

How Entrepreneurial Orientation Stimulates Different Types of Knowledge in the Internationalisation Process of Firms from Poland?

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ABSTRACT

Objective: The aim of the article is to verify how entrepreneurial orientation affects different types of knowledge in various stages of internationalisation of Polish firms.

Research Design & Methods: The research method applied in the paper is the critical analysis of prior studies as well as a survey conducted on a sample of 355 businesses from Poland. The research is based on the previously known typology of knowledge: market knowledge and experiential knowledge.

Findings: On the basis of the research, it can be concluded that entrepreneurial orientation plays a key role in the use of knowledge in internationalisation of Polish firms. Higher entrepreneurial orientation determines a more intensive use of knowledge on various stages on internationalisation. Network knowledge is used in the initial as well as mature internationalisation. Entrepreneurial knowledge is intensely used on the stage of mature internationalisation. Market and sociocultural knowledge is by far more explored in the initial internationalisation stage.

Implications & Recommendations: The study identified the gap in the literature regarding entrepreneurial orientation and knowledge in the internationalisation process. Obtained results have useful value for business practice, especially for managers thinking of going international.

Contribution & Value Added: An added value of this paper and at the same time a new view of the studied problem is the inclusion of knowledge and its role in the internationalisation process determined by the influence of entrepreneurial orientation.

Article type: research paper

Keywords: entrepreneurial orientation; knowledge; internationalisation; international business; international entrepreneurship

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INTRODUCTION

Entrepreneurial orientation in the international approach is a research problem systematically developed within studies on international entrepreneurship (Maciejewski & Wach, 2019; Wach, 2017a, 2017b; 2018). In this article entrepreneurial orientation refers to the process of the internationalisation of firms, which is a substantial contribution to research into internationalisation understood as an entrepreneurial process, or to be more exact, entrepreneurial internationalisation (Wach, Głodowska, & Maciejewski, 2018; Głodowska, Maciejewski, & Wach, 2019). An added value of this article and at the same time a new view of the studied problem is the inclusion of knowledge and its role in the internationalisation process determined by the influence of entrepreneurial orientation.

Therefore, the aim of the article is to verify how entrepreneurial orientation affects different types of knowledge in various stages of the internationalisation process on the basis of Polish businesses. The research method applied in the theoretical part is critical analysis of previous literature. In the empirical part, quantitative methods were used to present research results from survey conducted on a sample of 355 businesses from Poland.

The article is structured as follows. In the next section, the literature review of prior studies is presented. In the third section, the research methodology used in the study is explained. The results are discussed in the fourth section. The last section summarises our empirical findings, indicates the limitations of the study and recommendations for further research.

LITERATURE REVIEW

The connection of entrepreneurial orientation and knowledge in the internationalisation process can be understood differently on the theoretical basis. The entrepreneurial orientation itself is perceived as a strategic construction derived from the concept of strategic management (Gawel, 2015). Transposing this term to the international level resulted from the development of the international entrepreneurship idea. The new term was created as international entrepreneurial orientation explicated from the three basic components of entrepreneurial orientation: innovativeness, proactiveness and capability of risk-taking (McDougall & Oviatt, 2000; Knight, 2001). Knowledge as a driving force of internationalisation is noticed in all internationalisation theories: conventional and alternative, as well as macroeconomic and microeconomic models. Its special importance is accented in the concepts which treat internationalisation as an entrepreneurial process (Autio, 2017; Matusinaite & Sekliuckiene, 2015). Therefore, it can be assumed that the theoretical premises of combining entrepreneurial orientation and knowledge in the internationalisation process have common ground in the international entrepreneurship concept which integrates the aspects of international business, entrepreneurship and strategic management. Thus, on the grounds of theory, it is appropriate to associate entrepreneurial orientation and knowledge with the internationalisation process, but in the existing studies those issues functioned as individual research problems, not related directly.

