Table of Contents

Sławomir I. Bukowski, Marzanna Lament

Challenges experienced by immigrant entrepreneurs in a developing non-Western country: Malaysia

Hamizah Abd Hamid

A B S T R A C T
Objective: The objective of the article is to explore the challenges experienced by immigrant entrepreneurs in a developing non-Western immigrant-receiving country.
Research Design & Methods: Through a qualitative approach, this study examined the experiences of immigrant entrepreneurs from Indonesia, Pakistan, and South Korea in one host country, Malaysia.
Findings: The findings suggest that the formal aspects of host country institutions are mainly instrumental in the commencement stages of immigrant entrepreneurs' ventures and the informal aspects of institutions are predominantly influential in the developmental stages of immigrant entrepreneurs' ventures. Specifically, the findings indicate that the challenges experienced by immigrant entrepreneurs in the host country mainly stem from (1) governing institutions, (2) resource-providing institutions, (3) local society and (4) competition in the host country.
Implications & Recommendations: Through the model, this study provides a layer of knowledge in immigrant entrepreneurship activities conducted in developing non-Western countries, which is a fertile area of interest in immigrant entrepreneurship. Practice-wise, this study provides useful evidence in assisting immigrant entrepreneurs and host country's policymakers who deal with trade and migration to create a more sustainable landscape for immigrants to conduct entrepreneurship activities.
Contribution & Value Added: This research contributes to the immigrant entrepreneurship literature by further gauging the way home-host country dynamics influence the experiences of immigrant entrepreneurs in conducting their ventures in a foreign country.
Article type: research article
Keywords: immigrant entrepreneurs; Malaysia; entrepreneurship
JEL codes: J15, F22, L26
Received: 23 August 2019   Revised: 29 May 2020   Accepted: 14 June 2020

INTRODUCTION

As an academic discourse, immigrant entrepreneurship has mainly focused on developed Western countries, leaving a gap in understanding the phenomenon in countries beyond the conventional spectrum (Aliaga-Isla & Rialp, 2013). This study addresses this gap by investigating the way immigrant entrepreneurs (IEs) deal with the environment of a developing non-Western immigrant-receiving country through a qualitative approach. The outcome of this research is a nuanced view of how host country institutional environment influences entrepreneurial activities conducted by immigrants.

Institutions are a result of formal and informal rules based on regulatory structures, governmental agencies, laws, courts, professions, scripts, and other societal and cultural practices (DiMaggio, 1991). The political-institutional and sociocultural environments influence entrepreneurial attitudes and motives, the resources that can be mobilised, and the constraints on and opportunities for starting and running a business (Greenman, 2013; Martinelli, 2004), which are more salient for individuals such as IEs who operate business activities across borders, as they are considered as 'outsiders' in a host country. This aspect has been addressed in the immigrant entrepreneurship discourse; whereby immigrants' limited knowledge of the host country, in interaction with the host country's sociocultural context pushes them into entrepreneurship in marginal sectors (Aliaga-Isla & Rialp, 2013; Kloosterman, van der Leun, & Rath, 1999). However, as there is much to explore with regards to IEs' experiences in complex environments of developing and non-Western nations, this research focuses on the question: What are the challenges experienced by IEs in conducting their ventures in a developing non-Western host country?

While the developed Western world consistently hosts a large pool of immigrants, immigration to such countries slowly declines due to many immigration policy reforms; while immigration to developing non-Western nations gradually rises (United Nations, 2019). Developing and non-Western countries such as Malaysia provide a useful background in understanding institutions and immigrant entrepreneurship activities due to its nascent experience in dealing with foreign entrepreneurs (Abd Hamid, O'Kane, & Everett, 2019)and the role of culture and traditions shaping its environment (Barkema, Chen, George, Luo, & Tsui, 2015). As an implication, international business decision-makers navigate the complexity of relationship-based processes and the host nation's focus on development (Barkema *et al.*, 2015; Sharma, Luk, Cardinali, & Ogasavara, 2018). Here, it is timely and worthwhile to understand the way IEs deal with such contexts in their entrepreneurial endeavours.

This research focuses on IEs from Indonesia, Pakistan, and South Korea (henseforth: Korea) in a single host country: Malaysia. Malaysia offers this study a background of a regulated entrepreneurial environment and culturally-infused cognitive and normative environment (Carney & Andriesse, 2014), shaping the complexity for foreigners who conduct businesses in the host country. Such home countries provide this study with a richer account of immigrant entrepreneurship experiences, through the characteristics of their home countries contingent to the host country, in light of the call for more knowledge on home-host country dynamics in influencing immigrant entrepreneurship activities (Dheer, 2018). The utilisation of qualitative approach through these home and host countries will assist scholars discussing entrepreneurship activities conducted by immigrants through (1)

lifting the over-reliance on non-Western contexts in discussing such issues and (2) examining the phenomenon from various home country perspectives.

This paper begins with a discussion of the concepts underlying the study. Then, the research design and methods used are outlined. Next, this paper presents its findings, followed by the conclusion, which addresses the theoretical and practical implications of the study.

LITERATURE REVIEW

According to North (1990), "Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction" (p. 3). This study defines IEs as immigrants engaged in entrepreneurial activities in the host country (Chaganti, Watts, Chaganti, & Zimmerman-Treichel, 2008). Institutions include notions of the legal environment, economic incentives, culture, tradition, and history, which shape social interaction through providing constraints and enablers for activities and decision-making (Greenman, 2013). At the heart of the institutional perspective in entrepreneurship are the assumptions that material infrastructure, rules, underlying values, and expectations in countries shape entrepreneurial activities (Bruton, Ahlstrom, & Li, 2010; Lim, Oh, & De Clercq, 2016).The institutional logics outlines this study on the basis of decision-making in a specific context, which is shaped by the institutional environment of the setting.

The Environment of the Host Country and Immigrant Entrepreneurship

The formal aspects of institutions refer to the formally codified, enacted, and enforced structure of laws in a community, society, or nation (North, 1990, 2005). Within the context of immigrant entrepreneurship, components in this aspect primarily stem from governmental legislation, agreements, and standards that can encourage or discourage entrepreneurship activities in the host country (Mata & Alves, 2018). For IEs, the formal aspects of institutions mainly govern their access to the host country's opportunities through two dimensions: the labour market and the entrepreneurial opportunity structure (Abd Hamid *et al.*, 2019). It is documented that IEs usually face challenges in obtaining resources and experience administrative difficulties when starting their ventures, mainly stemming from their lack of knowledge in the host country's language and customs (Carter, Mwaura, Ram, Trehan, & Jones, 2015). For instance, Somali IEs in the UK experience limitations in obtaining bank loans due to the banks' regulations (Ram, Theodorakopoulos, & Jones, 2008), while Turkish IEs in the Netherlands engage in informal businesses due to barriers to formally registering their ventures (Kloosterman *et al.*, 1999).

The informal aspects of institutions refer to values, norms and what is considered proper or preferred (DiMaggio & Powell, 1983). Within the discussion in entrepreneurship, these aspects are represented by the entrepreneurs' knowledge and skills to conduct business within a specific country (Boudreaux, Nikolaev, & Klein, 2019; Busenitz, Gomez, & Spencer, 2000). For IEs, such aspects of institutions are influential through their knowledge of the host country's sociocultural environment. According to the Mixed Embeddedness Model and the Blocked Minority View in immigrant entrepreneurship, IEs equipped with knowledge of the host country's language and customs are likely to fare better than those who lack such knowledge, as these abilities enable them to access the host country's more profitable local market as opposed to the price-sensitive migrant segment (Cruz, Falcao, &

Barreto, 2018; Kloosterman *et al.*, 1999). Some examples reflecting this issue include Korean IEs who operate their ventures in Korean-dense neighbourhoods in the US due to their limited knowledge in the host country's language and networks (Zonta, 2012) and Indian IEs who face difficulties in attracting the local Australian market due to unfamiliarity with the country (Azmat & Fujimoto, 2016).

Developing Non-Western Countries as Host Countries

Developing non-Western countries or emerging markets offer IEs with a commercial environment shaped by state intervention and culture, which can be demonstrated in the management of their operations and marketing of their offerings (Barkema *et al.*, 2015; Luo, 2016). With regards to the formal environment, developing non-Western countries are mainly characterised with fluid legal systems, and entrepreneurs navigate the systems through encouraging the financial, legal, and labour structures that mainly enable their entrepreneurial activities (Bruton, Ahlstrom, & Obloj, 2008; Omri, 2020). For foreign entrepreneurs, these activities include forming and maintaining relationships with industry-relevant authorities and engage in nation-building activities (Jafari Sadeghi, Nkongolo-Bakenda, Anderson, & Dana, 2019). This can be manifested in providing donations to charities supported by the industry in which they operate and engage in events initiated by relevant bodies in the host country. Here, entrepreneurs provide encouragement to the institutional environment which is relatively underdeveloped to support entrepreneurial activities in the host country.

With the increasing migration to non-Western countries comes an increase of interest in non-Western contexts for immigrant entrepreneurship. A research on IEs in Uzbekistan illustrates that the host country's characteristics as a transition economy provides entrepreneurs with comparatively less competitive environment for starting a business venture (Elo, 2016), a study on IEs in Belize and Cambodia suggest that such entrepreneurs begin to operate beyond the co-ethnic market as countries progress towards development (Verver, 2019), while a research on IEs in South Africa reveals that the entrepreneurs mainly navigate the host country environment through forming and maintaining relationships with disadvantaged and governing communities (Griffin-EL & Olabisi, 2018). As such, IEs and their ventures in non-Western countries are mainly influenced by the host country's characteristics in terms of their development status and socio-economic environment. Malaysia as a host country provides a unique background for this study as its entrepreneurial institutions are largely designed to ensure the locals' competitiveness in business against foreign investors (Carney & Andriesse, 2014). For example, foreign businesses are required to have a local business partner and hire local employees so as to ensure that the locals are not marginalised. In addition to the general challenges experienced by IEs in the host country – like the lack of acceptance of the local society and government bodies or difficulties in obtaining resources – the developing nation status and non-Western characteristics of Malaysia adds a layer of complexity for IEs, due to its protectionist stance towards locals inherent from its status as a developing nation, culture, and tradition-permeated environment based on its non-Western features.

Research Focus

There are two key takeaways from this section: (1) IEs in general face difficulties in accessing the local market as they lack host country knowledge, and (2) developing non-Western

countries provide a more complex environment for decision-makers given the influence of the host country state intervention and culture. To address the research focus, a qualitative approach is undertaken to understand the phenomenon. Doing so will enable scholars to be more cognisant of the contextual roles of the host country in shaping IEs' experiences.

Study Context

Home countries selected in this study are Indonesia, Pakistan and Korea, with Malaysia as the host country. The qualitative approach employing multiple home countries provides this study with an insight on the similarities and differences of IEs' experiences in the host country, which can inform us on the way the host country environment influences entrepreneurial activities (Terjesen, Hessels, & Li, 2016). As a multi-racial country, the business environment in Malaysia mainly aims for the development of its natives, reflected in the rules and regulations for business creation and expansion to ensure the competitiveness of locals against foreigners (Carney & Andriesse, 2014). Furthermore, Malaysia's formal and informal profiles with regards to immigrant entrepreneurship may differ from that of conventional immigrant-receiving countries. Specifically, immigration to Malaysia is mainly composed of migrant workers, not IEs which lends to its unfamiliarity with IEs' businesses (Abd Hamid *et al.*, 2019; Hugo, 2011). On the other hand, IEs' home countries in this study represent varying characteristics that influence IEs' journeys in their venture development (Brzozowski, Cucculelli, & Surdej, 2014), in which Indonesian IEs can leverage from the similar Malay-based history, Pakistani IEs share similar Islamic values as Malaysia, while Korean IEs can benefit from their position as immigrants from a more prosperous country than the host country.

MATERIAL AND METHODS

This study employed a qualitative approach as such approaches are appropriate for questions about processes, understandings, and beliefs, involving making sense of the social world of the studied people (Taylor, Bogdan, & DeVault, 2015; Wiseman, 1979). Primary sources of data include the IEs (focal primary source of data), embassy representatives, community leaders, and trade representatives of the three cases. A total of 40 respondents, including 32 IEs and eight supplementary interviewees, participated in the study, as shown in Table 1.

The primary data for this study was obtained through face-to-face, in-depth, and semi-structured interviews as part of a larger research on immigrant entrepreneurship in Malaysia. Interviews lasting 35-90 minutes were recorded on tape with the consent of interviewees. Prior to interviews, interviewees were contacted by phone and given details about the study. In total, 2800 minutes of face-to-face interviews were conducted during 40 interview sessions. Where necessary, further questions were asked to provide ongoing clarification (Miles & Huberman, 1994). Secondary data sources were used for cross-checking purposes. During the phases of this research – which included outlining the framework, collecting data, analysing data, and subsequent iterations – the researcher employed a qualitative research software, NVivo for various purposes, including literature sorting, organising data sources, and coding.

Table 1. Summary of respondents

Case	Primary source(s)	Pseudonyms	N
Indonesian IEs	Entrepreneurs	EI1-EI10	10
	Community leader	ICL	1
	Embassy representative	ITE	1
	Trade association representative	ITL	1
Pakistani IEs	Entrepreneurs	EP1-EP10	10
	Community leader	PCL	1
	Embassy representative	PTE	1
Korean IEs	Entrepreneurs	EK1-EK12	12
	Community leader	KCL	1
	Embassy representative	KTE	1
Additional source	Malaysian trade expert	MTE	1
Total			40

Source: own study.

RESULTS AND DISCUSSION

Case Summaries

Indonesians form the largest pool of immigrants in Malaysia (United Nations, 2019), and within the context of this study, they are more represented in numbers relative to their Pakistani and Korean counterparts. The Islam-based affinity, racial and linguistic similarities, shared common history, and geographical proximity in the Malay Archipelago largely define bilateral Malaysian-Indonesian relations. These commonalities are assumed under the concept of ethnic-based kinship (Khalid & Yacob, 2012), which encourages the sense of familiarity of Indonesians in Malaysia. In this study, the majority of the interviewees are first-generation male Indonesians in Malaysia, who came to Malaysia in 1998, and equipped with a minimum upper secondary education qualification. With regards to their motivations to pursue entrepreneurial ventures, nine of the interviewees responded that they saw a business opportunity while only one of them mentioned that it was due to difficulties in obtaining employment.

Pakistanis' South Asian links with Malaysian Indians and Islam-based affinity shared with Malaysia enable Pakistani migration to Malaysia through a sense of familiarity and brotherhood (Hugo, 2011). In this study, Pakistani IEs' clients are predominantly host country locals. Four of the interviewees came to Malaysia around 1989 until 1992, two of them arrived in Malaysia between 2006 and 2013 and the rest of them are second-generation Pakistanis in Malaysia. Nine of the interviewees responded that noticing a business opportunity was a motivation for them to start a business venture, while one of them stated that he came to Malaysia to continue a business venture.

For Korean IEs, Korean migration to Malaysia is largely attributed to various nation-level policies and programs that welcoming immigrants from more developed countries. Such immigrants include businessmen, expatriates, and students. Most of Korean IEs in

this study conduct restaurant and retail-based operations. The respondent pool for the case of Korean IEs is mainly composed of first-generation male Koreans with at least upper secondary education. In terms of their entrepreneurial motivations, eight respondents stated that it was based on opportunity, three mentioned that it was due to difficulties to find employment at home, and one responded that it was because he wanted to continue a business venture. Table 2 shows the details of this study's IE respondents.

Table 2. Details of primary interviewees

Case	Interviewee	Gender	Years in Malaysia	Education	Entrepreneurial motivation
Indonesian IEs	EI1	Male	16-20	Master's Degree	Opportunity
	EI2	Male	≥ 21	Upper secondary	Opportunity
	EI3	Male	16-20	Master's Degree	Venture continuation
	EI4	Female	6-10	Bachelor's Degree	Opportunity
	EI5	Female	6-10	Master's Degree	Opportunity
	EI6	Male	≥ 21	Upper secondary	Opportunity
	EI7	Male	16-20	Bachelor's Degree	Opportunity
	EI8	Female	6-10	Bachelor's Degree	Opportunity
	EI9	Male	≥ 21	Upper secondary	Lack of employment opportunities
	EI10	Male	≥ 21	Diploma	Opportunity
Pakistani IEs	EP1	Male	≥ 21	Upper secondary	Opportunity
	EP2	Male	0-5	Bachelor's Degree	Opportunity
	EP3	Male	≥ 21	Bachelor's Degree	Venture continuation
	EP4	Male	6-10	Bachelor's Degree	Opportunity
	EP5	Male	≥ 21	Lower secondary	Opportunity
	EP6	Male	≥ 21	Upper secondary	Opportunity
	EP7	Male	≥ 21	Diploma	Opportunity
	EP8	Male	≥ 21	Upper secondary	Opportunity
	EP9	Female	≥ 21	Upper secondary	Opportunity
	EP10	Male	≥ 21	Upper secondary	Opportunity
Korean IEs	EK1	Male	0-5	Bachelor's degree	Opportunity
	EK2	Male	0-5	Bachelor's degree	Opportunity
	EK3	Male	0-5	Bachelor's degree	Lack of employment opportunities
	EK4	Male	≥ 21	Bachelor's degree	Lack of employment opportunities
	EK5	Male	0-5	Bachelor's degree	Opportunity
	EK6	Male	11-15	Bachelor's degree	Venture continuation
	EK7	Male	6-10	Bachelor's degree	Lack of employment opportunities
	EK8	Male	≥ 21	Bachelor's degree	Opportunity
	EK9	Male	11-15	Bachelor's degree	Opportunity
	EK10	Female	16-20	Upper secondary	Opportunity
	EK11	Female	6-10	Bachelor's Degree	Opportunity
	EK12	Male	0-5	Bachelor's Degree	Opportunity

Source: own study.

The migration characteristics of Indonesians, Pakistanis, and Koreans to Malaysia is illustrated in Table 3. As immigrant-sending countries, the migration profiles of different home countries offer a unique contextual setting (Vershinina, Barrett, & Meyer, 2011); Indonesian immigrants may benefit from its large pool of immigrants and close historical links to Malaysia, Pakistani immigrants are able to leverage colonial links and Islam-based affinity, while Korean immigrants can utilise their relatively more prosperous position in the host country. As such, Indonesian, Pakistani, and Korean IEs in this study are equipped with home-country-specific characteristics that can be utilised in navigating the host country environment (Sundararajan & Sundararajan, 2015).

Table 3. Statistics of Indonesians, Pakistanis, and Koreans migrating to Malaysia (source: United Nations, 2019)

Year	Indonesia	Pakistan	Korea
1990	252 710	3 208	1 194
1995	421 423	4 484	1 366
2000	726 961	7 140	1 927
2005	863 998	16 632	2 582
2010	960 819	31 814	3 073
2015	1 171 677	80 224	3 747
2019	1 225 156	83 884	3 917

Source: own study.

