != 0 p (|T| > |t|) = 0.009
Ha: diff > 0 p (T > t) = 0.004

Table 5. General results of two-sample t-test with equal variances for the internationalization speed and selected entrepreneurial traits

Traits	t	df	p-value
General managerial knowledge	1.564	343	0.059
Particular industry expertise	1.873	343	0.031
Conceptual skills	2.753	343	0.003
Social skills	1.779	343	0.038
Foreign languages ability	5.141	343	0.000
International markets expertise	4.632	343	0.000
International business experience	3.962	343	0.000
International work experience	4.700	343	0.000
Foreign education	4.092	343	0.000

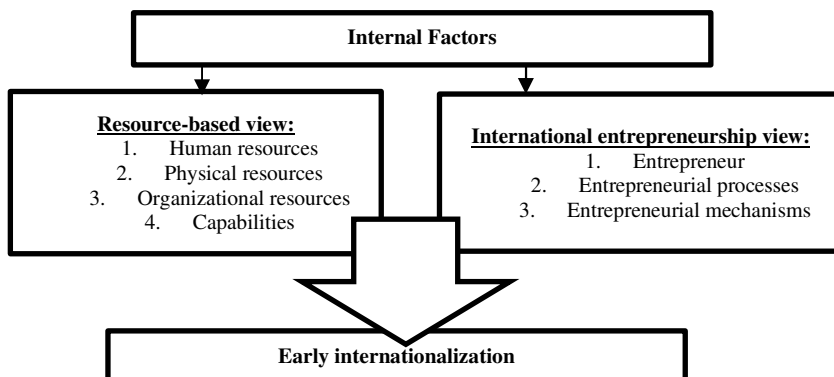
Table 6. Detailed results of two-sample t test with equal variances for the internationalization speed and selected entrepreneurial traits

Group	Obs.	Mean	Std. Err.	Std. Dev.
General managerial knowledge				
Early	209	5.22	0.09	1.38
Slow	136	5.00	0.11	1.25
Total	345	5.14	0.07	1.33

Table 6. Continued

Group	Obs.	Mean	Std. Err.	Std. Dev.
Particular industry expertise				
Early	209	6.14	0.07	1.01
Slow	136	5.92	0.10	1.19
Total	345	6.05	0.06	1.09
Conceptual skills				
Early	209	5.55	0.08	1.12
Slow	136	5.19	0.11	1.27
Total	345	5.40	0.06	1.19
Social skills				
Early	209	5.54	0.08	1.20
Slow	136	5.30	0.10	1.24
Total	345	5.44	0.65	1.22
Foreign languages ability				
Early	209	5.30	1.39	5.11
Slow	136	4.44	1.71	4.15
Total	345	4.96	1.58	4.80
International markets expertise				
Early	209	5.19	0.80	1.16
Slow	136	4.54	0.13	1.47
Total	345	4.94	0.07	1.33
International business experience				
Early	209	5.30	0.09	1.34
Slow	136	4.66	0.14	1.63
Total	345	5.04	0.08	1.49
International work experience				
Early	209	4.25	0.14	2.03
Slow	136	3.20	0.17	1.99
Total	345	3.84	0.11	2.07
Foreign education				
Early	209	4.00	0.10	1.50
Slow	136	3.33	0.12	1.47
Total	345	3.74	0.08	1.52

Figure 1. Entrepreneur allocation in the theoretical foundations of internationalization factors



Appendix

Note: Survey questionnaire — selected questions applied for all used variables in this article (Wach, 2018, pp. 223–233).

A1. Which year was the firm founded in?

A2. Which year did the first expansion to foreign markets take place in?

D2. Rate managerial competences of your firm top management for the internationalisation process (circle the proper rate on the scale, please)

Competences = knowledge + skills / capabilities + attitudes	<i>Rate from 1 to 7 (where 7 is the highest rate)</i>						
General managerial knowledge (on organisation and management)	1	2	3	4	5	6	7
Professional knowledge	1	2	3	4	5	6	7
Conceptual skills (strategic thinking, diagnosis, analysis)	1	2	3	4	5	6	7
Social/interpersonal skills (human relations, establishing contact)	1	2	3	4	5	6	7
Proactive attitude towards discovering and using market opportunities	1	2	3	4	5	6	7
Proactive attitude towards making decisions quite often burdened with risk	1	2	3	4	5	6	7

G2. Give the main features of the present owner, entrepreneur, top manager of your firm, please.

a) gender: male female

b) education level: primary vocational secondary higher

c) age (in years)

d) nationality: Pole immigrant in Poland

e) belonging to ethnic minority*: yes no

**ethnic group which is settled in the territory of another population and is distinguished by a different origin and culture, and often also language and religion.*

G3. Rate the attitude of the owner, entrepreneur, top manager in your firm to the internationalisation process (circle the proper rate on the scale, please)

<i>criteria</i>	<i>Rate from 1 to 7 (where 7 is the highest rate)</i>						
Individual strive for foreign expansion (international motivation)	1	2	3	4	5	6	7
Cosmopolitanism and international openness (international orientation)	1	2	3	4	5	6	7
Knowledge of foreign languages	1	2	3	4	5	6	7
Knowledge of international markets	1	2	3	4	5	6	7
Experience in business activity on international markets	1	2	3	4	5	6	7
Experience in working abroad	1	2	3	4	5	6	7
Professional experience in business as such	1	2	3	4	5	6	7
Foreign education or foreign origin of the firm's founders	1	2	3	4	5	6	7