Entrepreneurial orientation in itself has been one of the most important research topics within research into entrepreneurship since as early as late 1980s (Al Mamun *et al.*, 2017; Kumar *et al.*, 2018), but in the international dimension it was investigated much later (Wach, 2015). Knight (1997) was one of the first to combine entrepreneurial orientation with the

functioning of firms in various international cultures. He proved that entrepreneurial orientation is the crucial factor of success, determining international accomplishments of firms (Knight, 2001). Similarly, Florida (1997) proved that entrepreneurial orientation makes businesses undertake new ventures by penetrating international markets to sell their goods. Yiu, Lau and Bruton (2007) indicated innovativeness, efficiency and strategic decisions as constructs of entrepreneurial orientation. The authors added that the factors play a very important role in the internationalisation process, indicating the element related to risk-taking as particularly important. Emöke-Szidónia (2015) emphasized that small and medium-sized enterprises with high entrepreneurial orientation are leading entities of transition countries in Europe. Rant and Černe (2017) observed that differentiation via innovation positively impacts firm performance on international markets in the case of firms from the region of CEE. Numerous studies confirm a positive relation between entrepreneurial orientation and the internationalisation process (Florida, 1997; Yiu, Lau, & Bruton, 2007; Etemad, 2015; Swoboda & Olejnik, 2016; Tolstoy, 2018). However, this is not the final position of the researchers. Zahra and Garvis (2000) noticed a negative relation and Andersen (2010) indicated an insignificant link between entrepreneurial orientation and the internationalisation of firms. Great importance of entrepreneurial orientation, and especially of proactiveness in the internationalisation process is stressed by authors who deal with studying born globals and international new ventures, indicating that firms of this type are in their nature entrepreneurially-oriented, operating pro-actively all over the world (Sharma & Blomstermo, 2003; Weerawardena, Mort, Liesch, & Knight, 2007; Andersson, 2011; Andersson & Evers, 2015).

Knowledge and its significance in the internationalisation process is the area much more recognized in the literature of the subject. Empirical research into this problem was conducted in the first place within classical and alternative concepts concerning international trade. Therefore, it was an attempt to empirically verify the influence of knowledge on export or other forms of international activity within selected concepts of international trade (Sjöholm, 1996; Villar, Alegre, & Pla-Barber, 2014; Geldres-Veiss, Uribe-Bórques, Coudounaris, & Monreal-Pérez, 2016). In addition, the role of knowledge in internationalisation has been verified empirically on the grounds on the Uppsala model (Johanson & Vahlne, 1977), the eclectic model (Prashantham, 2005; Casillas, Acedo, Gallego, & Ramos, 2009; Mejri & Umamoto, 2010), international entrepreneurship theories (McDougall & Oviatt, 2000), as well as knowledge-based models (Grant, 1996). Definitely the most attention was devoted to knowledge in Johanson and Vahlne (1977) model as well as its polemical concepts created by McDougall and Oviatt (2000). Prashantham (2005) rightly observed that in spite of a seeming tension between those two approaches, in both of them we can see a specific albeit varied role of knowledge, its types and sources. Therefore, it is important to identify different types of knowledge that can have a varied impact on the internationalisation process, depending on the level of its advancement. In the stages model of internationalisation this is the market knowledge that contributes to the optimisation of the firm's resources engaged on foreign markets, thus, the lack of market knowledge becomes a substantial obstacle in the internationalisation process of firms (Forsgren, 2002; Petersen, Pedersen, & Sharma, 2003; Johanson & Vahlne, 2003; Johanson & Vahlne, 2009; Xie & Amine, 2009; Sommer & Haug, 2011; Hsu, Chen, & Cheng, 2013). In turn, in the context of international entrepreneurship, not only market knowledge but also specialist knowledge is particularly appreciated (McDougall & Oviatt, 2000).