Steps in Data Analysis

Interview transcripts were developed into three main cases (Indonesian, Pakistani, and Korean IEs). For each cases, codes were extracted based on the main research question, which went through three stages of coding, shaped by the interviewees' quotations and then assembled into a data structure in the final two stages of analysis (Gioia, Corley, & Hamilton, 2013). First, these codes were clustered into the groups of formal and informal barriers, as outlined by the institutional approach taken in this study, which produced 28 codes extracted from 75 quotations, which refer specifically to the challenges experienced in the host country. Codes relating to the host country's rules and regulations were organised in the "formal" cluster, while codes relating to culture and ways of implementation in business were organised in the "informal" cluster. The second stage of coding organises the codes into emerging themes upon application into the three cases. At this stage, a careful examination was re-employed to gauge the way the themes pose as challenges to the IEs. This step revealed that the challenges are mainly influential in shaping IEs' access to resources and opportunities. The final stage of coding categorises the themes into key dimensions influencing the challenges experienced by IEs and their ventures. This process revealed that the challenges experienced by IEs in a host country pertains to the following dimensions of the host country: (1) governing institutions, (2) resource-providing institutions, (3) society and (4) competition. This is described in Table 4.

Table 4. Steps in data analysis

Open codes based on institutional dimensions		Emergent themes	Aggregate Dimension
Formal	Migrant business-related regulations	Regulative require-ments for non-local business start-up processes	Governing in-stitutions
	Obtaining license		
	Rules regarding foreign workers		
	Special requirements for start-up for migrants		
	Official information issues	Facilities governing information and documentation	
	Speed of documentation		
	Fake foreign worker agencies	Limited access to potential employees due to immigrant ownership	
	Industry-related regulations		
	Protective local unions		
	General funding regulations	Limited access to fi-nancial capital due to immigrant own-ership	Resource-providing in-stitutions
	Lack of support from larger corporations		
	Main client base limiting funding		
	Migrant status limiting funding		
	Complicated business mechanisms	Limited access to in-formation due to unfamiliarity	
	Difficulties in getting information		
	Knowledge about institutional environment		
Informal	Attracting the local market	Understanding the local market	Host country society
	Foreigner image		
	Hiring locals		
	Industry-related image		
	Language in business operation	Understanding the host country's cul-ture in business op-eration	
	Network diversity		
	Staff retention		
	Work styles		
	Competition	Informal activities within the host country's migration environment	Competition in the host country
	Smuggling and counterfeiting		

Source: own study.

Key Dimension 1: Governing Institutions

This dimension refers to the rules outlined by the regulative bodies in the host country with regards to starting a new venture. Codes in this dimension include issues on permits and special requirements for IEs' ventures as they are owned by non-citizens. The follow-ing quotations by EK10 (Korean food retailer), EP1 (carpet-focused entrepreneur), and a Pakistani trade expert (PTE) illustrate the way the host country's governing bodies influ-ence IEs and their ventures:

> "I was working for the license for this business for four years. This is not a small operation; my business is quite profitable. I guess it is easier if it's another business like Korean restaurant businesses … it is easier for them to get a license" (EK10).

> "I applied for a wholesale permit, and it links with immigration because the nature of business operators. I got rejected a few times, as this company can be operated from overseas" (EP1).

> "Among the challenges, one of them is to obtain a visa here. Expatriates and foreigners have to renew their visas every two years, the system is quite challenging as those who have stayed in Malaysia for 15 to 16 years must also do the same. Institution-wise, the performance of the immigration department can also be a challenge" (PTE).

Furthermore, the respondents explained that there were specific rules applied especially for non-citizens to begin entrepreneurial activities in the host country. In this regard IEs' activities are closely related with the limited opportunities inherent from their position as immigrants. This is clarified by the interviewed Indonesian and Pakistani trade experts (ITE and PTE respectively):

> "To start a business, now … I think it is more challenging. For legal workers, they have a limit as to how long they should be here. For businessmen, they have to adhere to local requirements, for example, a portion of their company must be owned by the locals" (ITE).

> "It can be quite stressful for businessmen because of the regulations. Because business owners have to deal with the immigration department and business regulators, who provide them with licenses" (PTE).

Key Dimension 2: Resource-Providing Institutions

Codes that informed this dimension comprise of bodies pertaining to funding and employment, which includes local unions and foreign worker agencies. This dimension is related to the early stages of IEs' ventures, as they directly influence the start-up and survival of IEs' ventures in the host country. Such bodies generally limit IEs access to resources in relation to their status as non-citizens. As exemplified by Indonesian IEs, EI4 who runs a spa business and EI5 who is involved in food trading, obtaining funding from financial institutions such as banks and supporting agencies is challenging:

> "The first two-and-a-half years were the hardest. I am a foreigner, so I was not allowed to borrow money from the bank. So whatever revenue I have received, I recycled back as capital" (EI4).

> "The main challenge for me is funding. The banks in Malaysia are quite conservative" (EI5).

The respondents added that some organisations involved in the ecosystem of immigrant entrepreneurship in the host country mainly distorts the commencement of IEs' ventures. According to the data, there are two types of such organisations. The first type focuses on protecting locals of the host country – like an employee union – and the second

type is more informal in nature, predominantly operated by illegal immigrant-based activities, such as informal foreign worker agencies. As IEs generally lack the local labour market information, they will mainly rely on a large number of foreign workers who are usually managed by informal foreign worker agencies. This quandary in employment is further exemplified by the following quotations by Indonesian IEs, EI3 (a trading entrepreneur) and EI8 (a restaurant operator):

> "The union in Malaysia is also protective of employees, especially for employees who have been fired. Companies fire their workers for a reason … they do not easily fire their workers they know …. For them, coming to work and leaving is just a game … as if companies are the object of their games. About the union, although they do listen to all sides of the story, the inclination is still towards the employees" (EI3).

> "Then, there is the problem of fake agents. Agents for manpower, I mean. These agents promise us workers, and they promise to handle all the legal matters involved … but they just want money" (EI8).

Key Dimension 3: Host Country's Society

Items relating to this dimension are concerning IEs and their ventures within the context of the host country's society, which enables IEs' access to the more profitable local market during venture development. Codes informing this dimension pertain to attracting the host country's locals and language in their venture operations.

Attracting the local market is a challenge experienced by the IEs within this dimension. Specifically, adapting their offer to the host country is a challenge, as demonstrated by the following comments by EI1 (an herb entrepreneur), EI3 (a food trader), and EK12 (a restaurant operator). Here, marketing their products is difficult due to the non-local characteristics of their offerings and EIs' knowledge about the local market:

> "My challenge was to rebrand the image of herb-based products in Malaysia to be more local, so that people would not think of Indonesia when they see herb-based products" (EI1).

> "Turns out that tailoring our marketing efforts was a challenge due to the cultural proximity. There are three main ethnicities in Malaysia, and they have different needs in terms of advertising. For instance, our media commercials have to be in Bahasa Malaysia and Mandarin, but also in English. Same goes for packaging …. In Indonesia, we only have to go through one language" (EI3).

> "I suppose the challenge is to let people know about our products" (EK12).

Language is a challenge experienced by the IEs, and the following quotations by EI8, who operates a restaurant business, and a Pakistani trade expert who link the challenges to difficulties in communicating with locals:

> "For instance, Malaysians have their own slang even though we share similarities in language" (EI8).

> "For newcomers, they are quite limited when it comes to language so they can't express themselves well" (PTE).

Key Dimension 4: Competition

This dimension describes the competition around ventures owned and operated by IEs. Items such as competition with local and non-local businesses and smuggling and counterfeiting activities – which influences venture revenues – are important components of this dimension. This dimension is closely related with the development of IEs' ventures.

One of the main challenges within this dimension pertains to competition with locals and other IEs, as exemplified by the following quotations by EI9 who conducts a textile operation, EP7 who operates an ethnic food business, and confirmed by a Korean community leader (KCL):

> "The increasing competition from locals, they are smart because they have the access to import from Vietnam and China, for the textile industry" (EI9).

> "Competition is a challenge, for instance, one of my dishes has been copied by another Indian food restaurant" (EP7).

> "Competition; among themselves, with other immigrant businesses, and most importantly, businesses owned by the Malaysian Chinese" (KCL).

Several Indonesian IEs explain that activities such as smuggling and counterfeiting by their competitors are their main challenges in conducting entrepreneurial activities in the host country. Further examination of the data suggests that this component is unique to the Indonesian IEs, as they link this challenge with Malaysian-Indonesian cultural similarities. The following comments by EI3, EI10, and an Indonesian trade association leader, ITL, illustrate that cultural similarities shared by Malaysia and Indonesia enables several unique challenges:

> "Another challenge is having our products imitated. X [pseudonym] soy sauce is one of our products that we distribute. It came to our knowledge one day, from the complaints of our customers, that there is a line of soy sauce that has a similar packaging design as X soy sauce, with a similar price. Unfortunately, this product is being imitated by a Malaysian company" (EI3).

> "Because Indonesia and Malaysia are quite near, and the demand for jamu (traditional Malay-Indonesia herb) product is strong, there are people that travel between Malaysia and Indonesia, buy similar products like ours in Indonesia, and sell them cheap. Of course, they can sell these products cheap; they do not have to go through customs, shipping, labelling, licensing and all that, which creates cost" (EI10).

> "Indonesian businesses also face product and service imitation" (ITL).

Based on the narratives, IEs' challenges in the host country revolve around the host country's governing institutions, resource-providing institutions, local society, and competition environment. These dimensions interact within the host country's landscape of immigrant entrepreneurship in shaping IEs' access to resources and opportunities. The experiences of IEs revealed that although the host country is influential in shaping IEs' venture development in the host country, IEs' home countries offer a distinct contingency effect on

how the ventures are conducted. The narratives indicate two unique instances for IEs according to their home countries. Firstly, funding is a challenge expressed by many of the IEs from Indonesia and Pakistan, but it was not mentioned by any of the Korean respondents. Secondly, Indonesian IEs expressed that the challenges are very much related to product and service imitation which can be linked to the cultural similarity of Malaysia and Indonesia. As such, we may observe that home-host country characteristics can offer distinct challenges for IEs in the host country. Nevertheless, as immigrants, IEs from Indonesia, Pakistan, and Korea experience similar challenges in the host country – from private and regulative institutions and from host country's society – with several components unique to the Indonesian IEs (challenges from host country competitors). This is summarised in Table 5 and subsequently discussed in the next section, which develops the findings of this study.

Table 5. Comparison of the cases in regard to the dimension of challenges

Dimension/Case	Main issues	Indonesian IEs	Pakistani IEs	Korean IEs
Governing institutions	Immigrant business regulations	✓	✓	✓
	Obtaining license	✓	✓	✓
Resource-providing institutions	Funding	✓	✓	✗
	Protective local unions	✓	✗	✗
	Fake worker agencies	✓	✗	✗
Host country's society	Attracting the local market	✓	✓	✓
	Language in business operation	✓	✓	✓
Competition	Competition with locals	✓	✓	✓
	Competition with non-locals	✓	✓	✓
	Smuggling and counterfeiting	✓	✗	✗

Source: own study.

Formal and Informal Institutional Nexus in Influencing Entrepreneurial Activities

The host country can pose institutional barriers through formal "gatekeeping" rules and informal cultural expectations (DiMaggio & Powell, 1991; Kostova, 1999). In the context of this study, the aforementioned institutional barriers are represented by special requirements for immigrant-based business owners and businesses to protect local entrepreneurs. This is inherent from the host country's position as a developing economy, whereby formal institutions play an important part in shaping the entrepreneurial ecosystem that affects new and foreign entrants in consideration of local firms (Busenitz *et al.*, 2000). Based on the findings, the formal challenges experienced by IEs are more prominent in the early stages of venture development, through various requirements for immigrant business owners and attainment of licenses and permits. Those who are unable to satisfy such requirements may be left in the informal economy or rely on their co-nationals as a market, both of which are generally unprofitable.

During the course of venture development, IEs find themselves navigating the informal aspects of the host country, especially in terms of attracting local consumers and competing within their selected industries. The informal institutional environment provides IEs with barriers with regards to understanding the more profitable local market (Wang & Warn, 2018). Knowledge about the host country's local market and competition which are items that lie within the cognitive and normative realms of institutions are not likely to be available in a written format, unlike business license and permits. Here, commencing and expanding entrepreneurial ventures in the host country can be challenging, given the developing nature of the host country, and characteristics of IEs' home countries.

Navigating a Host Country's Institutional Environment

The institutional approach in entrepreneurship asserts that the host country is instrumental in encouraging or discouraging entrepreneurial activities in the host country. On the other hand, the literature on immigrant entrepreneurship shows that the host country's environment is generally discouraging for IEs. IEs' challenges in the host country are usually attributed to their lack of host country knowledge (including knowledge in language and networks) in interaction with the host country sociocultural context, which results in their reliance on marginal and informal sectors (Aliaga-Isla & Rialp, 2013; Kloosterman *et al.*, 1999).

Views on immigrant entrepreneurship have been heavily influenced by the IEs' experiences in developed Western countries (Aliaga-Isla & Rialp, 2013), which can dent our understanding of immigrant-based enterprises, given the shift in migration towards non-Western countries. The complexity of Malaysia as a host country for foreigners (including IEs and expatriates) is mainly attributed to its developing nation status and non-Western characteristics. Malaysia's developing nation status motivates the government to focus on the welfare of its local population, which translates into many business start-up regulations and locals' acceptance of non-local offerings, while its non-Western characteristics are influential in the heavy emphasis on local language and customs. Through this study's findings, this research suggests that IEs' challenges within the host country span four key aspects, which are the governing institutions, resource-providing institutions, society, and competition in the host country. In reference to the experiences clarified by this study's main respondents, IEs from different home countries experience similar challenges in conducting business activities in the host country. However, as some components are unique to Indonesian IEs – such as products copied by local entrepreneurs and product smuggling – based on the narratives this research suspects that the extent of home country similarities to the host country could influence IEs' experiences in the host country. In this regard, in reference to the home-country-based experiences (Vershinina *et al.*, 2011), this study proposes that a "one-size-fits-all" approach in regulating ventures owned and operated by IEs are not feasible in such countries. Such approach can offer sustainability for IEs and their ventures, but also for the regulating bodies of the host country. Figure 1 summarises the challenges experienced by IEs in the host country within the institutional lens.
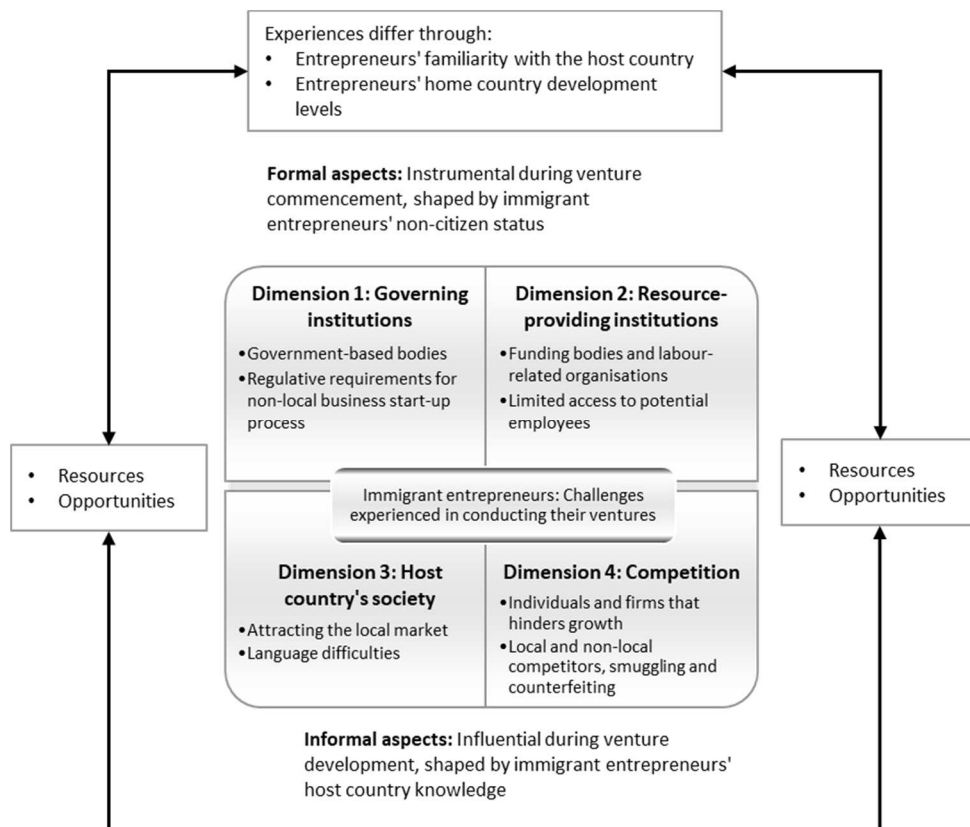
Figure 1. The proposed model of challenges experienced by immigrant entrepreneurs
Source: own elaboration.

CONCLUSIONS

This article examined how institutions influence entrepreneurial activities conducted by IEs. The study was underpinned by North's (1990, 2005) institutional approach in clarifying that the host country influences entrepreneurial activities through formal and informal frameworks. As a research setting, this study focused on IEs from Indonesia, Pakistan, and Korea in the host country of Malaysia. Through a qualitative approach, the findings were organised into cases of Indonesian, Pakistan, and Korean IEs. This approach enabled contextualising with the use of entrepreneurs' narratives which facilitated a rich and in-depth examination of the phenomenon.

The findings show that the challenges experienced by IEs in the host country mainly stem from the governing institutions, resource-providing institutions, local society, and competition in the host country. These items co-relate with IEs' home countries and the host country's formal and informal frameworks in shaping IEs' access to resources and opportunities. Specifically, the host country's focus on ensuring local entrepreneurs'

competitiveness against foreigners are manifested in various challenges on opportunities and resource provisions. The findings of this study produced a model of challenges experienced by IEs in a non-Western developing host country. This model can be instrumental to support the existing knowledge of immigrant entrepreneurship by illustrating how institutions in developing non-Western countries influence IEs and their ventures. As for policy and practice implications, based on this study, home country supporting bodies and host country policymakers are encouraged to engage and interact to build a more sustainable business landscape.

At the time when this article is written, developing non-Western countries host around five to ten percent of immigrants (United Nations, 2019), and it is expected that this number will keep rising. As such, it would be valuable for future research to examine immigrant entrepreneurship activities in countries within this category. Adopting a qualitative approach in a single host country is useful in studying this topic, yet there is much to understand about such contexts in immigrant entrepreneurship research. With regards to the limitations of the study, this paper encourages future research to examine this topic in different developing non-Western host countries to further strengthen the discussion around immigrant-based entrepreneurial activities.