This article adopts the typology of knowledge arising from the knowledge-based internationalisation model by Mejri and Umemoto (2010), which distinguishes two main types of knowledge: market knowledge coming from written documents, reports and explicit materials, and empirical knowledge which arises from practice and can be acquired exclusively via personal experience. The types of knowledge thus defined were juxtaposed by the authors with the internationalisation process in which they distinguished three phases according to the firm's experience level: pre-internationalisation phase, novice internationalising phase and experienced internationalising phase. Different intensity of acquiring and using specific types of knowledge falls on these phases, which is presented in Figure 1.

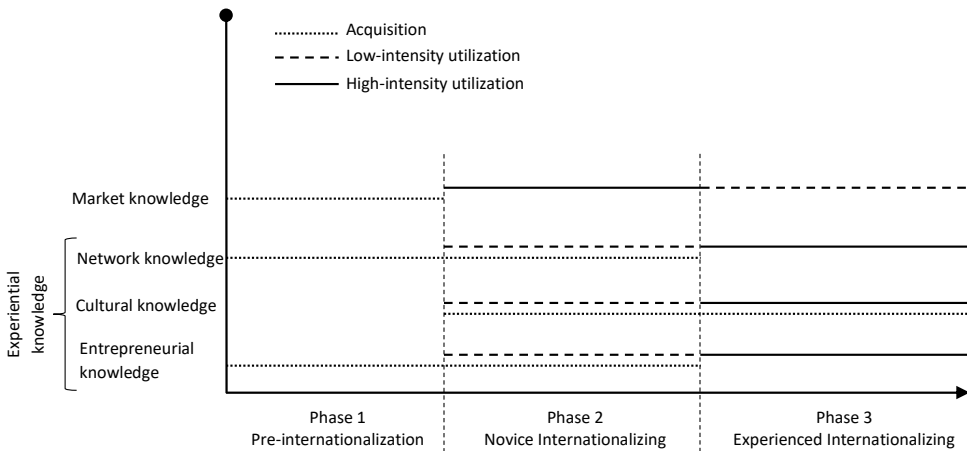


Figure 1. The role of market and experiential knowledge in the internationalisation process in the concept by Mejri and Umemoto

Source: Mejri & Umemoto (2010, p. 162).

Market knowledge refers to the information about foreign markets, their size, competitors and regulations. The acquisition of this type of knowledge in the pre-internationalising period is of key importance for undertaking internationalisation and in the first phase of its process. Using this type of knowledge in the novice internationalising phase arises from the need to acquire any available information about the target market due to a high level of risk related to entering this market. With the increasing engagement in the internationalisation process, the intensity of the use of knowledge about the market decreases in favour of the growth of the significance of empirical knowledge.

In the empirical or experiential knowledge Mejri and Umemoto (2010) included network, sociocultural and entrepreneurial knowledge.

Network knowledge is acquired within the functioning of the firm in formal and informal social and business networks in the pre-internationalisation period and in its first phase. Knowledge acquired as a result of mutual learning and the exchange of experiences enables to reduce apprehensions towards foreign markets, which facilitates and accelerates the internationalisation of firms, particularly SMEs. It is used to a various extent on individual stages of the internationalisation process.

Sociocultural knowledge refers to the familiarity with the values, attitudes and mind-sets occurring on foreign markets. Acquisition of this type of knowledge begins with entering the internationalisation process of the firm. The intensity of the use of sociocultural knowledge grows with the level of its absorption by the firm.

Entrepreneurial knowledge refers to the recognition of market opportunities and the ways of its use. Knowledge of this type is acquired since the beginning of the firm’s existence, thus still in the period preceding internationalisation, and its deepening takes place already after foreign market entry. The use of entrepreneurial knowledge on the international market grows with the experience the firm gains on it.

Amplification of the Mejri and Umemoto (2010) model with the aspect of entrepreneurial orientation is justified indirectly in studies by Omar, Aris and Nazri (2016), Åkerman (2015), Prashantham (2005), Fletcher (2004), Wiklund and Shepherd (2003). These authors proved positive influence of entrepreneurial orientation and knowledge on the firm’s functioning but they did not take into account the international dimension directly. Analogically, it can be assumed that the same dependence occurs between entrepreneurial orientation, knowledge and the internalisation process (Figure 2).