REFERENCES

Abd Hamid, H., O'Kane, C., & Everett, A. M. (2019). Conforming to the host country versus being distinct to our home countries: Ethnic migrant entrepreneurs' identity work in cross-cultural settings. *International Journal of Entrepreneurial Behavior and Research, 25*(5), 919-935. https://doi.org/10.1108/IJEBR-02-2018-0097

Aliaga-Isla, R., & Rialp, A. (2013). Systematic review of immigrant entrepreneurship literature: Previous findings and ways forward. *Entrepreneurship and Regional Development, 25*(9-10), 819-844. https://doi.org/10.1080/08985626.2013.845694

Azmat, F., & Fujimoto, Y. (2016). Family embeddedness and entrepreneurship experience: A study of Indian migrant women entrepreneurs in Australia. *Entrepreneurship and Regional Development, 28*(9-10), 630-656. https://doi.org/10.1080/08985626.2016.1208279

Barkema, H., Chen, X.-P., George, G., Luo, Y., & Tsui, A. (2015). West meets East: New concepts and theories. *Academy of Management Journal, 58*(2), 460-479. https://doi.org/10.5465/amj.2015.4021

Boudreaux, C.J., Nikolaev, B.N., & Klein, P. (2019). Socio-cognitive traits and entrepreneurship: The moderating role of economic institutions. *Journal of Business Venturing, 34*(1), 178-196. https://doi.org/10.1016/j.jbusvent.2018.08.003

Bruton, GD., Ahlstrom, D., & Li, H.L. (2010). Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future? *Entrepreneurship Theory and Practice, 34*(3), 421-440. https://doi.org/10.1111/j.1540-6520.2010.00390.x

Bruton, G.D., Ahlstrom, D., & Obloj, K. (2008). Entrepreneurship in emerging economies: Where are we today and where should the research go in the future. *Entrepreneurship Theory and Practice, 32*(1), 1-14. https://doi.org/10.1111/j.1540-6520.2007.00213.x

Brzozowski, J., Cucculelli, M., & Surdej, A. (2014). Transnational ties and performance of immigrant entrepreneurs: The role of home-country conditions. *Entrepreneurship and Regional Development, 26*(7-8), 546-573. https://doi.org/10.1080/08985626.2014.959068

Busenitz, L.W., Gomez, C., & Spencer, J.W. (2000). Country institutional profiles: Unlocking entrepreneurial phenomena. *Academy of Management Journal, 43*(5), 994-1003. https://doi.org/10.2307/1556423

Carney, M., & Andriesse, E. (2014). Malaysia: Personal capitalism. In M.A. Witt & G.S. Redding (Eds.), *The Oxford Handbook of Asian Business Systems*. Oxford, UK: Oxford University Press.

Carter, S., Mwaura, S., Ram, M., Trehan, K., & Jones, T. (2015). Barriers to ethnic minority and women's enterprise: Existing evidence, policy tensions and unsettled questions. *International Small Business Journal, 33*(1), 49-69. https://doi.org/10.1177/0266242614556823

Chaganti, R.S., Watts, A.D., Chaganti, R., & Zimmerman-Treichel, M. (2008). Ethnic-immigrants in founding teams: Effects on prospector strategy and performance in new Internet ventures. *Journal of Business Venturing, 23*(1), 113-139. https://doi.org/10.1016/j.jbusvent.2006.07.004

Cruz, E.P., Falcao, R.P. Q., & Barreto, C.R. (2018). Exploring the evolution of ethnic entrepreneurship: The case of Brazilian immigrants in Florida. *International Journal of Entrepreneurial Behavior and Research, 24*(5), 971-993. https://doi.org/10.1108/IJEBR-08-2016-0239

Dheer, R.J.S. (2018). Entrepreneurship by mmigrants: A review of existing literature and directions for future research. *International Entrepreneurship and Management Journal, 14*(3), 555-614. https://doi.org/ 10.1007/s11365-018-0506-7

DiMaggio, P.J. (1991). Constructing an organizational field as a professional project: U.S. art museums 1920-1940. In W.W. Powell & P.J. DiMaggio (Eds.), *The New Institutionalism in Organizational Analysis* (pp. 267-292). Chicago, IL: University of Chicago Press.

DiMaggio, P.J., & Powell, W.W. (1983). The iron cage revisited - Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review, 48*(2), 147-160.

DiMaggio, P.J., & Powell, W.W. (1991). Introduction. In W.W. Powell & P.J. DiMaggio (Eds.), *The New Institutionalism in Organizational Analysis* (pp. 1-38). Chicago, IL: University of Chicago Press.

Elo, M. (2016). Typology of diaspora entrepreneurship: Case studies in Uzbekistan. *Journal of International Entrepreneurship, 14*(1), 121-155. https://doi.org/10.1007/s10843-016-0177-9

Gioia, D.A., Corley, K.G., & Hamilton, A.L. (2013). Seeking qualitative rigor in nductive research: Notes on the Gioia Methodology. *Organizational Research Methods, 16*(1), 15-31. https://doi.org/10.1177/1094428112452151

Greenman, A. (2013). Everyday entrepreneurial action and cultural embeddedness: An institutional logics perspective. *Entrepreneurship and Regional Development, 25*(7-8), 631-653. https://doi.org/10.1080/08985626.2013.829873

Griffin-EL, E.W., & Olabisi, J. (2018). Breaking boundaries: Exploring the process of intersective market activity of immigrant entrepreneurship in the context of high economic inequality. *Journal of Management Studies, 55*(3), 457-485. https://doi.org/10.1111/joms.12327

Hugo, G. (2011). Migration and development in Malaysia: An emigration perspective. *Asian Population Studies, 7*(3), 219-241. https://doi.org/10.1080/17441730.2011.608983

Jafari Sadeghi, V., Nkongolo-Bakenda, J.-M., Anderson, R.B., & Dana, L.-P. (2019). An institution-based view of international entrepreneurship: A comparison of context-based and universal determinants in developing and economically advanced countries. *International Business Review, 28*(6), 101-117. https://doi.org/10.1016/j.ibusrev.2019.101588

Khalid, K.M., & Yacob, S. (2012). Managing Malaysia-Indonesia relations in the context of democratization: The emergence of non-state actors. *International Relations of the Asia-Pacific, 12*(3), 355-387. https://doi.org/10.1093/irap/lcr024

Kloosterman, R.C., van der Leun, J., & Rath, J. (1999). Mixed embeddedness: (In)formal economic activities and immigrant businesses in the Netherlands. *International Journal of Urban and Regional Research, 23*(2), 252-266.

Kostova, T. (1999). Transnational transfer of strategic organizational practices: A contextual perspective. *Academy of Management Review, 24*(2), 308-324. https://doi.org/10.5465/AMR.1999.1893938

Lim, D.S.K., Oh, C.H., & De Clercq, D. (2016). Engagement in entrepreneurship in emerging economies: Interactive effects of individual-level factors and institutional conditions. *International Business Review, 25*(4), 933-945. https://doi.org/10.1016/j.ibusrev.2015.12.001

Luo, Y. (2016). Competing in complex cross-cultural world: Philosophical insights from Yin-Yang. *Cross Cultural and Strategic Management, 23*(2). https://doi.org/10.1108/CCSM-01-2016-0020

Martinelli, A. (2004). The social and institutional context of entrepreneurship. In G. Corbetta, M. Huse, & D. Ravasi (Eds.), *Crossroads of entrepreneurship* (pp. 58-74). New York, NY: Springer.

Mata, J., & Alves, C. (2018). The survival of firms founded by immigrants: Institutional distance between home and host country, and experience in the host country. *Strategic Management Journal, 39*(11), 2965-2991. https://doi.org/10.1002/smj.2945

Miles, M.B., & Huberman, M.A. (1994). *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks, CA: SAGE.

North, D.C. (1990). *Institutions, institutional change and economic performance*. Cambridge, UK: Cambridge University Press.

North, D.C. (2005). Institutions and the process of economic change. *Management International, 9*(3), 1-7.

Omri, A. (2020). Formal versus informal entrepreneurship in emerging economies: The roles of governance and the financial sector. *Journal of Business Research, 108*, 277-290. https://doi.org/10.1016/j.jbusres.2019.11.027

Ram, M., Theodorakopoulos, N., & Jones, T. (2008). Forms of capital, mixed embeddedness and Somali enterprise. *Work, Employment and Society, 22*(3), 427-446. https://doi.org/10.1177/0950017008093479

Sharma, P., Luk, S.T.K., Cardinali, S., & Ogasavara, M.H. (2018). Challenges and opportunities for marketers in the emerging markets. *Journal of Business Research, 86*, 210-216. https://doi.org/10.1016/j.jbusres.2018.01.065

Sundararajan, M., & Sundararajan, B. (2015). Immigrant capital and entrepreneurial opportunities. *Entrepreneurial Business and Economics Review, 3*(3), 29-50. https://doi.org/10.15678/EBER.2015.030303

Taylor, S.J., Bogdan, R., & DeVault, M. (2015). *Introduction to qualitative research methods: A guidebook and resource*. Hoboken, New Jersey: Wiley.

Terjesen, S., Hessels, J., & Li, D. (2016). Comparative international entrepreneurship: A review and research agenda. *Journal of Management, 42*(1), 299-344. https://doi.org/10.1177/0149206313486259

United Nations. (2019). Trends in international migrant stock: Migrants by destination and origin. from Department of Economic and Social Affairs https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates19.asp

Vershinina, N., Barrett, R., & Meyer, M. (2011). Forms of capital, intra-ethnic variation and Polish entrepreneurs in Leicester. *Work, Employment and Society, 25*(1), 101-117. https://doi.org/10.1177/0950017010389241

Verver, M. (2019). Contextualising ethnic minority entrepreneurship beyond the west: Insights from Belize and Cambodia. *International Journal of Entrepreneurial Behavior and Research, 25*(5), 955-973. https://doi.org/10.1108/IJEBR-03-2019-0190

Wang, Y., & Warn, J. (2018). Break-out strategies of Chinese immigrant entrepreneurs in Australia. *International Journal of Entrepreneurial Behavior and Research (in press)*. https://doi.org/:10.1108/IJEBR-03-2017-0108

Wiseman, J.P. (1979). The research web. In J.M. Bynner & K.M. Stribley (Eds.), *Social research: Principles and procedures* (pp. 113-121). New York, NY: Longman.

Zonta, M. (2012). The continuing significance of ethnic resources: Korean-owned banks in Los Angeles, New York and Washington DC. *Journal of Ethnic and Migration Studies, 38*(3), 463-484. https://doi.org/10.1080/1369183X.2012.658547

Author

Hamizah Abd Hamid

Senior lecturer at the National University of Malaysia (Universiti Kebangsaan Malaysia). Her PhD, which was obtained from University of Otago (New Zealand), dealt with issues of entrepreneurship within cross-cultural contexts. Her research interests include topics of cross-cultural entrepreneurship and international business.

Correspondence to: Dr. Hamizah Abd Hamid, Centre of Global Business and Digital Economy, Faculty of Economics and Business Management, National University of Malaysia, 43600 Bangi, Selangor, Malaysia, e-mail: hamizah.h@ukm.edu.my

ORCID http://orcid.org/0000-0001-8031-8075

Entrepreneurial tendencies of migrants working in the care sector in Poland

Jolanta Maj, Sabina Kubiciel-Lodzińska

A B S T R A C T
Objective: The main goal of the paper is to assess the degree of intent to become entrepreneurial, and whether this intent influences perceived barriers and hindrances self-employment.
Research Design & Methods: For the purpose of the study, we employed the approach of grounded theory. The sample included 42 immigrants from the care sector chosen in accordance with snowball sampling and Respondent Driven Sampling.
Findings: Most immigrants did not think about setting up a business or rejected the idea due to various reasons, including their current legal status or the lack of financial resources, sufficient language, and professional competencies. Some of the respondents admitted that they would like to start their own business in the future.
Implications & Recommendations: The implications include the identification of barriers perceived by immigrants, which may be an indicator for decision-makers about areas which require improvement in order to facilitate migrant entrepreneurship.
Contribution & Value Added: The article contributes to the research on migrant entrepreneurship by analysing entrepreneurial tendencies of migrants working in a specific yet important sector and by showing novel causalities between psychological, social, and environmental factors and the degree of intent to become self-employed.

INTRODUCTION

Migrant entrepreneurship is an important socio-economic phenomenon, which became the object of interest of migration and management researchers and decision-makers (Kloosterman & Rath, 2003; van Delft *et al.*, 2000). Migrant entrepreneurs are defined as people who came to the country of immigration and started their own business (Chaganti & Greene, 2002). This phenomenon occurs mostly in highly developed countries (Kloosterman & Rath, 2003) which attract representatives of poorer nations. Starting own business is one of the forms enabling migrants to overcome obstacles in the host country's labour market (Waldinger *et al.*, 1990). In the case of immigrants, sometimes opening own company is forced, because it is the only option to earn and the only possibility of staying in the country of immigration (Chrysostome, 2010). Research shows that immigrants are more likely to start their own businesses than non-immigrants (Fairlie, 2008). Companies founded by migrants usually fail more often than those established by citizens of a given country, which may result, among other things, from limited access to bank loans (Fraser, 2006), insufficient qualifications, or market mismatch in the new country. The functioning of migrant entrepreneurs is connected with additional challenges, such as language barrier, the understanding of the legal and institutional environment, consumer needs in the host country, access to capital, market situation, and competition (Glover & Sim, 2002; Volery, 2007). Despite the significant number of studies concerning this phenomenon, we must be aware that the nature of migration-related issues is drastically changing (Dang & Harima, 2020). In Poland, the mobility model has transformed from an emigration into an immigration model (Solga & Kubiciel-Lodzinska, 2017). The relevance of immigrant labour workforce is growing, and its presence is crucial not only for the development of the industry but also for household services including elderly care. Demand for the latter is growing due to Poland's aging population. In Poland, the phenomenon of migrant entrepreneurship is starting to gain importance; however, there is relatively little research on this subject (Andrejuk, 2017a; Brzozowski, 2017; Czerniejewska, 2014; Glinka & Brzozowska, 2015; Nestorowicz, 2013), and the conducted research focuses on already established enterprises.

The current article concentrates on (1) entrepreneurial intentions (2) in a specific, under-investigated segment of the immigrant population (working in elderly care) and (3) in an under-researched context (Poland).

The conducted research fills the theoretical gap regarding the tendencies to set up an own business among immigrants working in the care sector. We selected the care sector on purpose. The USA experience shows that 20% of immigrant enterprises operate in health care and social assistance (Fairlie & Lofstrom, 2015), which proves that this could be an industry that stimulates entrepreneurship. Furthermore, due to brain waste (Hanson, 2006; Chiswick & Miller, 2009) immigrants employed in the care sector are at risk of marginalisation. Becoming entrepreneurial is a way of escaping marginalisation and the grey economy, raise status on the labour market, better use qualifications, and in some cases to circumvent the inability of employment in "better" labour market segments. The analysis of willingness to establish a business among migrants working in senior care is important because illegal employment predominates in this sector. Reducing grey economy is beneficial from the viewpoint of the host country's economy, because legal workers

pay taxes and social security contributions to the budget of the host country. This study contributes to the research on migrant entrepreneurship by analysing entrepreneurial tendencies of migrants working in a specific yet important sector by showing novel causalities between psychological, social, and environmental factors and the degree of intent to become an entrepreneur. First the study not only explores the intent to become an entrepreneur but also the combination of psychological, social, and environmental factors that contribute to the decision of becoming an entrepreneur.

The study aims to explore the research problem of the influence of the degree of intent to become entrepreneurial on the perceived barriers and hindrances to setting up a business. Therefore, we formulated the following research question: What are the motives for and perceived barriers and hindrances to become an entrepreneur for migrant elderly care workers in Poland?

The paper is organised in the following way. First, we present the results of a literature review on the issue of migrant entrepreneurship with focus on elderly care, followed by a materials and methods section that describes the sample selection, sample structure, the research tool and data collection process. Then, we explain and discuss the research results. The paper ends with conclusion, which including recommendations for further research.

LITERATURE REVIEW

Migrant entrepreneurship is recognised as an important issue for the development of regions and states. This phenomenon was studied in developed countries, but also in those considered undeveloped (Lofstrom, 2014), as immigrant entrepreneurs are also present on labour markets of developing countries (Elo, 2016). This shows that immigrant entrepreneurship can be interesting from an economic viewpoint, even when it is not massive in scale. Migrant entrepreneurship became the subject of analysis of different scientific disciplines around the world (Aliaga-Isla & Rialp, 2013), analysed through the lens of different scientific approaches (Ilhan-Nas *et al.*, 2011).

Research shows that several factors influence the migrant's intention to become an entrepreneur (Bird, 2015; Liñán & Fayolle, 2015) and decision to set up a business, even the immigrant's country of origin. Research on this subject was conducted, among other places, in the United States of America (Raijman & Tienda, 2000; Saxenian, 2002). Moreover, scholars examined the barriers and challenges in conducting business by immigrants (Constant & Zimmermann, 2006; Teixeira *et al.*, 2007) and determined that there are limitations stemming from cultural mismatches, the lack of experience and knowledge (Shinnar & Young, 2008), the length of stay (Leicht *et al.*, 2012), and difficulties with access to loans (Leicht & Welter, 2009). Among the determinants of setting up a business, research scrutinises the immigrants mindset (Czerniejewska, 2014), education and experience in the labour market, and the existence of enclave markets (Le, 2000). Strategies and financial outcomes of migrant enterprises are also analysed. Bolzani and Boari (2018) analyse, among others, the export results of such companies, while Achidi Ndof and Priem (2011) overview strategies of immigrant ventures. Others determine that migrant enterprises achieve better results than native enterprises due to the access to international networks (Neville *et al.*, 2014). Furthermore, it was noted that a certain process needs to be set into motion for an employee to evolve into an entrepreneur (Rahman, 2018; Wilpert, 2003). The key determinant of the decision to become self-employed for migrants is very often

that entrepreneurship is perceived as the only way to overcome labour market barriers, such as low payed jobs, discrimination due to ethnic origin, and difficulties in the formal recognition of qualifications (Light & Gold, 2000). In general, the tendency to start a business among immigrants increases with the increase of their human, financial and social capital. Caparrós Ruiz (2010) indicates that immigrants are disadvantaged when entering into self-employment as the first job. This is connected with the need to have sufficient experience to run a business (Caparrós Ruiz, 2010). Research from Poland shows that the main driver for starting own business was the need for independence and raising own social status and income. A significant group plans on becoming entrepreneur even before coming to Poland (Brzozowski & Pędziwiatr, 2014). Another area of analysis in the context of the development of migrant entrepreneurship are also language skills (Ram & Smallbone, 2003). Australian and British research shows that the host country language proficiency positively impacts the migrants' decision to become entrepreneurial (Evans, 1989; Ram & Smallbone, 2003). Furthermore, studies show that the level of language proficiency affects the choice of the industry in which a migrant entrepreneur operates (Rueda-Armengot & Peris-Ortiz, 2012). Thus, one of our research goals is to determine the possible motives, hindrances and barriers of migrant's entrepreneurship.

A typology of economic structures of migrant entrepreneurships was distinguished within the mixed embeddedness model. Within those structures, scholarship distinguishes the post-industrial sector as the one with the most potential for development, requiring low qualifications and having low entering barriers (Kloosterman, 2010). This sector includes, among others, household services such as care services. The demand for such services is growing in highly developed countries, which witness an aging population (Brzozowski, 2019). As a result, this particular industry creates opportunities for the development of micro-entrepreneurship (Hall *et al.*, 2019). This was one of the reasons to focus the following study on the care sector, narrowing the primary research goal on the motives and entrepreneurial tendencies of migrants working in the care sector. The sector which attracts migrant workers is the care sector and especially elderly care. The influx of immigrant workers is especially visible in developed countries, in which there appears a "care crisis," that is the inability to meet the demand with native care givers (Yeates, 2010). Native workers do not want to work in this sector due to the perceived low status (Goel & Penman, 2015) and undesirability of this type of work (Hugo, 2009). Elderly care has become an area dominated by migrants, very often the undertaken employment is illegal (Van Hooren, 2010), and it provides difficult working conditions due to low wages and social isolation, which very often results from the round-the-clock care (Walsh & O'Shea, 2010). Furthermore, research shows that self-employment is for migrants a way to escape marginalisation (Blume *et al.*, 2009). Most of the current literature focuses on factors that attract and push out migrants into the elderly care sector (Bruquetas-Callejo, 2020), their scope of responsibilities (Martin *et al.*, 2009), the changing role of the family (Rugolotto *et al.*, 2017), or the changes in formal and institutional conditions (Pelzelmayer, 2016; Van Hooren, 2010). However, to our best knowledge, the entrepreneurial tendencies of migrants working in this sector have not analysed yet.