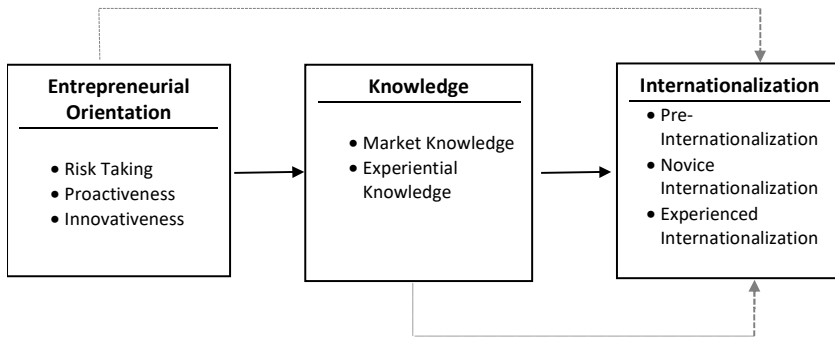


Figure 2. The impact of entrepreneurial orientation on knowledge in the internationalisation process

Source: own elaboration.

To sum up, the conducted overview of research confirms the validity of combining the influence of entrepreneurial orientation on different types of knowledge in the internationalisation process. What is more, a substantial shortage of empirical studies in this area is indicated (Gupta & Moesel, 2007; Cui, Fan, Guo, & Fan, 2018). On that basis, the following research hypothesis was formulated:

- H:** Firms with higher entrepreneurial orientation more intensely use both market knowledge and experiential knowledge (i.e. network knowledge, sociocultural knowledge, entrepreneurial knowledge), both in the novice and experienced internationalisation phase.

MATERIAL AND METHODS

As it has been already mentioned, Mejri and Umemoto’s (2010) model assumes high use of market knowledge in the first period of internationalisation and its low use in the case

of mature internationalisation. On the contrary, experiential knowledge (network, sociocultural, entrepreneurial knowledge) is subject to high use in the mature phase of internationalisation, and low use in the pioneer phase. It is worth supplementing this model with entrepreneurial orientation, since it may be expected that firms with higher entrepreneurial orientation use specific types of knowledge in the internationalisation process more intensely than firms characterised by lower entrepreneurial orientation. This concept is the authors' development of the model, combining the output of models based on the knowledge and learning process with the international entrepreneurship school.

The research sample was selected based on firms registered in Poland in REGON (National Business Register) out of which 7,100 firms were randomised and to which the survey was directed. Out of those firms only 355 gave their consent to take part in the survey (5%).

Stratified random sampling was applied in accordance with the following criteria:

1. The sample includes only internationalised firms (being at least experts);
2. The sample includes firms of different sizes but reflecting research needs, namely (a) with a small participation of micro-enterprises as the least internationalised, although they are the most numerous group in the studied population, (b) a relatively small participation of large enterprises which, although they are the smallest group in the population, are the most typical research objects in the subject of internationalisation, but it was assumed that each of those groups should be about 10-15% of the research sample, (c) with a relatively large participation of both small and medium-sized enterprises, which, according to the assumptions, should constitute 25-45% of the sample.

The survey was conducted by means of Computer Assisted Telephone Interview (CATI) technique. The survey questionnaire was divided into four thematic parts, namely: (i) the firm's characteristics, (ii) modes and scope of internationalisation, (iii) internationalisation patterns and strategies, (iv) resources and competences, (v) domestic and foreign environment, (vi) entrepreneurial orientation, (vi) characteristics of the entrepreneur.

For the needs of statistical calculations and with the use of the survey questionnaire the following variables were used:

1. IEO – international entrepreneurial orientation with the use of variables developed by Covin and Slevin (1989);
2. MARK_KNOW – market knowledge, with the use of the author's questions with measures on the Likert's scale;
3. SOCIO_KNOW – sociocultural knowledge, with the use of the authors' questions with measures on the Likert's scale;
4. NET_KNOW – network knowledge, with the use of the authors' questions with measures on the Likert's scale;
5. ENTRE_KNOW – entrepreneurial knowledge with the use of the authors' questions with measures on the Likert's scale.