Research shows that high-skilled migrants very often undertake employment in jobs below their qualifications (Borjas, 1991, 1994; Baker & Benjamin, 1994). Such a situation is

defined as brain waste, and occurs when a person who incurred education costs does not benefit from the raised capital (Pires, 2015). Brain waste results from the fact that skills, qualifications, and professional experience are not being used in the incoming country (Chammartin, 2008), due to the lack of recognition of diploma and qualification from the home countries. In terms of not fully using qualifications by highly qualified migrants, scholars also employ the term "de-skilling," which means that migrants undertake employment not fitting their qualifications and professional experience. Difficulties with the recognition and transfer of skills and qualifications resulting from higher education are not uncommon (Brzozowski, 2008). Thus, the decision to become entrepreneurial is necessity-driven, as the only way to come out of illegal employment below one's qualifications (Hughes, 2003). Nonetheless, German research shows that self-employment in the care sector may have negative consequences for the migrant entrepreneur, as it may not result in improving working conditions nor increasing salary. Instead, it may result in increased obligations and risk related to the correct implementation of regulations, including tax regulations (Lutz & Palenga-Möllenbeck, 2011). Austria is a special example, where regulations encourage self-employment of migrants who want to work in elderly care. The so-called live-in caregivers, even if they have only one patient, can become self-employed (Schwiter *et al.*, 2018).

Demographical changes in Europe, such as the decrease in work force and the growing number of older people result in the rising importance of immigrants and the elderly care they provide (Honig, 2018). We cannot rule out that migrants would perceive the possibility of becoming self-employed as a way to legalise their employment. On the other hand – in the case of nurses, physiotherapists – it would give them the opportunity to work in accordance with qualifications, not necessarily only in elderly care. Hence, it would be important to determine whether this would be necessity- or opportunity-driven, because each of these forms has a different impact on economic growth in the host country (Brzozowski *et al.*, 2017).

MATERIAL AND METHODS

Adopting a social-constructivist perspective, 42 in-depth interviews were conducted among immigrants working in elderly care. For the purpose of the study, they were defined as people who permanently live with a dependent person or periodically take care of a senior and their household. The interviews were digitally recorded, transcribed and analysed using MAXQDA software. The interviews were conducted in Polish and lasted about 45 minutes. For the purpose of the study, we selected the grounded theory approach. The data was analysed using open and axial coding (Charmaz, 2006; Strauss & Corbin, 1994; Strauss & Corbin, 1997), which enabled the development of first and second order categories. To ensure the quality of the analysis, we employed the audit trial, collaboration, and disconfirming evidence validity procedures (Creswell & Miller, 2000). The codes were developed using the inductive coding approach with iteration between theories and empirical material. This approach required several meetings between the authors separately coding the empirical material. After several iterations based on logical similarities and ontological levels of each code, particular categories were developed.

The structure of the sample has been presented in Table 1. The vast majority, 39 people came from Ukraine, two from Belarus, and one from Russia. The youngest person in the study group was 18 years old and the oldest was 57 years old.

Table 1. The structure of the sample

Respondent characteristics Indicator		Number of respondents
Gender	Male	8
	Female	34
Legal status	Legal	16
	Illegal	26
Country of origin	Ukraine	39
	Other	3

Source: own study.

For the purpose of the study, two sampling techniques have been used: snowball sampling and Respondent Driven Sampling. Snowball sampling is based on a non-random selection of respondents for the study. After each interview, the interviewer asked the respondent to indicate the next person or more – as there is no limit in the number of people recruited by the respondent – with whom he could conduct interviews on the same subject. However, the interviewer usually attracted more people to research through own contacts. RDS (Respondent Driven Sampling) relies on a sample controlled by the respondent (Heckathorn, 1997). This is a modification of snowball sampling, supplemented by a double incentive system. After the interview the respondent could indicate a limited number of people for the study (a maximum of two people). This method allows the use of a dual system of incentives consisting of rewarding the respondent both for giving an interview (50 PLN for the conducted research) and for recruiting more people (30 PLN for the conducted research). Furthermore, when using snowball sampling, the interview is usually conducted at the location indicated by the respondent (the interviewer comes to the respondent). However, in the case of using the RDS method, the interview happens at the location set by the interviewer (the respondent comes to the interviewer). Using the RDS sampling method at a regional scale was a novelty because, so far, the method was used to analyse the migrant population in cities or agglomerations (Gorny & Napierała, 2016). However, using RDS on a regional scale resulted in difficulties in achieving the assumed sample. The method was supplemented with the traditional snowball sampling. The choice of the sampling method did not influence the respondents' gender, education level, nature of work, and completeness of provided answers. Among the respondents selected using the RDS method, we observed a small overrepresentation of people treating elderly care as additional employment (14 to 11), students (3 to 1), and young people (average age 32.2, while in the snowball sample the average age was 33.2). Furthermore, the RDS sample showed a higher representation of respondents living in larger cities, such as Opole, Brzeg, and Nysa, while in the snowball sample most respondents lived in the suburbs.

We used a semi-structured interview questionnaire. The aim of the research was not to develop generalisations but to reach for thoughts, experiences of interlocutors, and the explanation of motives favourable and unfavourable for undertaking entrepreneurial activity by immigrants currently working in providing care to the elderly. The conducted research was developed as exploratory research.

RESULTS AND DISCUSSION

The first main finding shows that only individual migrants started an own business in Poland. In the conducted research only one respondent, no. 15, declared self-employment. However, several respondents stated that they would like to be self-employed in the future or at least consider such a possibility. For the purpose of further analysis, the respondents were divided based on the degree of intention to start own business. The division is presented in Table 2.

Table 2. Respondents' intention to start own business

Degree of intention to start own business	Respondents
Already self-employed	R15
Intending to become an entrepreneur	R4, R5, R6, R8, R9, R10, R16, R17, R20, R24, R25, R29, R37
Not intending to become an entrepreneur	R7, R12, R13, R18, R23, R27, R30, R31, R33, R35, R36
Has not thought about it	R1, R2, R3, R11, R14, R19, R21, R22, R26, R28, R32, R34, R38, R39, R40, R41, R42

Source: own study.

Most respondents have not considered setting up their own business and some – although admitting that they did not think about it – after a short reflection stated that they do not want to become entrepreneurial.

Most of the respondents who consider starting an own business in Poland, want to do it in a different sector, not connected with the care sector. Respondents mention the construction sector (Respondent no. 4), services (Respondent no. 6, 8, 16, 17, 20, 25), and gastronomy (Respondent no. 10). Entrepreneurial intentions depend on exogenous factors like the personal situation (Krueger, 2017).

Considering the reasons for starting a business in Poland, we observed a division between the respondent already self-employed and those who plan to become self-employed. Aware of the limitation of having only one respondent who already has an own business and, thus, unable to draw any representative conclusions, we observed the differences between the other groups and respondents. When explaining the motives for setting up a business, Respondent no. 15 mentioned two reasons: a perceived market gap and the fact that this form of employment was more suitable for the respondent in terms of remuneration, working hours, and legal conditions. The reasons were categorised as competency-related, because in this particular study we included personal preferences (attitudes) and market orientation (skills and knowledge). "Older people need the help of physiotherapists. You have many [older people] in Poland, but nobody is taking care of your elders …. I noticed that in Poland the elderly are neglected by their families" (Respondent no. 15). This confirms Curci and Mackoys (2010) results stating that migrant entrepreneurships may fill a niche in the local national economy.

The motives of the second group were summarised in Figure 1. We developed first and second order codes in accordance with Schwartz's human value structure (Schwartz, 1994).
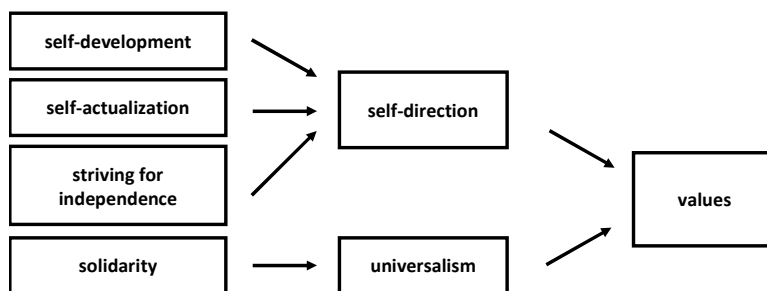
Figure 1. Motives for setting up a business in Poland
Source: own elaboration.

The first group of motives was identified as self-direction values of the respondents open to the idea of setting up a business. Respondents mentioned their striving for self-development, self-actualisation, or independence. "In five years, I would like to have my own firm. I would like to have something on my own and not to be forced to look for different jobs, because this can be different and difficult, as being on my own is being on my own" (Respondent no. 24). Those values were categorised by Schwartz (1994, p. 31). The second group of values are related to universalism. Within the analysed interviews, of special importance appeared solidarity and the possibility to help fellow nationals. This is consistent with the findings of Walton-Roberts and Hiebert (1997), who state that migrant firms may be a way of creating new workplaces for other migrants.

The second identified issue are the reasons for not setting up a business. Those reasons were also divided based on the degree of intention to start one's own business. The first and second order codes have been presented in Figure 2.

The first identified group of reasons was connected with the perceived need to build up the necessary social and intellectual capital, i.e. the need to graduate and the need to gain practical experience: "I wanted to graduate first. This is why I am studying Finance and Accounting – to know the details" (Respondent no. 10). This fits the findings of Caparrós Ruiz (2010), who indicate the need to build up the necessary social and intellectual capital before starting own business. Those reasons have been emphasised by migrants willing to start own businesses. The second group of reasons was categorised in accordance with Schwartz's human value structure (Schwartz, 1994). The respondents mentioned the lack of values like stability and security. The lack of stability in the analysed interviews included short residential status, young, age and parental responsibilities. "I don't know, I have not thought about it yet. I am too young for this, I'm only 20 years old. Maybe in a few years I will have my own company, however I did not think about it yet" (Respondent no. 32). On the other hand, the lack of security first and foremost included the legal status of the immigrant and the fact that a significant group of respondents was working illegally at the time of the interview. Values as motives for not setting up a business have been expressed by migrants generally willing to set up a business and those who have not thought about it yet. Finally, the third group of motives was summarised under a "migrant's mindset" label, which includes the perception of one's personality. "I have never thought about [becoming self-employed], because I am not a person who could do

such a thing. I am not a person who would handle all of it" (Respondent no. 27). Considering Holland's theory of career choices, one must fit or, at least, be close to the enterprising personality type (Holland, 1997). Furthermore, the mindset incudes the perception of possible benefits or their lack and the perception of need to set up a business: "for now, it is not necessary, but it may become helpful in the future" (Respondent no. 29).
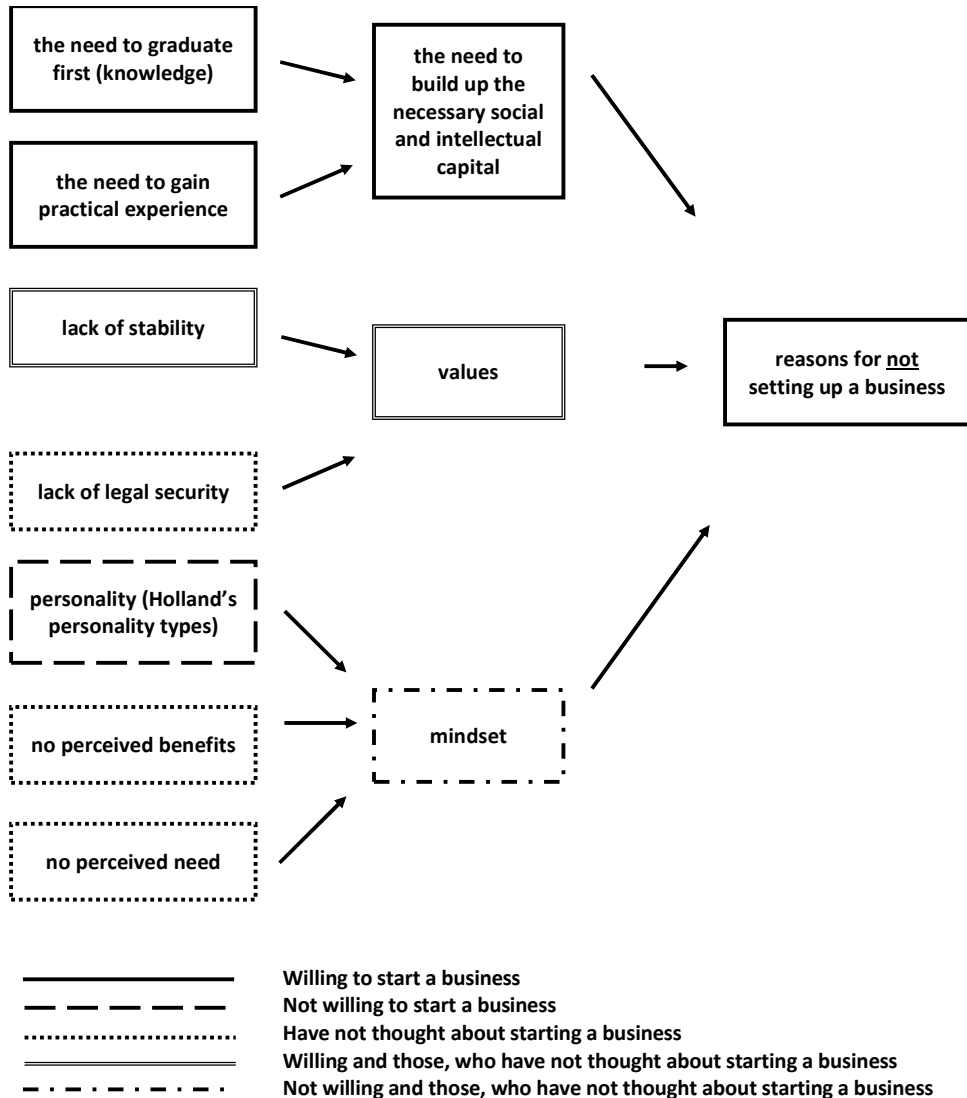
Figure 2. Motives for not setting up a business in Poland
Source: own elaboration.

    The third selected element are the perceived barriers for setting up a business, presented in Figure 3. The perception of barriers was also analysed including different degrees of intention to set up own business.
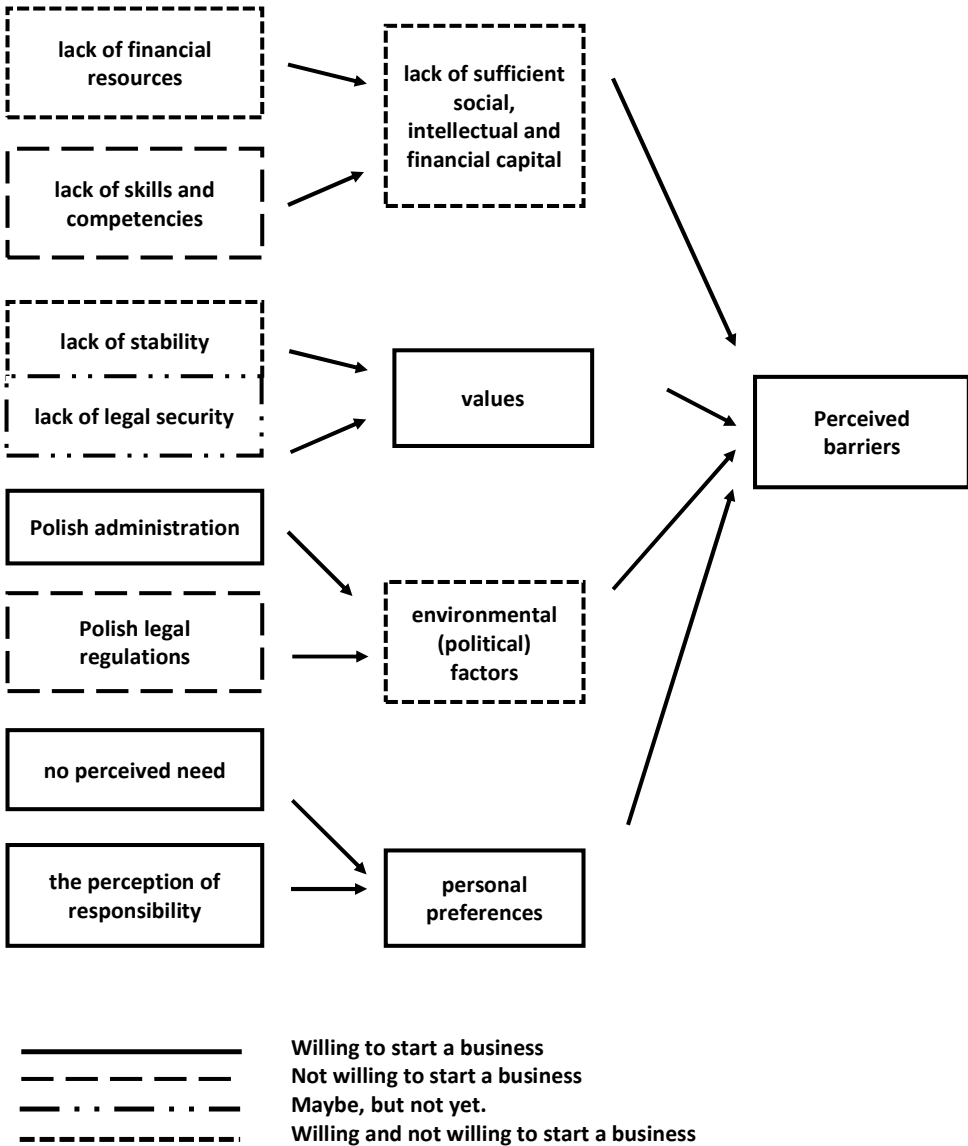
Figure 3. Perceived barriers for setting up a business in Poland
Source: own elaboration.

Although some of the categories overlap with the presented reasons for not setting up a business, it seems necessary to present them also in the category of barriers – as some respondents pointed to them – without wholesale dismissing the idea of setting up a business now or in the foreseeable future.

The first group of barriers can be captured under the label of insufficient social, intellectual, and financial capital. This group of barriers was mentioned regardless of the

intent to set up a business. The respondents highlighted the lack of necessary skills and competencies, especially linguistic. As most of the respondents would consider opening a business in services, as shown by Rueda-Armengot and Peris-Ortiz (2012), the financial barrier was also mentioned very often: "You need money if you want to have your own company" (Respondent no. 33). The second group of barriers are connected to values and, once again, includes the lack of stability and legal security. The lack of stability and security partially results from the financial situation of migrants, but also from the legal status of immigrants: "I could [start my own business], but as I am a foreigner I would have to pay high taxes, which in the beginning would be difficult" (Respondent no. 37). The lack of stability is also connected to the level of responsibility of an entrepreneur and the fact that the success of a company often depends on external factors: "I have always wanted to start my own business but this is a big responsibility. Whether the business will be successful depends not only on how much time you put into it, but it also depends on external factors. I've always wanted to have a hairdresser's salon, because I enjoy doing haircuts. Once, when I told my mother I wanted to become a hairdresser, she told me to study something normal, so I became a nurse" (Respondent no. 17). The third group of barriers is connected to environmental factors and includes complicated administration and legal regulation. These barriers have also been mentioned regardless of the intention to become entrepreneurial. However, as stated by Respondent no. 15, one can overcome these barriers. Finally, the fourth group of barriers includes personal preferences: the perceived need (or its lack) of becoming an entrepreneur and the perception of responsibility, as mentioned by Respondent no. 17. These barriers were mentioned by respondents generally willing to become entrepreneurial.

The conducted interviews showed that only one respondent had his own business. However, most of the respondents did not think about opening up their own businesses prior to the interview. There may be several reasons for this, considering the different answers given by the respondents, but also the previously conducted research. Firstly, considering the influence of personal-level variables, scholars established that entrepreneurship education has a greater effect on women's self-efficacy and, through this, on intentions (Shapero & Sokol, 1982; Wilson et *al.*, 2007). Secondly, as stated by Leicht *et al.* (2012), enterprises are started by migrants who have lived in the new country for more than 15 years. With small exceptions, most of the migrants interviewed for the purpose of this study have been in Poland for a much shorter time. Most arrived one year before the interview. The respondents directly stated they have not been in Poland long enough to think about becoming self-employed. The reason for a low interest in entrepreneurship among the migrants may be the consequence of the fact that, in general, people who decide to become independent are those with a stable status in Poland and with permanent residency rights (Andrejuk 2017b). Thus, the interviewed respondents do not have the necessary knowledge about administrative and legal aspects of starting own business. Moreover, in connection to the legal status of the migrants, we should again indicate that a major part of the respondents worked without the necessary legal permission. Another reason for the low willingness among immigrants to start their own business might be limited financial resources, which was also confirmed by the respondents in the study. Limited access to bank loans was identified as a barrier by Leicht *et al.* (2009).

Considering the findings by Andrejuk (2017b), the fact that Ukrainians are the largest immigrant group in Poland, and that in the last years the influx of immigrants from the Ukraine has grown dynamically, the phenomenon of migrant entrepreneurship may become more prevalent in Poland. Furthermore, as stated by Caparrós Ruiz (2010), the growth of the human, financial, and social capital motivates entrepreneurship; especially human capital highly influences the competitive advantage of a company, but also that of a region (Zygmunt, 2020). This may be a positive indicator for future entrepreneurial activities. Some of the respondents started studying in Poland, which will raise their intellectual and social capital.

Research conducted in the Opole region completes the existing knowledge and research gap within migrant entrepreneurship research, especially in regard to the intention to become entrepreneurial. The innovative approach to the subject relies, among other things, on the fact that researchers in Poland mainly studied migrants who already have own businesses. These studies were conducted among the Vietnamese community in Warsaw and the surrounding area (Andrejuk, 2017a; Brzozowska, 2015), the Ukrainian community (Andrejuk, 2017a), and the Krakow-based Ukrainian entrepreneurs (Brzozowski 2019). However, these were conducted in large cities that provide greater opportunities for the development of the company. Research conducted in the Opolskie Voivodeship differs from previous analyses, as it included respondents who work and live not only in the region's capital but also in smaller cities and suburbs. Moreover, this region is a rather specific area of research because, firstly, it is a region that is aging and depopulating (Heffner, Klemens, & Solga, 2019; Rokita-Poskart, 2016). Secondly, it is also a peripheral voivodship, located between two large agglomerations – Wroclaw and Katowice – with an average entrepreneurship rate (Zakrzewski & Skowrońska, 2019). Furthermore, research shows that due to economic growth, there are differences between Polish regions in entrepreneurial activities (Zygmunt, 2018).

CONCLUSIONS

The paper contributes to the research on the entrepreneurial intentions of migrants in a specific under-investigated segment of the migrant population working in elderly care. The research problem was how the intention to become entrepreneurial influences the perceived barriers and hindrances of becoming self-employed. Firstly, research-related results showed that the vast majority reject the idea of starting their own business or never even thought about such a possibility. Respondents indicated financial barriers, legal status, language skills, and parental status as the main barriers for entrepreneurship among migrants. Nevertheless, as indicated by the one actually self-employed respondent, one can overcome the legal and administrative barriers. Secondly, as to the influence of the degree of intent to become self-employed, we observed such tendencies as the fact that the lack of sufficient social and intellectual capital as a motive for not setting up a business was indicated generally by those willing to become entrepreneurial, while the mindset characterised those who were unwilling or have not thought about becoming entrepreneurial. However, these tendencies require further testing. Research-related results also present some positives. A significant group of respondents stated that they would be willing to become self-employed, even if not in the near future. Furthermore, those open to the idea of self-employment do not necessarily plan to remain in the care sector, as for

some, the current employment in the care sector is of a temporary nature. However, this may allow hope for an increase in migrant entrepreneurship in the coming years also in other sectors, not necessarily in the care sector, such as construction (Hawrysz, 2017) or retail (Kozel *et al.*, 2017). The respondents open to the idea of entrepreneurship perceived their own business as a form of self-development and self-realisation, a way to help compatriots, or a possibility of filling a market gap.

Although the conducted research was of exploratory nature, the results have important theoretical implications, as it reveals the moderate willingness to start one's own business in Poland among migrants – while not excluding it completely – thus giving an insight into entrepreneurial tendencies of migrants. The interviewed migrants named a set of barriers which hindered or discouraged them from becoming self-employed, including the financial barrier, the lack of sufficient language skills, or their current legal status. The conducted research has important practical implications. As already mentioned, research has shown that migrant entrepreneurship may be a motor for economic development (Nel & Abdullah, 2015). Thus, the results are of great importance for decision-makers. A positive conclusion of the conducted study may be that a significant group of immigrants would consider starting their own businesses in Poland. However, in order for this to happen, the barriers perceived by the immigrants must be addressed and removed. The possible solutions would be firstly to further simplify the legal and administrative procedures the immigrants need to face or to develop a program for raising awareness and competence in contacting and handling Polish administration. Secondly, business environment units could organise special actions targeting immigrants and popularising the idea of entrepreneurship. Ponting towards sociopolitical implications, it may be time in Poland to start thinking about migrants as potential entrepreneurs and not only cheap labour force. Moreover, a significant group of immigrants who have not thought about setting up a business suggests that information and incentives for setting up businesses should be increased. Research shows that there is a large group of immigrants who can be acquired or lost in the context of entrepreneurial potential. Nonetheless, we should note that becoming self-employed is connected to financial and non-financial costs a migrant must carry, so it may not be the optimal solution for every person.

There are three groups of important factors for becoming self-employed: migrants' economic capital (e.g. having the capital to invest, having previous entrepreneurial experiences from the home country), cultural capital (e.g. bilingualism, knowledge of the host country's market), and social capital (e.g. having a network of contacts, friends, and family in the country of immigration) (Zapata-Barrero & Rezaei, 2019). Immigration-friendly policies and infrastructures such as governmental support networks are also important (Osaghae & Cooney, 2019).

Several possible future research areas can be indicated as a result of the above research study. In the Polish context, it seems very important to conduct a comparative analysis between immigrants from EU countries and non-EU countries. Due to legal differences, especially regarding the administrative and legal procedures connected with setting up own business, such comparison could show important differences. Furthermore, due to the fact that the study was conducted only on immigrants from the care sector, future research should verify the information and conduct a similar study among representatives of other sectors. It may be the case that the sector the studied migrants are employed in

is influences their entrepreneurial tendencies. The above study has some limitations. Due to its qualitative nature, the presented results cannot be treated as representative. Thus, one of the possible future analyses would be to conduct quantitative, representative research and investigate whether the length of stay influences the entrepreneurial tendencies or whether professional experience impacts the willingness to set up own business. Moreover, the question remains whether plans regarding the future stay in Poland affects the willingness to start own business. This questions requires a quantitative approach, which may nevertheless be difficult due to the nature of the research sample and difficulties that may arise when trying to determine the population and reach individual respondents. The results of the above study indicate some tendencies about those relations. Although we may say it only with great caution, the migrants that came to Poland in the last months or within the last few years were not that eager to start own businesses; with the exception of respondents with the student status. Regarding the potential influence of the question of migrants' future plans and their effect on entrepreneurial tendencies, most of the interviewed immigrants – irrespective of their willingness to start own businesses – declared that they would like to stay in Poland and the Opole Voivodeship. Thus, it does not seem of relevance to the issue in question. However, such statements require a quantitative approach and hypothesis testing. Although the results are not representative, due to their exploratory nature they are an important starting point for future analysis and – already at this point – include important practical implications. The results of this exploratory research should be treated with attention, as the influx of immigrants to Poland is expected to increase and problems signalled in this study will only gain in importance.

REFERENCES

Achidi Ndofor, H., & Priem, R. L. (2011). Immigrant entrepreneurs, the ethnic enclave strategy, and venture performance. *Journal of Management, 37*(3), 790-818.

Aliaga-Isla, R., & Rialp, A. (2013). Systematic review of immigrant entrepreneurship literature: previous findings and ways forward. *Entrepreneurship and Regional Development, 25*(9-10). 819-844. https://doi.org/10.1080/08985626.2013.845694

Andrejuk, K. (2017a). *Przedsiębiorcy ukraińscy w Polsce Struktura i sprawstwo w procesie osiedlenia*. Warszawa: IFiS PAN.

Andrejuk, K. (2017b). Self-employed migrants from EU Member States in Poland: differentiated professional trajectories and explanations of entrepreneurial success. *Journal of Ethnic and Migration Studies, 43*(4), 560-577. https://doi.org/10.1080/1369183x.2016.1249050

Baker, M., & Benjamin, D. (1994). The performance of immigrants in the Canadian labor-market. *Journal of Labor Economics, 12*(3), 369-405. https://doi.org/0.1086/298349

Bird, B. (2015). Entrepreneurial intentions research: A review and outlook. *International Review of Entrepreneurship*, *13*(3), 143-168.

Blume, K., Ejrnæs, M., Nielsen, H.S., & Würtz, A. (2009). Labor market transitions of immigrants with emphasis on marginalization and self-employment. *Journal of Population Economics, 22*(4), 881-908. https://doi.org/10.1007/s00148-008-0191-x

Bolzani, D., & Boari, C. (2018). Evaluations of export feasibility by immigrant and non-immigrant entrepreneurs in new technology-based firms. *Journal of International Entrepreneurship, 16*(2), 176-209.

Borjas, G.J. (1991). *National origin and the skills of immigrants in the postwar period*. Retrieved from https://ideas.repec.org/h/nbr/nberch/6904.html on September 15, 2019.

Borjas, G.J. (1994). The economics of immigration. *Journal of Economic Literature, 32*(4), 1667-1717.

Bruquetas-Callejo, M. (2020). Long-Term Care Crisis in The Netherlands and Migration of Live-in Care Workers: Transnational Trajectories, Coping Strategies and Motivation Mixes. *International Migration*, 58(1), 105-118. https://doi.org/10.1111/imig.12628

Brzozowska, A. (2015). *Przedsiębiorczość imigrantów wietnamskich w Polsce* (unpublished PHD thesis). Warsaw. Retrieved from http://depotuw.ceon.pl/handle/item/1206 on October 8, 2019.

Brzozowski, J. (2008). Brain drain or brain gain? The new economics of brain drain reconsidered. *The New Economics of Brain Drain Reconsidered (October 22, 2008)*). https://doi.org/10.2139/ssrn.1288043

Brzozowski, J. (2017). Immigrant Entrepreneurship and Economic Adaptation: A Critical Analysis. *Entrepreneurial Business and Economics Review, 5*(2), 159-176. https://doi.org/10.15678/eber.2017.050209

Brzozowski, J. (2019). *Przedsiębiorczość imigrantów w Krakowie – stan obecny i perspektywy rozwoju*. UEK, Kraków: Obserwatorium Wielokulturowości i Migracji.

Brzozowski, J., Cucculelli, M., & Surdej, A. (2017). The determinants of transnational entrepreneurship and transnational ties' dynamics among immigrant entrepreneurs in ICT sector in Italy. *International Migration, 55*(3), 105-125.

Brzozowski, J., & Pędziwiatr, K. (2014). Analiza procesu integracji imigrantów w Małopolsce. In: E. Pindel (Ed.), *Imigranci w Małopolsce. Między integracją, asymilacją, separacją, marginalizacją* (pp.117-240). Krakow: Akademia Ignatianum.

Caparrós Ruiz, A. (2010). Self-employment or paid employment as the first job: Evidence from Spain by nationality. *International Journal of Social Economics, 37*(12), 951-969.

Chaganti, R., & Greene, P.G. (2002). Who are ethnic entrepreneurs? A study of entrepreneursapos; ethnic involvement and business characteristics. *Journal of Small Business Management, 40*(2), 126-143.

Chammartin, G. (2008). *Migration, Gender Equality and Development* (Paper presented at the International Conference on Gender, Migration, Ration and Development: Seizing Opportunities, Upholding Rights). Manila, Phillipines. Retrieved from academia.edu on September 10,2019.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage.

Chiswick, B.R., & Miller, P.W. (2009). The international transferability of immigrants' human capital. *Economics of Education Review, 28*(2), 162-169.

Chrysostome, E. (2010). The success factors of necessity immigrant entrepreneurs: In search of a model. *Thunderbird International Business Review, 52*(2), 137-152.

Constant, A., & Zimmermann, K. F. (2006). The making of entrepreneurs in Germany: Are native men and immigrants alike? *Small Business Economics, 26*(3), 279-300.

Creswell, J.W., & Miller, D.L. (2000). Determining validity in qualitative inquiry. *Theory into Practice, 39*(3), 124-130. https://doi.org/10.1207/s15430421tip3903_2

Curci, R., & Mackoy, R. (2010). Immigrant business enterprises: A classification framework conceptualization and test. *Thunderbird International Business Review, 52*(2), 107-121.

Czerniejewska, I. (2014). „*Migranci aktywni zawodowo*" czy „*zagraniczni przedsiębiorcy*"? *Raport z badań*. Instytut Spraw Publicznych.

Dang, C.-M., & Harima, A. (2020). Dual Embeddedness and Entrepreneurial Activities of Second-Generation Ethnic Entrepreneurs: Multiple Case Studies with Vietnamese Entrepreneurs in Germany. *Journal of Entrepreneurship and Innovation in Emerging Economies*, *6*(1), 84-113. https://doi.org/10.1177/2393957519887554

Elo, M. (2016). Typology of diaspora entrepreneurship: case studies in Uzbekistan. *Journal of International Entrepreneurship, 14*(1), 121-155.

Evans, M. D.R. (1989). Immigrant Entrepreneurship – Effects of Ethnic Market-Size and Isolated Labor Pool. *American Sociological Review, 54*(6), 950-962. https://doi.org/10.2307/2095717

Fairlie, R.W. (2008). *Estimating the contribution of immigrant business owners to the US economy*. SBA Office of Advocacy. Retrieved from https://people.ucsc.edu on September 10, 2019.

Fairlie, R.W., & Lofstrom, M. (2015). Immigration and entrepreneurship. In B.R. Chiswick & P.W. Miller (Eds.), *Handbook of the economics of international migration* (pp. 877-911). Elsevier.

Fraser, S. (2006). *Finance for Small and Medium-Sized Enterprises: Comparisons of Ethnic Minority and White Owned Businesses* (Research Report prepared for the Department for Business Enterprise and Regulatory Reform). Retrieved from http://www.bis.gov.uk/files/file39925.pdf on September 9, 2019.

Glinka, B., & Brzozowska, A. (2015). Immigrant Entrepreneurs: in Search of Identity. *Entrepreneurial Business and Economics Review, 3*(3), 51-76. https://doi.org/10.15678/eber.2015.030304

Glover, C., & Sim, L. (2002). Entrepreneur Immigrant Survey: A Mail Survey of Entrepreneur Immigrants in Vancouver, Canada, Post-Terms and Conditions Removal. *Strategic Research and Review, CIC, and International Consortium for Venture Expertise.* University of Victoria, Ottawa.

Goel, K., & Penman, J. (2015). Employment experiences of immigrant workers in aged care in regional South Australia. *Rural and Remote Health, 15*(1), 14.

Gorny, A., & Napierała, J. (2016). Comparing the effectiveness of respondent-driven sampling and quota sampling in migration research. *International Journal of Social Research Methodology, 19*(6), 645-661.

Hall, K., Needham, C., & Allen, K. (2019). Micro entrepreneurship in the care sector: motives, values and practices. *Voluntary Sector Review, 10*(3), 311-328.

Hanson, G.H. (2006). Illegal migration from Mexico to the United States. *Journal of Economic Literature, 44*(4), 869-924.

Hawrysz, L. (2017). Environmental aspects of csr reporting in Polish construction sector enterprices listed on the warsaw stock exchange*. Proceedings of the International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM*, 281-286.

Heckathorn, D.D. (1997). Respondent-driven sampling: A new approach to the study of hidden populations. *Social Problems, 44*(2), 174-199. https://doi.org/10.1525/sp.1997.44.2.03x0221m

Heffner, K., Klemens, B., & Solga, B. (2019). Challenges of Regional Development in the Context of Population Ageing. Analysis Based on the Example of Opolskie Voivodeship. *Sustainability, 11*(19), 5207.

Holland, J.L. (1997). *Making vocational choices: A theory of vocational personalities and work environments*. Psychological Assessment Resources.

Honig, B. (2018). Exploring the intersection of transnational, ethnic, and migration entrepreneurship. *Journal of Ethnic and Migration Studies*, 1-17.

Hughes, K.D. (2003). Pushed or pulled? Women's entry into self-employment and small business ownership. *Gender, Work & Organization, 10*(4), 433-454.

Hugo, G. (2009). Care Worker Migration, Australia and Development. *Population Space and Place, 15*(2), 189-203. https://doi.org/10.1002/psp.534

Ilhan-Nas, T., Sahin, K., & Cilingir, Z. (2011). International ethnic entrepreneurship: Antecedents, outcomes and environmental context. *International Business Review, 20*(6), 614-626.

Kloosterman, R., & Rath, J. (2003). *Immigrant entrepreneurs: Venturing abroad in the age of globalization*. Oxford/New York: Berg/University of New York Press.

Kloosterman, R.C. (2010). Matching opportunities with resources: A framework for analysing (migrant) entrepreneurship from a mixed embeddedness perspective. *Entrepreneurship and Regional Development, 22*(1), 25-45. https://doi.org/10.1080/08985620903220488

Kozel, R., Hawrysz, L., Vilamová, Š., & Hys, K. (2017). Mystery e-mail/website customer service. A case study of retail companies. *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration, 24*(40), 95-107.

Krueger, N.F. (2017). Entrepreneurial intentions are dead: Long live entrepreneurial intentions. In *Revisiting the entrepreneurial mind* (pp. 13-34). Springer.