Out of 7 100 randomised firms from the REGON, the research sample was theoretically 5%, but in reality the randomised part of the population included 3 313 firms, and the final research sample was de facto 10.7%. The total of 355 questionnaires were collected (Table 1).

1). The reasons for not considering the other firms in the study were as follows:

- 28.1% (1 991) were not internationalised firms, that is, they did not meet the first criterion;

- 25.3% (1 796) had a wrong phone number in the REGON, or nobody answered the phone, thus, they could not take part in the research;
- 22.9% (1 627) refused to participate in the survey;
- 18.7% (1 331) firms came across difficulties or caused difficulties for various reasons, which made obtaining reliable responses impossible.

Table 1. Characteristics of the Research Sample

Size of the firm (in %)		Sector of the economy (in %)	
micro	14.1	agriculture	1.7
small	43.1	manufacturing	56.4
medium-sized	29.8	construction	1.9
large	13.0	trade	22.4
		services	17.6
Foreign ownership (in %)		Age of firms (in years)	
Average	28.0	Average	24
Min	0	Min	1
Q1	0	Q1	14
Median	0	Median	20
Q3	68.5	Q3	25
Max	100.0	Max	183

Source: own calculation based on the survey ($n = 355$).

Telephone interviews were conducted in the first quarter 2015, and then their results were subject to adequate statistical calculations with the use of specialist computer software *Statistica PL v. 10.0*.

RESULTS AND DISCUSSION

The use of knowledge was studied in the dynamic approach in 2011 and in 2014, with the use of the retrospective managerial perception. The period of three years was related to defining internationalised firms from inception, and the literature of the subject defines them as internationalised within the first three years from inception. As for the period of time which passed from the firm's establishment to its internationalisation, it fluctuated from 0 to 61 years, but according to the median interpretation, in half of the cases it was a year and less, and in half it was a year and more. 75% of the studied firms internationalised in the 8th year of activity at the latest, and only 10% in the whole sample undertook foreign expansion after 16 years from inception. In majority, that is in as many as 61.5% cases, we had to do with fast internationalisation (namely, three years from inception).

It was found out in the sample that in 2014 only 65 out of 355 firms were characterised by high IEO indicator (average from 'risk taking', 'proactiveness' and 'innovativeness' was equal to at least 5). The firms were characterised by a little, although statistically insignificant, higher market knowledge (t -test -0.7819 [0.2174]). On the other hand, however, they were characterised by significantly higher network knowledge (t -test -1.8061 [0.0359]). Yet, no differences between firms in terms of sociocultural knowledge consid-

ering IEO indicator were found. Taking into account the classification made, it was observed that firms with higher IEO are characterised by statistically significant higher level of entrepreneurial knowledge (t -stat=-1.7358 [0.0417]). In general, firms with the higher IEO indicator were characterised by a higher level of knowledge on three discussed levels, namely, market knowledge (statistically insignificant, though), network, entrepreneurial knowledge. Such a relationship was not discovered for sociocultural knowledge.

The decision was also made to check whether an analogous situation took place also in 2011. Based on the t -student test for medium-sized enterprises it was found out that higher IEO indicator values were accompanied then by statistically significant higher values of market knowledge (t -stat -1.3852 [0.0834]). An analogous situation concerned the indicator of network knowledge (t -stat -2.3523 [0.096], sociocultural knowledge (t -stat -2.3755 [0,081]) and entrepreneurial knowledge (t -stat -4.7076 [0.000]). Such a relationship was not discovered for sociocultural and entrepreneurial knowledge.