Le, A.T. (2000). The determinants of immigrant self-employment in Australia. *International Migration Review, 34*(1), 183-214. https://doi.org/10.2307/2676017

Leicht, R., Di Bella, J., Langhauser, M., Leiß, M., Philipp, R., Werner, L., Volkert M., Berwing, S., & Tur Castelló, J. (2012). Schöpferische Kraft der Vielfalt: Zugewanderte und ihre Unternehmen. Mannheim (Report). Retrieved from https://madoc.bib.uni-mannheim.de on September 8, 2019.

Leicht, R., & Welter, F. (2009). Selbständig integriert?: Studie zum Gründungsverhalten von Frauen mit Zuwanderungsgeschichte in Nordrhein-Westfalen. In: Ministerium für Generationen, Familie, Frauen und Integration des Landes Nordrhein-Westfalen, Mannheim. Retrieved from http://www.institut-fuer-mittelstandsforschung.de on 7 September, 2019.

Light, I., & Gold, S. (2000). *Ethnic Economies*. Emerald Publishing.

Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: citation, thematic analyses, and research agenda. I*nternational Entrepreneurship and Management Journal*, *11*(4), 907-933.

Lofstrom, M. (2014). Immigrants and entrepreneurship. *IZA World of Labor*. Retrieved from wol.iza.org on 6 September 2019.

Lutz, H., & Palenga-Möllenbeck, E. (2011). Care, gender and migration: Towards a theory of transnational domestic work migration in Europe. *Journal of Contemporary European Studies, 19*(3), 349-364.

Martin, S., Lowell, B.L., Gozdziak, E.M., Bump, M., & Breeding, M.E. (2009). The role of migrant care workers in aging societies (*Report on Research Findings in the United States*). Institute for the Study of International Migration, Walsh School of Foreign Service, Georgetown University, Washington DC.

Nel, P., & Abdullah, M. (2015). An exploratory study of Immigrant entrepreneurs in Malaysia regarding their business success and prospects in the small retail business sector. *Asia Pacific Journal of Business and Management, 6*(1/2), 18-31.

Nestorowicz, J. (2013). Do Networks Do the Works? Towards Recognising (and Solving) a Migration-Entrepreneurship Conundrum. *Central Eastern European Migration Review, 2*(2).

Neville, F., Orser, B., Riding, A., & Jung, O. (2014). Do young firms owned by recent immigrants outperform other young firms? *Journal of Business Venturing, 29*(1), 55-71. https://doi.org/10.1016/j.jbusvent.2012.10.005

Osaghae, O.-G., & Cooney, T.M. (2019). Exploring the relationship between immigrant enclave theory and transnational diaspora entrepreneurial opportunity formation. *Journal of Ethnic and Migration Studies*, 1-20.

Pelzelmayer, K. (2016). Places of difference: narratives of heart-felt warmth, ethnicisation, and female care-migrants in Swiss live-in care. *Gender Place and Culture, 23*(12), 1701-1712. https://doi.org/10.1080/0966369x.2016.1249351

Pires, A.J.G. (2015). Brain drain and brain waste. *Journal of Economic Development, 40*(1), 1-34.

Rahman, M.M. (2018). Beyond labour migration: The making of migrant enterprises in Saudi Arabia. *International Sociology, 33*(1), 86-106. https://doi.org/10.1177/0268580917745770

Raijman, R., & Tienda, M. (2000). Immigrants' pathways to business ownership: A comparative ethnic perspective. *International Migration Review, 34*(3), 682-706. https://doi.org/10.2307/2675941

Ram, M., & Smallbone, D. (2003). Policies to support ethnic minority enterprise: the English experience. *Entrepreneurship and Regional Development, 15*(2), 151-166. https://doi.org/10.1080/0898562032000075177

Rokita-Poskart, D. (2016). Educational migration and the labour market. *Czech Journal of Social Sciences Business and Economics, 5*(1), 6-18.

Rueda-Armengot, C., & Peris-Ortiz, M. (2012). The emigrant entrepreneur: a theoretical framework and empirical approximation. *International Entrepreneurship and Management Journal, 8*(1), 99-118. https://doi.org/10.1007/s11365-010-0164-x

Rugolotto, S., Larotonda, A., & van der Geest, S. (2017). How migrants keep Italian families Italian: badanti and the private care of older people. *International Journal of Migration Health and Social Care, 13*(2), 185-197. https://doi.org/10.1108/ijmhsc-08-2015-0027

Saxenian, A. (2002). Silicon valley's new immigrant high-growth entrepreneurs. *Economic Development Quarterly, 16*(1), 20-31. https://doi.org/10.1177/0891242402016001003

Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values?. *Journal of Social Issues, 50*(4), 19-45.

Schwiter, K., Strauss, K., & England, K. (2018). At home with the boss: Migrant live-in caregivers, social reproduction and constrained agency in the UK, Canada, Austria and Switzerland. *Transactions of the Institute of British Geographers, 43*(3), 462-476. https://doi.org/10.1111/tran.12235

Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. *Encyclopedia of Entrepreneurship*, 72-90.

Shinnar, R.S., & Young, C.A. (2008). Hispanic immigrant entrepreneurs in the las vegas metropolitan area: Motivations for entry into and outcomes of self-employment. *Journal of Small Business Management, 46*(2), 242-262. https://doi.org/10.1111/j.1540-627X.2008.00242.x

Solga, B., & Kubiciel-Lodzińska, S. (2017). Poland: immigration instead of emigration. Transformation of the mobility model. In K. Soliman (Ed.), *Vision 2020: Sustainable Economic development, Innovation Management, and Global Growth* (pp. 797-810). Madrid: International Business Information Management Association.

Strauss, A., & Corbin, J. (1994). Grounded theory methodology. *Handbook of Qualitative Research, 17*, 273-285.

Strauss, A., & Corbin, J. M. (1997). *Grounded theory in practice*. Sage.

Teixeira, C., Lo, L., & Truelove, M. (2007). Immigrant entrepreneurship, institutional discrimination, and implications for public policy: a case study in Toronto. *Environment and Planning C-Government and Policy, 25*(2), 176-193. https://doi.org/10.1068/c18r

van Delft, H., Gorter, C., & Nijkamp, P. (2000). In search of ethnic entrepreneurship opportunities in the city: a comparative policy study. *Environment and Planning C-Government and Policy, 18*(4), 429-451. https://doi.org/ 10.1068/c9873

Van Hooren, F. (2010). When families need immigrants: The exceptional position of migrant domestic workers and care assistants in Italian immigration policy. *Bulletin of Italian Politics, 2*(2), 21-38.

Volery, T. (2007). Ethnic entrepreneurship: a theoretical framework. *Handbook of Research on Ethnic Minority Entrepreneurship, 1*, 30-41.

Waldinger, R.D., Aldrich, H., & Ward, R. (1990). *Ethnic entrepreneurs: Immigrant business in industrial societies* (vol. 1). Sage Publications.

Walsh, K., & O'Shea, E. (2010). The role of migrant care workers in ageing societies: report on research findings in the United Kingdom, Ireland, Canada and the United States. *International Organization for Migration – IOM Migration Reserach Series*, No. 41. Retrieved from https://aran.library.nuigalway.ie/handle/10379/3217 on October 25, 2019.

Walton-Roberts, M., & Hiebert, D. (1997). Immigration, entrepreneurship, and the family: Indo-Canadian enterprise in the construction industry of Greater Vancouver. *Canadian Journal of Regional Science, 20*(1), 119-140.

Wilpert, C. (2003). Germany: from workers to entrepreneurs. *Immigrant Entrepreneur, Venturing Abroad in the Age of Globalisation,* 233-260. Berg, Oxford.

Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, *31*(3), 387-406.

Yeates, N. (2010). The globalization of nurse migration: Policy issues and responses. *International Labour Review, 149*(4), 423-440. https://doi.org/10.1111/j.1564-913X.2010.00096.x

Zakrzewski, R., & Skowrońska, A. (2019). *Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce.* PARP, Warszawa. Retrieved from https://www.parp.gov.pl/storage/publications/pdf/2019_07_ROSS.pdf on September 28, 2019.

Zapata-Barrero, R., & Rezaei, S. (2019). Diaspora governance and transnational entrepreneurship: the rise of an emerging social global pattern in migration studies. *Journal of Ethnic and Migration Studies*. https://doi.org/=10.1080/1369183X.2018.1559990

Zygmunt, A. (2020). Do Human Resources and the Research System Affect Firms' Innovation Activities? Results from Poland and the Czech Republic. *Sustainability 12*(6), 1-14. https://doi.org/10.3390/su12062519

Zygmunt, J. (2018). Does level of economic growth matter in spatial diversity in entrepreneurial activity in a transition economy? A case of Poland. *Proceedings of the 32nd International Business Information Management Association Conference* (pp. 6999-7006). IBIMA.

Authors

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

Jolanta Maj

Assistant professor at the Opole University of Technology, Faculty of Economics and Management. She holds a Ph.D. degree in political science. Her research interests are issues of diversity management and corporate social responsibility.
Correspondence to: Jolanta Maj, PhD, Opole University of Technology, Faculty of Economics and Management, ul. Luboszycka 7, 45-036 Opole, Poland e-mail: j.maj@po.edu.pl
ORCID http://orcid.org/0000-0001-5542-0713

Sabina Kubiciel-Lodzińska

Assistant professor at the Opole University of Technology, Faculty of Economics and Management. She holds a Ph.D. degree in economic science. Her research interests are issues of migration.
Correspondence to: Sabina Kubiciel-Lodzińska, PhD, Opole University of Technology, Faculty of Economics and Management, ul. Luboszycka 7, 45-036 Opole, Poland e-mail: s.kubiciel@po.edu.pl
ORCID http://orcid.org/0000-0002-5465-6967

The influence of innovation on international new ventures' exporting in Central and Eastern Europe and Central Asia countries

Krystian Bigos, Adam Michalik

A B S T R A C T
Objective: The main objective of the article is to confirm the relationship between the innovativeness of new ventures and exporting. Based on the Oslo Manual, which indicates four main types of innovation, we analysed the innovation processes in firms and the impact of particular categories of innovation on export odds.
Research Design & Methods: Apart from the literature review and its criticism, the article is based on data collected by the BEEPS, conducted among enterprises located in post-communist countries in Eastern Europe and Central Asia. After an appropriate selection procedure, 906 ventures were finally picked. For this purpose, five logit models were created to determine the chances for export, depending on the type of innovation implemented in each enterprise.
Findings: The likelihood of export in ventures is higher when it implements process and organisational innovations. Research results show that the implementation of organisational innovations by ventures increases the likelihood of export more than twice, while in the case of process innovations – about one and a half times.
Implications & Recommendations: he importance of process and organisational innovations in ventures seems to play an important role in explaining the odds of their export. We recommend that future studies focus on explaining the lack of impact of product innovations and the negative relation of marketing innovations on the export propensity of ventures.
Contribution & Value Added: The article enriches the ongoing scientific discourse on the role of innovation in determining the export odds of ventures.

Article type:	research article
Keywords:	Innovation; export; international new ventures; international entrepreneurship; internationalisation
JEL codes:	F23, L26, O31

Received: 3 November 2019 | Revised: 13 July 2020 | Accepted: 13 July 2020

INTRODUCTION

The globalisation of the business world leads to the shrinking of local markets. The development of a company based only on domestic recipients is increasingly impossible, which forces economic entities to apply more or less advanced forms of internationalisation. The Uppsala model, which assumes the gradual foreign expansion of enterprises (Johanson & Vahlne, 1977), thus reflecting the business reality of the 1970s, increasingly often stands in contradiction with the activity of companies from the beginning thinking about the global market (McDougall, 1989; Knight & Cavusgil, 2005; Maciejewski & Wach, 2019). Often, the key success factor of these undertakings was the innovativeness of applied business solutions. In the literature, international new ventures (INVs) and high technology start-ups (known as international start-ups) have begun to gain popularity. There appeared increased attention on international new ventures, including export-oriented new ventures (Knight & Kavusgil, 1996; Oviatt & McDougall, 1994). These entities seek sources of competitive advantage in the international environment (McDougall, Shane, & Oviatt, 1994). International new ventures achieve market success thanks to the high degree of innovation in their products and business models, along with the relatively high degree of internationalisation since the beginning of their existence.

Research conducted previously by others, although they indicate the existence of dependencies between the innovation and export of companies, due to the differences in the selection of the sample in terms of the country of origin, the size and type of activity cannot be reliable for international new ventures and should be continued. Therefore, we decided to choose as the subject of our research the dependence between particular types of innovation and export opportunities of INVs.

The development of the process of early internationalisation of small and medium-sized enterprises – called international new ventures or born globals – increased the number of studies on this phenomenon, but little is known about the stimulating factors and success factors of new international ventures from transition economies in Central and Eastern Europe (Vissak, 2006; Ciszewska-Mlinaric *et al.*, 2016; Sekliuckiene, 2017; Sekliuckiene, Jarosinski, & Kozma, 2019).

The main objective of the article is to confirm the relationship between the innovativeness of new ventures and exporting. The article consists of two parts: theoretical and empirical. In the first part, we conduct a critical analysis of literature, while in the empirical part we construe five models of logistic regression.

LITERATURE REVIEW

Oviatt and McDougall (1994) define International New Ventures (INV) as "a business organisation that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of output in multiple countries." They used two dimensions: applying the coordination of value chain activities (few vs many) and the number of countries involved (few vs many) to identify four types of INVs: export/important start-ups, multinational trader, geographically focused start-ups, and global start-ups.

INVs are characterised by rapid expansion into foreign markets but without a global presence (Sikora & Baranowska-Prokop, 2018). Crick (2009) indicates that the terms "born

global" and "international new venture" are used interchangeably to characterise companies that undergo rapid internationalisation "usually, but not exclusively, within three years of their start-up."

Schumpeter (1934) introduced the concept of innovation into economic literature, considering innovations to be solutions based on introducing new or improving existing solutions in terms of product, manufacturing methods, forms of trade, raw materials, and semi-finished products or the organisation of processes. According to Kotler (1997), innovation is an idea, a product, or an element of technology implemented and presented to customers who describe it as new. Lumpkin and Dess (2001), among others, point to innovation as one of the key elements of entrepreneurship at the company level.

Results of various empirical research show that the relationship between the firm's internationalisation process and the level of innovativeness of its solutions is twofold (Lachenmaier & Wößmann, 2006; Damijan, Kostevc, & Polanec, 2010; Wach, 2016; Moreno-Menéndez, 2018). In the first case, scholars analyse the impact of internationalisation on the growth of innovativeness of learning by exporting firms (*e.g.* Boso, Cadogan, & Story, 2013; Nekethna & Gunasekar, 2017; Aghion, Bergeaud, Lequien, & Melitz, 2018). The second case gathers articles that examine the reverse relationship that shows the impact of innovation on the degree of internationalisation, which we will also discuss in this article (Chen, Chen, Wang, & Xiang, 2018; Fassio, 2018).

Moreover, previous studies are not fully comparable due to differences in the size and market position of surveyed companies, their country of origin, or the area of business activity (van Beveren & Vandenbussche, 2010). However, research conducted in particular markets unambiguously indicates the positive relationship between innovation and export development of individual enterprises. Cieślik, Qu, and Qu (2018) demonstrate a positive correlation between product and process innovations and chances for export success of Chinese companies. Similar conclusions are drawn by Cieślik and Michałek (2017a, 2017b, 2018), who cover, among other states, ECA countries and Visegrad countries; Bertarelli and Lodi (2018) base their research on companies from seven EU markets belonging in the past to the block of communist countries; while Tekin and Hancioğlu (2018) analyse companies from 17 developing countries. The pro-export significance of innovation is also demonstrated in the research conducted in the United Kingdom (Wakelin, 1998; Ganotakis & Love, 2011), Slovenia (Damijan, Kostevc, & Polanec, 2010), Portugal (Rua, 2018), Italy (Brancati, Marrocu, Romagnoli, & Usai, 2018), Germany (Lachenmaier & Wößmann, 2006; Bernardini Papalia, Bertarelli, & Mancinelli, 2018), Belgium (van Beveren & Vandenbussche, 2010), and Australia (Palangkaraya, 2012).

Using the example of Chilean companies, Blyde, Iberti, and Mussini (2018) indicate that the impact of innovation on exports is heterogeneous. The goods and markets in which innovative exporters outperform non-innovative exporters are those in which innovation can lead to substantial differences in terms of quality. Innovative firms do not have an edge in exporting goods and in targeting markets that do not reward innovation. Innovative firms do not outperform non-innovative firms when exporting goods and penetrating markets in which differentiation in terms of quality is impossible or irrelevant (Blyde, Iberti, & Mussini, 2018).

The current research unambiguously indicates innovation as one of the determinants of a firm's success on export markets, mainly by analysing the importance of technological

innovations, *i.e.* product and process innovations (Cavusgil & Zhou, 1994; Wakelin, 1998; Roper, Love, 2002; Halpern, 2007; Wagner, 2007; Harris & Li, 2009; Higón & Driffield, 2011; Palangkaraya, 2012; Filipescu, Prashantham, Rialp, & Rialp, 2013; Lewandowska, Szymura-Tyc, & Gołębiowski, 2016; Tavassoli, 2017; Movahedi, Shahbazi, & Gaussens, 2017).

Based on the overview of prior studies in various parts of the globe and the OECD (2005) classification, we propose to verify the following research hypotheses:

H1: The implementation of product innovations by International New Ventures (INV) increases the export likelihood of a given INV.

H2: International New Ventures are more likely to export when they implement process innovations.

Less research focuses on non-technological innovations, *i.e.* marketing and organisational innovations (Damanpour & Aravind, 2011; Morone, Renna, & Testa, 2013; Crick & Crick, 2015; Azar & Ciabuschi, 2017).

However, the innovation process is complex, resulting from the pro-entrepreneurial orientation of managers and reflecting practically in every aspect of business activity, so that many researchers emphasise the importance of the complementarity of technological and non-technological innovations in terms of the impact on winning foreign markets (Lokshin, Gils, & Bauer, 2010; Tidd & Bessant, 2009; Azar & Ciabuschi, 2017; Bodlaja, Kadic-Maglajlicb,& Vidda, 2020).

Hence, we also anticipate the following:

H3: Organisational innovations implemented by International New Ventures increase the probability of their export.

H4: Marketing innovations implemented by International New Ventures increases the likelihood of exporting a given INV.

However, some studies do not confirm the link between innovation and exports. Results of research surveys by Ayllón and Radicic (2019) suggest complementarity only through contemporaneous effects but find no support for the causal link from past product and process innovations to current export activities. The study by Máñez-Castillejo, Rochina-Barrachina, and Sanchis-Llopis (2009) does not indicate this significant relationship.

MATERIAL AND METHODS

In this article, a binomial logistic regression model – also called the logit model – was applied. It is used to explain the dummy qualitative variable Y depending on the level of independent (exogenous) variables $X_1, X_2, \ldots, X_k$ which, in turn, can be qualitative or quantitative. The dependent variable is a dummy (dichotomous) variable:

$$Y = \begin{cases} 1, & phenomenon\ occurs \\ 0, & otherwise \end{cases} \tag{1}$$

In the logistic regression model, the binding function is known as logit and has the following form (Jackowska, 2011; McCullagh & Nelder, 1989):

$$g(p) = \text{logit}(p) = ln\left(\frac{p}{1-p}\right) \tag{2}$$

Furthermore, the logistic regression model can be written in the following form:

$$p = P(Y = 1 | X_1 = x_1, X_2 = x_2, \ldots, X_k = x_k) = \frac{\exp\left(\beta_0 + \sum_{i=1}^{k} \beta_i x_i\right)}{1 + \exp\left(\beta_0 + \sum_{i=1}^{k} \beta_i x_i\right)} \tag{3}$$

The estimation of model parameters $\beta_1, \beta_2, \ldots, \beta_k$ is usually performed with the use of the maximum likelihood method. The logarithm of the likelihood function with model parameters is maximised using iterative numerical procedures (Jackowska, 2011).

One of the advantages of the logistic regression model is the possibility of interpreting parameters e^{β_i}, which are defined as the ratio of the likelihood an event occurs to the probability that an event does not occur. In this model, the odds ratio can be expressed as a function of explanatory variables:

$$\frac{p}{1+p} = \gamma(x_1, x_2, \ldots, x_k) = \exp\left(\beta_0 + \sum_{i=1}^{k} \beta_i x_i\right) \tag{4}$$

In the case of the constant term, the e^{β_0} value is interpreted as the likelihood of a phenomenon occurring in the reference group (Jackowska, 2011).

The inference is based on data collected in the Business Environment and Enterprise Performance Survey (the BEEPS IV-V),[1] which covered the years 2006-2014 and was conducted mainly among companies with headquarters in post-communist countries in Europe and Central Asia. Moreover, the BEEPS survey was conducted among companies with at least five employees, while the survey process itself was supported by several business organisations and government agencies responsible for promoting job creation and economic growth. In the BEEPS survey, questions were answered by business owners or senior managers in a face-to-face interview. The main objective of this survey was to obtain information from selected firms on the status of the private sector. The survey questions related, among others, to the identification of the enterprise in the sector (ownership structure), the determination of the legal and economic status of enterprises, the characteristics of management (*e.g.* education and professional experience).

The BEEPS survey asked respondents dichotomous questions about new or significantly improved innovations (*i.e.* product innovation, process innovation, organisational innovation, and marketing innovation). Each of the questions was preceded by a detailed explanation of what each type of innovation means. For instance, product innovations are understood as introducing new or significantly improved products or services. Moreover, they did not refer to minor changes and excluded products or services that effected from regular seasonal changes, routine improvements in functionality, and visual improvements that did not affect the functionality and resale of goods purchased from other companies.

The sample included SMEs operating in Central and Eastern Europe and Central Asia (31 countries altogether). Initially, nearly 10 000 companies were selected for the analysis. Subsequently, those entities whose data were incomplete were eliminated. A spreadsheet was used to calculate the difference between the year of founding a business and the year of first foreign sales. In a second step, those firms with a difference of more than three years and foreign sales representing less than 25% of total sales were eliminated. This agrees with the criterion proposed by Jantunen, Nummela, Puumalainen, and Saarenketo (2008), Knight, Madsen, and Servais (2004), but also Madsen,

---

[1] The Business Environment and Enterprise Performance Survey is prepared by the European Bank for Reconstruction and Development and by the World Bank. The BEEPS IV-V panel dataset was last updated on 23 August 2017.

Rasmussen, and Servais (2000). The sample also includes those ventures that did not have any foreign sales within three years of starting their business: 463 companies, which makes about 51% of the sample. Finally, 906 firms remained.

Table 1 presents the qualitative and quantitative variables included in the logit model. The dependent variable is the dummy variable EXPORT, which assigns value 1 when the venture sells abroad and value 0 when the venture does not sell abroad. The model also includes the control variables OWNERSHIP, EXPERIENCE, and R&D SPENDING (see Table 1). Four types of innovation – product innovation, process innovation, organisational innovation, and marketing innovation – were adopted as independent variables, whose definitions are described in detail in the Oslo Manual. According to the third version of the publication, innovative activity means the entirety of scientific, technical, organisational, financial, and commercial activities that lead or are intended to lead to the implementation of innovation which, in turn, can be defined as the implementation of a new or significantly improved product, service, process, a new marketing method, or a new organisational method in business practice (OECD, 2005).

The Oslo Manual distinguishes between the following types of innovation (OECD, 2005):

− product innovations (NEW_PRODUCT): they concern the introduction of a product or service that is new or substantially improved in terms of its characteristics or use; such innovations include significant improvements in terms of technical specifications, components and materials, embedded software, user-friendliness, and other functional features,
− process innovations (NEW_PROCESS): they concern the implementation of a new or substantially improved production or supply method; such innovations include significant changes in the context of technology, equipment and software,
− organisational innovation (NEW_ORGANISATION): they are mainly the implementation of a new organisational method in the rules of operation adopted by the company in the organisation of the workplace or relations with the environment,
− marketing innovations (NEW_MARKETING): they are primarily the implementation of a new marketing method, which involves significant changes in the product design, packaging, distribution, promotion, or pricing strategy.

In the logit model, the independent variables describing particular types of innovations are dummy, *e.g.* in the context of product innovations, the independent variable assumes value 1 when a venture presented a new product/service over the last three years; otherwise, the variable assumes value 0. The basic descriptive statistics are presented in Table 2. All the variables used in the model are zero-one variables, excluding the control variable EXPERIENCE that describes the professional experience of the owner of the venture (indicator measured by the number of years).

The sample included 906 ventures from 31 countries in Central and Eastern Europe and Central Asia (see Table 3). The largest groups were companies from Turkey (14.02%), Georgia (7.17%), and Tajikistan (7.06%), while the smallest groups were the ventures from Montenegro (0.66%), Slovakia (0.88%), and Armenia (0.99%). Among the countries currently belonging to the European Union, the largest number of enterprises came from Romania (4.42%), Croatia (3.20%), and Lithuania (3.09%).

Table 1. Variables used in the empirical analysis

Variables	Description
EXPORT	Dummy variable that takes the value 1 if the venture is exporting and 0 if not.
OWNERSHIP	Dummy variable, that takes the value of 1 if at least 50% of the shares in the venture are held by a foreign investor, and 0 if not.
EXPERIENCE	Number of years of professional experience of the venture owner.
R&D SPENDING	Dummy variable that takes the value 1 if the venture spent on R&D over the last 3 years, otherwise 0.
NEW_PRODUCT	Dummy variable that takes value 1 if the venture introduced new products/services over the last 3 years, otherwise 0.
NEW_ PROCESS	Dummy variable that takes value 1 if the venture introduced new production/supply methods over the last 3 years, otherwise 0.
NEW_ORGANISATION	Dummy variable that takes value 1 if the venture introduced new organisational/management practices or structures over the last 3 years, otherwise 0.
NEW_MARKETING	Dummy variable that takes value 1 if the venture introduced new marketing methods over the last 3 years, otherwise 0.

Source: own study.

Table 2. Summary statistics

Variables	Mean	SD	Min	Max
1. EXPORT	0.489	0.500	0	1
2. OWNERSHIP	0.088	0.284	0	1
3. EXPERIENCE	13.460	9.850	1	55
4. R&D SPENDING	0.100	0.30	0	1
5. NEW_PRODUCT	0.231	0.422	0	1
6. NEW_ PROCESS	0.174	0.380	0	1
7. NEW_ORGANISATION	0.191	0.393	0	1
8. NEW_MARKETING	0.216	0.412	0	1

Source: own study.

Table 3. Countries of observations

Country	Observations	Percentage
Albania	53	5.85%
Armenia	9	0.99%
Azerbaijan	25	2.76%
Belarus	28	3.09%
Bosnia and Herzegovina	13	1.43%
Bulgaria	12	1.32%
Croatia	29	3.20%
Cyprus	12	1.32%
The Czech Republic	10	1.10%
Estonia	22	2.43%
FYR Macedonia	28	3.09%
Georgia	65	7.17%
Greece	26	2.87%
Hungary	19	2.10%
Kazakhstan	45	4.97%

Country	Observations	Percentage
Kosovo	24	2.65%
The Kyrgyz Republic	17	1.88%
Latvia	26	2.87%
Lithuania	28	3.09%
Moldova	13	1.43%
Mongolia	28	3.09%
Montenegro	6	0.66%
Poland	14	1.55%
Romania	40	4.42%
Serbia	28	3.09%
The Slovak Republic	8	0.88%
Slovenia	15	1.66%
Tajikistan	64	7.06%
Turkey	127	14.02%
Ukraine	30	3.31%
Uzbekistan	42	4.65%
TOTAL	906	100%

Source: own study.

RESULTS AND DISCUSSION

The program for statistical analysis Gretl (version 2018c) was used to construct five logistic regression models, in which the dependent variable is EXPORT, which assumes zero-one values; value 1 when venture realises foreign sales and value 0 when it does not realise foreign sales. Three control variables are included in the model: the first control dummy variable describes the ownership structure of the venture (OWNERSHIP), the second control variable (continuous variable) describes the number of years of professional experience of the venture owner (EXPERIENCE), and the third control variable concerns the R&D expenditures of the company over the last three years (R&D SPENDING).

The variables applied in the model are not strongly correlated with each other ($r < 0.5$), so we can include them in the estimated regression model (see Table 4). Variance Inflation Factor (VIF) for independent variables in all models is less than 1.6 (see Table 5), which means that there is no collinearity between the variables. It is worth mentioning that VIF values greater than 5 ($1/VIF < 0.2$) may indicate the problem of collinearity (Hair, 2006; Hair, Risher, Sarstedt, & Ringle, 2018).

In the next step, the parameters of five logistic regression models were estimated, and coefficients are presented in Table 6. To check the significance of variables in the models used, the likelihood-ratio test was conducted. The test showed the statistical significance of all models ($p < 0.001$). To avoid heteroscedasticity, the test included robust standard errors. The value of Pseudo-R2 depending on the model ranges from 0.0931 to 0.1118.

All logit models clearly show that mainly the share of foreign capital and ventures' R&D expenditures play a key role in increasing the likelihood of foreign sales. Nearly a six-times higher likelihood of export occurs when the share of foreign capital in the venture exceeds 50%. The situation is similar in the case of expenditure on research and development. The likelihood of export occurrence is nearly twice higher in the case of those ventures, which

allocate a part of their revenues to expenses related to research and development activity (see Table 6). These results are consistent with the research of other scientists (Kumar & Siddharthan, 1994; Wagner, 1996; Zhao & Li, 1997; Basile, 2001; Rodil, Vence, & Sánchez, 2016; Cieślik, Michałek, & Szczygielski, 2016; Cieślik & Michałek, 2017a).

Table 4. Correlations matrix between variables

Variables	1	2	3	4	5	6	7
1. OWNERSHIP	1.00						
2. EXPERIENCE	0.04	1.00					
3. R&D SPENDING	0.05	0.04	1.00				
4. NEW_PRODUCT	0.13	0.10	0.34	1.00			
5. NEW_ PROCESS	0.09	0.11	0.35	0.50	1.00		
6. NEW_ORGANISATION	0.11	0.10	0.29	0.39	0.45	1.00	
7. NEW_MARKETING	0.07	0.08	0.28	0.42	0.38	0.50	1.00

Significance of all indications: $p < 0.05$.
Source: own calculations in Gretl.

Table 5. Multicollinearity test on variables

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
	VIF	TOL	VIF	TOL	VIF	TOL	VIF	TOL	VIF	TOL
1. OWNERSHIP	1.023	0.978	1.019	0.981	1.020	0.980	1.015	0.985	1.013	0.987
2. EXPERIENCE	1.019	0.981	1.012	0.988	1.016	0.984	1.017	0.983	1.013	0.987
3. R&D SPENDING	1.214	0.824	1.131	0.884	1.188	0.842	1.185	0.844	1.123	0.890
4. NEW_PRODUCT	1.526	0.655	1.158	0.864	1.411	0.709				
5. NEW_ PROCESS	1.547	0.646			1.410	0.709	1.389	0.720		
6. NEW_ORGANISATION	1.553	0.644					1.541	0.649	1.425	0.702
7. NEW_MARKETING	1.504	0.665					1.438	0.695	1.397	0.716

"VIF values > 10.0" may indicate a collinearity problem.
Source: own calculations in Gretl.

Based on the first model of logistic regression (Table 6), we may conclude that the likelihood of export is 1.52 times higher in ventures that implement process innovations than in those that do not ($p < 0.1$). The same situation applies to organisational innovations. The implementation of organisational innovations in a given venture increases the likelihood of export slightly more than 2.5 times ($p < 0.01$). The situation of marketing innovations is somewhat different. In this case, the implementation of marketing innovations by ventures does not increase their likelihood of export ($p < 0.05$). The model omits the interpretation of the independent variable that describes product innovations because the estimated parameter of logistic regression is statistically insignificant.

In the next step, the logistic regression model (2) was constructed, in which – besides control variables – the independent variable NEW_PRODUCT was used. It turns out that when a venture implements product innovations, it increases the likelihood of its export 1.38 times than such if a venture would not implement innovations ($p < 0.1$). Taking into account also the results of model 1 estimation, it is not possible to unambiguously statistically confirm that product innovations are a key factor stimulating the export of a given

venture. Therefore, there is no statistical basis for accepting hypothesis 1, although we recommend further research in this direction. Nevertheless, the results of other cited studies and the logical thinking process indicate that the implementation of product innovations fosters an increase in product competitiveness, which is a factor facilitating the acquisition of new customers on the foreign market.

Model 3 includes two independent variables describing product innovation (NEW_PRODUCT) and process innovation (NEW_PROCESS). The results confirm hypothesis 2. Based on the model, we see that the implementation of process innovations in venture increases the probability of its export almost twice ($p < 0.01$). In the case of the independent variable describing product innovations, we may say that they do not affect the chance of export (no statistical significance).

In the next logistic regression model (4), three independent variables were taken into account: process innovation (NEW_PROCESS), organisational innovation (NEW_ORGANI-SATION), and marketing innovation (NEW_MARKETING). New organisational solutions in venture increase its likelihood of export 2.33 times than if the entity had not implemented them ($p < 0.01$), while process innovations increase its chance of export 1.5 times. The model seems to confirm hypothesis 3 that organisational innovations implemented by ventures increase the likelihood of export. The obtained results have their justification in a relatively little degree of the company's organisational development, which dominates in the case of a particular venture. Most frequently, these are entities with small organisational and human resources, hence innovations in this field have a significant impact on the development and export potential.

The last constructed logit model (5), which consists of two independent variables, *i.e.* a variable describing organisational innovations (NEW_ORGANISATION) and marketing innovations (NEW_MARKETING), was intended to confirm the thesis that the implementation of marketing innovations in a venture contributes to increasing the likelihood of export. It turns out that the likelihood of export in a venture does not increase when it implements marketing innovations. Moreover, taking into account the results obtained in the first and third model of logistic regression, we can finally reject hypothesis 4, which states that the implementation of marketing innovations by venture increases the likelihood of their export.

This article contributes important insights to the relationship between innovativeness and new ventures exporting, further confirmed by studies conducted, among others, by Harris and Moffat (2011), Palangkaraya (2012), and Rodríguez and Rodríguez (2005). Salomon and Shaver (2005) argue that new ventures consider innovation to be the measurement of learning so that these ventures can strategically obtain access to foreign knowledge bases and increase their innovative potential by involvement in export operations. Moreover, Harris and Moffat (2011) maintain that R&D spending in firms has a much greater impact on the likelihood of exports, which in turn is consistent with the results obtained in this study. In terms of process innovation, the results agree with research undertaken by Palangkaraya (2012) on Australian companies, which proves that process innovation plays an important role in the SMEs' export. This is because most product innovations concern products that are not new to the world, hence the greater significance of process innovations for SMEs. In our study, most companies belonged to the service sector, in which the majority of product innovations can happen outside of the company and, therefore, can be treated not as product innovations but process innovations (Palangkaraya, 2012). As far as organisational

Table 6. Logistic regression model (exporter = 1, non-exporter = 0)

Variable	Model 1			Model 2			Model 3			Model 4			Model 5		
	Coeff.	Odds	SD	Coeff.	Odds	SD	Coeff.	Odds	SD	Coeff.	Odds	SD	Coeff.	Odds	SD
const.	-1.06***	0.35	0.13	-1.01***	0.36	0.13	−1.03***	0.36	0.13	−1.05***	0.35	0.13	−1.04***	0.35	0.13
OWNERSHIP	1.73***	5.63	0.32	1.75***	5.74	0.32	1.73***	5.64	0.32	1.73***	5.64	0.32	1.76***	5.81	0.32
EXPERIENCE	0.05***	1.05	0.01	0.05***	1.05	0.01	0.05***	1.05	0.01	0.05***	1.05	0.001	0.05***	1.05	0.01
R&D SPEN~G	0.49*	1.63	0.28	0.70***	2.01	0.26	0.55**	1.73	0.27	0.50*	1.65	0.28	0.61**	1.84	0.26
NEW_PROD~T	0.06	1.06	0.22	0.32*	1.38	0.182	0.09	1.09	0.20						
NEW_PRO~S	0.42*	1.52	0.24				0.60***	1.82	0.23	0.44**	1.55	0.22			
NEW_ORG~N	0.94***	2.55	0.23							0.94***	2.56	0.23	1.06***	2.89	0.22
NEW_MAR~G	-0.50**	0.61	0.22							-0.49**	0.61	0.22	-0.41**	0.66	0.18
Observations	906			906			906			906			906		
Log likelihood	-557.61			-569.30			-565.80			−557.65			-559.41		
AIC	1131.21			1148.59			1143.59			1129.29			1131.03		
Prob > χ^2	***			***			***			***			***		
Pseudo R2	0.1118			0.0931			0.0987			0.1117			0.1087		
LR test	140.33***			115.95***			123.95***			140.25***			136.51***		

Significant codes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
Source: own calculations in Gretl.

innovation is concerned, it is the significance for the company's export performance, which agrees with study results by Pino, Felzensztein, Zwerg-Villegas, and Arias-Bolzman (2016). The aforementioned relationship was confirmed on a sample of 299 entities from South America. In the case of marketing innovations, the analysis results presented a negative co-efficient, which may suggest that marketing innovations are not significant for exporting. These results are in line with the studies of Cieślik and Michałek (2017b), but future research should explain the matter more thoroughly.

CONCLUSIONS

International ventures are characterised by a high degree of innovation. It is an expression of the general entrepreneurial orientation of managers, who strive to seek new solutions and continuous development of businesses. These activities will naturally be reflected in the choice of development path through expansion to new markets, therefore innovation and export orientation of venture are genetically linked to each other, although the degree of these links varies depending on the type of innovation.

The conducted research confirms two out of four hypotheses. Hypothesis 1 posited that the implementation of product innovations by venture increases the likelihood of their export, which has not been confirmed or rejected due to the lack of statistical significance. The logistic regression model confirmed hypotheses 2 and 3. The implementation of process innovations in venture increases its likelihood of export almost 1.5 times, while in the case of organisational innovations – 2.5 times. The last hypothesis was not confirmed. Based on data taken from the constructed logit model, it turns out that the implementation of marketing innovations in venture does not increase the likelihood of venture export ($p<0.05$).

We obtained different results in the case of product innovations (no statistical significance). In terms of products from the very beginning, the reason may be the innovative nature of the surveyed ventures activities, causing the implemented subsequent product solutions to not generate significant changes in the likelihood of export.

As each empirical study, the current one is not free of its limitations. The research sample included SMEs strongly differentiated in terms of sector and industry, but also in size and country of capital origin. The analysis of the occurrence possibility of certain characteristics specific to ventures from a given country was not included, and the cause and effect relationships between the phenomenon of innovation and export in particular industries were not examined.