The results obtained (Table 2) univocally prove that higher international entrepreneurial orientation intensifies the use of entrepreneurial knowledge and network knowledge on the experienced internationalisation stage (but not in its novice stage), which is the essence of international entrepreneurship. The calculations made do not enable to build general conclusions concerning experiential knowledge *en bloc* (no confirmation for sociocultural knowledge).

Table 2. Results of t test linking four types of knowledge with EO during the novice and experienced internationalisation phases

Type of knowledge ($n = 353$)	Novice internationalisation (first 3 years of operating on foreign markets)			Experienced internationalisation (after at least 3 years of operations on foreign markets)		
	t -stat	p -value	Sig. ^a	t -stat	p -value	Sig. ^a
Market knowledge	1.3852	0.043	**	-0.7819	0.217	X
Network knowledge	-2.3523	0.096	*	-1.8061	0.035	**
Cultural knowledge	-2.3755	0.081	*	1.9112	0.689	X
Entrepreneurial knowledge	-4.7076	0.000	***	-1.7358	0.041	**

^a significance levels: *** < 0.01; ** < 0.05; * < 0.1.

Source: own elaboration based on the survey ($n = 355$).

In the initial internationalisation phase, in addition to market knowledge (which is compliant with theoretical bases), firms with higher entrepreneurial orientation use sociocultural knowledge (being one of the three components of experiential knowledge) more intensely, which may positively influence the course of the firm internationalisation process, thus, entrepreneurial orientation can stimulate internationalisation much earlier than it is assumed in earlier theoretical concepts which do not consider entrepreneurial orientation. Considering a very limited number of studies combining entrepreneurial orientation, knowledge and internationalisation, or rather their lack in the prior literature, it is difficult to compare and confront the obtained results. We can assume that our findings are compatible with the studies by Omar, Aris and Nazri (2016), Åkerman (2015), Prashantham (2005), Fletcher (2004), Wiklund and Shepherd (2003).

CONCLUSIONS

Entrepreneurial orientation is nowadays one of more important issues discussed within research into internationalisation. The main components of entrepreneurial orientation: risk taking, innovativeness and proactiveness are regarded as significant causative factors of effective internationalisation. Including the aspect of knowledge in the deliberations on entrepreneurial orientation and internationalisation seems to be naturally justified on the grounds of theoretical concepts, however, it is an area rather skipped in empirical research. This article combines the issue of entrepreneurial orientation and knowledge on the example of Polish firms basing on the knowledge-based internationalisation model by Mejri and Umemoto (2010). On the basis of the conducted analysis we can find out that entrepreneurial orientation is substantial in the use of knowledge in the internationalisation process. Firms characterised by higher entrepreneurial orientation much more intensely use individual types of knowledge on various stages on internationalisation. Network knowledge is more used by those firms both in the initial and mature internationalisation. On the other hand, entrepreneurial knowledge is intensely used on the stage of mature internationalisation. Market and sociocultural knowledge is by far more explored in the initial internationalisation stage.

Therefore, based on the conducted statistical analysis we can only partially accept the verified research hypothesis, as not all types of knowledge are explored to the same extent on different internationalisation stages by firms characterised by higher entrepreneurial orientation.

The article can be of not only cognitive but also applicative character. However, it is not deprived of limitations. Firstly, it is a study conducted on the sample of Polish firms, and the research findings cannot be generalised. Moreover, it is a cross-sectional study, which makes it impossible to verify cause and effect relationships between the studied variables, which is possible only when conducting dynamic research. This article goes much further than existing research in the search for the point intermediating between entrepreneurial orientation and internationalisation, however, attention should be also paid to other factors which by means of entrepreneurial orientation influence the internationalisation process (organisational culture, management, etc.). What is more, the study adopted an assumption as for the types of knowledge, thus it is recommended to verify the research problem posed adopting also other taxonomies of knowledge. Therefore, it is recommended to carry out further research eliminating the indicated limitations. Future research may go towards international comparative analyses in the studied problem. What is more, it is worth continuing research not only on the relationship of entrepreneurial orientation and knowledge in the internationalisation process, but also on factors determining this relationship.

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