At present, there are not enough studies on the influence of ventures innovativeness on their export activities. It seems justified to take into account, among other things, the sectoral and industry diversification of venture activity as one of the variables influencing the export-oriented – or even global – attitude of managers towards export. It is worth considering complementing the results of quantitative research with qualitative research, which may deepen the research conclusions obtained so far.

REFERENCES

Aghion, Ph., Bergeaud, A., Lequien M., & Melitz M.J. (2018). *The Impact of Exports on Innovation: Theory and Evidence* (NBER Working Papers, 24600). National Bureau of Economic Research, Inc.

Ayllón, S., & Radicic, D. (2019). Product innovation, process innovation and export propensity: Persistence, complementarities and feedback effects in Spanish firms. *Applied Economics, 51*(33), 3650-3664. https://doi.org/10.1080/00036846.2019.1584376

Azar, G., & Ciabuschi, F. (2017). Organizational innovation, technological innovation, and export performance: The effects of innovation radicalness and extensiveness. *International Business Review, 26(2),* 324-336.

Basile, R. (2001). Export behaviour of Italian manufacturing firms over the nineties; the role of innovation. *Research Policy, 30*(8), 1185-1201.

Bernardini Papalia, R., Bertarelli, S., & Mancinelli, S. (2018). Innovation, complementarity, and exporting. evidence from German manufacturing firms. *International Review of Applied Economics, 32*(1), 3-38. https://doi.org/10.1080/02692171.2017.1332576

Bertarelli, S., & Lodi, C. (2018). Innovation and Exporting: A study on Eastern European Union Firms. *Sustainability (Switzerland), 10*(10). https://doi.org/10.3390/su10103607

Blyde, J., Iberti, G., & Mussini, M. (2018). When does innovation matter for exporting? *Empirical Economics, 54*(4), 1653-1671. https://doi.org/10.1007/s00181-017-1274-x

Bodlaja, M., Kadic-Maglajlicb, S., & Vidda, I. (2020). Disentangling the impact of different innovation types, financial constraints and geographic diversification on SMEs' export growth. *Journal of Business Research, 108*, 466-475.

Boso, N., Cadogan, J.W., & Story, V.M. (2013). Entrepreneurial orientation and market orientation as drivers of product innovation success: A study of exporters from a developing economy. *International Small Business Journal, 31*(1), 57-81. https://doi.org/10.1177/0266242611400469

Brancati, R., Marrocu, E., Romagnoli, M., & Usai, S. (2018). Innovation activities and learning processes in the crisis: Evidence from Italian export in manufacturing and services. *Industrial and Corporate Change, 27*(1), 107-130. https://doi.org/10.1093/icc/dtx022

Cassiman, B., Golovko, E., & Martinez-Ros, E. (2010). Innovation, exports and productivity. *International Journal of Industrial Organization, 28*(4), 372-376.

Cavusgil, S.T., & Zou, S. (1994). Marketing Strategy-performance Relationship: An Investigation of the Empirical Link in Export Market Ventures. *Journal of Marketing 58*(1), 1-21.

Chen, T., Chen, X., Wang, C., & Xiang, X. (2018). Export Behavior and Firm Innovation: New Method and Evidence. *Economics Letters, 170*, 76-78. https://doi.org/10.1016/j.econlet.2018.05.029

Cieślik, A., & Michałek, J.J. (2017a). Innovations and export performance of new EU member states. *Ekonomista, 5*, 489-505.

Cieślik, A., & Michałek, J.J. (2017b). Innovation forms and firm export performance: Empirical evidence from ECA countries. *Entrepreneurial Business and Economics Review, 5*(2), 85-99. https://doi.org/10.15678/EBER.2017.050205

Cieślik, A., & Michałek, J. J. (2018). Process and product innovations, multi-product status and export performance: firm-level evidence from V-4 countries. *Equilibrium. Quarterly Journal of Economics and Economic Policy, 13*(2), 233-250. https://doi.org/a10.24136/eq.2018.012

Cieślik, A., Michałek, J.J., & Szczygielski, K. (2016). Innovations and export performance: Firm-level evidence from Poland. *Entrepreneurial Business and Economics Review, 4*(4), 11-28. https://doi.org/10.15678/EBER.2016.040402

Cieślik, A., Qu, Y., & Qu, T. (2018). *Innovations and Export Performance: Firm Level Evidence from China. Entrepreneurial Business and Economics Review, 6*(4), 27-47.

Ciszewska-Mlinaric, M., Obloj, K., & Wąsowska A. (2016). Effectuation and causation: Two decision-making logics of INVs at the early stage of growth and internationalisation. *Journal of East European Management Studies, 21*(4), 275-297. https://doi.org/10.5771/0949-6181-2016-3-275

Crick, D. (2009). The internationalization of born global and international new venture SMEs. *International Marketing Review*, 26, 453-476.

Crick, D., & Crick, J. (2015). The first export order: A marketing innovation revisited. *Journal of Strategic Marketing, 24*(2), 77-89. https://doi.org/10.1080/0965254X.2014.1001870

Damanpour, F., & Aravind, D. (2011). Managerial Innovation: Conceptions, Processes, and Antecedents. *Management and Organization Review, 8*, 423-454.

Damijan, J.P., Kostevc, C., & Polanec, S. (2010). From innovation to exporting or vice versa?. *World Economy, 33*(3), 374-398.

Fassio, C. (2018). Export-led innovation: The role of export destinations. *Industrial and Corporate Change, 27*(1), 149-171. https://doi.org/10.1093/icc/dtx028

Filipescu, D.A., Prashantham, S., Rialp A., & Rialp, J. (2013). Technological Innovation and Exports: Unpacking Their Reciprocal Causality. *Journal of International Marketing, 21*(1), 23-38.

Ganotakis, P., & Love, J.H. (2011). R&D, Product Innovation, and Exporting: Evidence from UK New Technology based Firms. *Oxford Economic Papers, 63*(2), 279-306. https://doi.org/10.1093/oep/gpq027

Hair, J.F. (2006). *Multivariate Data Analysis* (6th ed.). Upper Saddle River, N.J.: Pearson Prentice Hall.

Hair, J.F., Risher, J.J., Sarstedt, M., & Ringle, C.M. (2018). When to Use and How to Report the Results of PLS-SEM. *European Business Review*, *31*(3), 2-24. https://doi.org/https://doi.org/10.1108/EBR-11-2018-0203.

Halpern, L. (2007). *Literature Survey on the Links between Innovation, Competition, Competitiveness, Entry & Exit, Firm Survival and Growth, Micro-dyn, EU Sixth Framework Programme* (Working Paper No. 02/07).

Harris, R., & Li, Q.C. (2009). Exporting, R&D, and Absorptive Capacity in UK Establishments. *Oxford Economic Papers*, *61*(1), 74-103.

Harris, R., & Moffat, J. (2011). *R&D, innovation and exporting (No. 33593)*. London School of Economics and Political Science, LSE Library.

Higón, D.A., & Driffield, N. (2011). Exporting and innovation performance: Analysis of the annual small business survey in the UK. *International Small Business Journal, 29*(1), 4-24.

Jackowska, B. (2011). Efekty interakcji między zmiennymi objaśniającymi w modelu logitowym w analizie zróżnicowania ryzyka zgonu. *Przegląd Statystyczny*, *58*(1-2), 24-41.

Jantunen, A., Nummela, N., Puumalainen, K., & Saarenketo, S. (2008). Strategic Orientations of Born-globals – Do They Really Matter?. *Journal of World Business*, *43*(2), 158-170.

Johanson J., & Vahlne J.E. (1977). The Internationalization Process of the Firm: a Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies, 8*(1), 23-32.

Knight, G.A., & Cavusgil, S.T. (1996). The born global firm: A challenge to traditional internationalization theory. In S.T. Cavusgil & T.K. Madsen (Eds.), *Export internationalizing research-enrichment and challenges* (Advances in International Marketing Series, Vol. 8, pp. 11-26). New York: JAI.

Knight, G.A., & Cavusgil S.T. (2005). A Taxonomy of Born-Global Firms. *Management International Review, 45*(3), 15-35.

Knight, G., Madsen, T.K., & Servais, P. (2004). An Inquiry into Born-global Firms in Europe and the USA. *International Marketing Review*, *21*(6), 645-665. https://doi.org/10.1108/02651330410568060

Kotler, Ph. (1997). *Marketing Management - Analysis, Planning, Implementation, and Control*. NJ: Prentice Hall.

Lachenmaier, S., & Wößmann, L. (2006). Does Innovation Cause Exports? Evidence from Exogenous Innovation Impulses and Obstacles using German Micro Data. *Oxford Economic Papers, 58*(2), 317-350. https://doi.org/10.1093/oep/gpi043

Lewandowska, M.S., Szymura-Tyc, M., & Gołebiowski, T. (2016). Innovation Complementarity, Co-operation Partners, and New Product Export: Evidence from Poland. *Journal of Business Research, 69*(9), 3673-3681. https://doi.org/10.1016/j.jbusres.2016.03.028

Lumpkin, G.T., & Dess, G.G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: the moderating role of environment and industry life cycle. *Journal of Business Venturing, 16*(5), 429-451.

Maciejewski, M., & Wach, K. (2019). International Startups from Poland: Born Global or Born Regional? *Journal of Management and Business Administration. Central Europe*, *27*(1), 60-83.

Madsen, T.K., Rasmussen, E., & Servais, P. (2000). Differences and Similarities between Born-globals and other Types of Exporters. In: A. Yaprak & H. Tutek (Eds), *Globalization, the Multinational Firm, and Emerging Economies* (pp. 247-265). Amsterdam: Emerald Group Publishing.

Máñez-Castillejo, J., Rochina-Barrachina, M., & Sanchis-Llopis, J. (2009). Self-selection into Exports: Productivity and/or Innovation? *Applied Economics Quarterly, 55*(3), 219-241.

McCullagh, P., & Nelder, J.A. (1989). *Generalized Linear Models*. Boston, US: Springer.

McDougall, P. (1989). International versus Domestic Entrepreneurship: New Venture Strategic Behavior and Industry Structure. *Journal of Business Venturing, 4*(6), 387-400.

McDougall, P., Shane S., & Oviatt, B. (1994). Explaining the Formation of International New Ventures: The Limits of Theories from International Business Research. *Journal of Business Venturing, 9*(6), 469-487.

Moreno-Menéndez, A.M. (2018). Co-Evolution of Innovation Cooperation Activities and Internationalisation through Exports. *Innovation: Management, Policy and Practice, 20*(4), 353-376. https://doi.org/10.1080/14479338.2018.1502611

Morone, P., Renna, F., & Testa, G. (2013). Innovation Activities and Italian SMEs' Exports Decisions: A Multi-treatment Analysis. *International Journal of Globalisation and Small Business, 5*(4), 256-272. https://doi.org/10.1504/IJGSB.2013.056810

Movahedi, M., Shahbazi, K., & Gaussens, O. (2017). Innovation and Willingness to Export: Is There an Effect of Conscious Self-selection?. *Economics, 11,* 1-22. https://doi.org/10.5018/economics-ejournal.ja.2017-25

Nekethna, M.S., & Gunasekar, S. (2017). Export Behaviour and Innovation - A Tobit Analysis (Paper presented at the *2016 IEEE International Conference on Computational Intelligence and Computing Research, ICCIC 2016).* https://doi.org/10.1109/ICCIC.2016.7919690

OECD. (2005). *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data* (3ed.). Paris: OECD. Retrieved from http://dx.doi.org/10.1787/9264013105 on June 15, 2019.

Oviatt, B.M. & McDougall, P.P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies, 25*(1), 45-64.

Palangkaraya, A. (2012). The Link between Innovation and Export: Evidence from Australia's Small and Medium Enterprises. *ERIA Discussion Paper Series, 8,* 1-41.

Pino, C., Felzensztein, C., Zwerg-Villegas, A.M., & Arias-Bolzman, L. (2016). Non-technological innovations: Market performance of exporting firms in South America. *Journal of Business Research, 69*(10)*,* 4385-4393.

Rodil, Ó., Vence, X., & Sánchez, M.D.C. (2016). The relationship between innovation and export behaviour: The case of galician firms. *Technological Forecasting and Social Change, 113*, 248-265. https://doi.org/10.1016/j.techfore.2015.09.002

Rodríguez, J.L., & Rodríguez, R.M.G. (2005). Technology and export behaviour: a resource-based view approach. *International Business Review*, *14*(5), 539-557.

Roper, S., & Love, J.H. (2002). Innovation and Export Performance: Evidence from the UK and German Manufacturing Plants. *Research Policy, 31*(7), 1087-1102.

Rua, O.L. (2018). From Intangible Resources to Export Performance: Exploring the Mediating Effect of Absorptive Capabilities and Innovation. *Review of International Business and Strategy, 28*(3-4), 373-394. https://doi.org/10.1108/RIBS-02-2018-0012

Salomon, R.M., & Shaver, J.M. (2005). Learning by Exporting: New Insights from Examining Firm Innovation. *Journal of Economics and Management Strategy, 14*, 431-460.

Schumpeter, J. (1934). *The Theory of Economic Development*. Cambridge: Harvard University Press.

Sekliuckiene, J. (2017). Factors leading to early internationalization in emerging Central and Eastern European economies: Empirical evidence from new ventures in Lithuania. *European Business Review, 29*(2), 219-242. https://doi.org/10.1108/EBR-12-2015-0158

Sekliuckiene, J., Jarosinski, M., & Kozma, M. (2019). Entrepreneurial Level Factors of Early Internationalization: a Cross Country Comparison. *Inzinerine Ekonomika - Engineering Economics, 30*(2), 223-235.

Sikora, T., & Baranowska-Prokop, E. (2018). Explaining success perception of Polish international new ventures: Four perspectives. *Economics and Sociology, 11*(4), 106-127. https://doi.org/10.14254/2071-789X.2018/11-4/7

Tavassoli, S. (2017). The Role of Product Innovation on Export Behavior of Firms: Is it Innovation Input or Innovation Output that Matters?. *European Journal of Innovation Management 21*(2), 294-314. https://doi.org/10.1108/EJIM-12-2016-0124

Tekin, E., & Hancioğlu, Y. (2018). The Effects of Innovation on Export Performance in Developing Countries. *Global issues in social sciences: Different perspectives - multidisciplinary approaches*, 23-36. https://doi.org/10.3726/ b13343

Tidd, J., & Bessant, J. (2009). *Managing Innovation: Integrating Technological, Market and Organizational Change*. Chichester: Wiley.

van Beveren, I., & Vandenbussche, H. (2010). Product and Process Innovation and Firms' Decision to Export. *Journal of Economic Policy Reform, 13*(1), 3-24. https://doi.org/10.1080/17487870903546267

Vissak, T. (2006). Internationalisation of Estonian Listed Companies - Theories and Reality. In T. Mets, J. Andrijevskaja, U. Venesaar, & E. Kolbre (Eds.), *Entrepreneurship in Estonia: policies, practices, education and research* (pp. 116-138). Tartu: University of Tartu.

Wach, K. (2016). Innovative Behaviour of High-Tech Internationalized Firms: Survey Results from Poland. *Entrepreneurial Business and Economics Review*, *4*(3), 153-165.

Wagner, J. (1996). Export Performance, Human Capital, and Product Innovation in Germany. A Micro View. *Jahrbuch für Wirtschaftswissenschaften, 47*, 40-45.

Wagner, J. (2007). Exports and Productivity: a Survey of the Evidence from Firm-level Data. *World Economy, 30*(1), 60-82.

Wakelin, K. (1998). Innovation and Export Behaviour at the Firm Level. *Research Policy, 26*(7-8), 829-841.

Authors

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

Krystian Bigos[1]

Research Assistant at Cracow University of Economics, Department of International Trade at the College of Economics, Finance and Law. His research interests include early and rapid internationalisation, international start-ups and international entrepreneurship.
Correspondence to: Krystian Bigos, MSc, Department of International Trade, Cracow University of Economics, Poland, e-mail: bigosk@uek.krakow.pl
ORCID http://orcid.org/0000-0001-6030-4119

Adam Michalik [2]

Assistant Professor at Cracow University of Economics, Department of International Trade at the College of Economics, Finance and Law. His research interests include entrepreneurship, foreign investments, and security of business transactions.
Correspondence to: Adam Michalik, PhD, Department of International Trade, Cracow University of Economics, Poland, e-mail: michalia@uek.krakow.pl
ORCID http://orcid.org/0000-0002-9333-408X

Acknowledgements and Financial Disclosure

Copyright and License

Published by Cracow University of Economics – Krakow, Poland

Advancing the contextual factors impeding the development of aquapreneurship in Cameroon

Bernard Lama Ngota

ABSTRACT
Objective: The objective of this article is to examine the contextual factors impeding the growth and development of aquapreneurship in Cameroon.
Research Design & Methods: The empirical study was conducted during November and December on a sample of 195 aquapreneurs in the Littoral, West, and Central regions of Cameroon. The study employed self-administered structured questionnaires and individual invitations were sent out to aquapreneurs in these regions. To compile the results, 150 completely filled-out questionnaires were used.
Findings: Findings revealed that fish farmers faced several challenges including the high cost of constructing, filling, and managing ponds, the high rate of fish predators, fish death due to diseases, the high cost of feed, and the lack of financing, industries to manufacture quality fish feed, and space to expand fishponds.
Implications & Recommendations: The study recommends all-encompassing measures by the government regarding awareness through education, the production of fingerlings at low cost to farmers, encouraging new entrants in fish feed manufacturing industries, and credit policies to accommodate aquapreneurs and improve incorporation into the globalised economy.
Contribution & Value Added: This study is significant because it highlights the plight of aquapreneurs in a developing country such as Cameroon and brings to the fore the challenges this sector encounters to develop the aquaculture industry.

INTRODUCTION

Fish consumption has recently increased worldwide with high demands in the developing countries that get most of their catches from the wild (FAO, 2004, 2015). Fish is a preferred protein source for most Cameroonians because it is cheap compared with other meats such as bushmeat, pork, chicken, and beef. An important source of protein in the human diet on a worldwide gauge, it is predicted that fish form the most significant source of protein and it is suggested that more than 30% of all fish consumable for humans comes from aquaculture (Frimpong & Adwani, 2015; Håstein, Hjeltnes, Lillehaug, Skåre, Berntssen, & Lundebye, 2006). This has posed an enormous increase of demand for fish and fish product for food in Cameroon. Over the past decades, aquaculture has advanced to turn into the firmest rising food producing segment globally (Frimpong & Adwani, 2015). The FAO (2015) asserts that an outsized amount of fish is produced by small-scale fish farmers. Consistently, some authors (Håstein *et al.*, 2006; Frimpong & Adwani, 2015) attest that freshwater produces more than 80% of aquacultural products. Aquaculture started in Asia and – since then – it has experienced enormous progress to become the highly specialised field it is today.

Some authors (Ifejika, Oladosu, Asadu, Ayanwuyi, Sule, & Tanko, 2015; Ifejika, 2015) indicate that practising aquaculture amplified fish farming practices with an observable economic impact in areas such as nutrition and food security, poverty reduction and employment, economic growth, business venture, and the improved standard of living for aquapreneurs. Similar studies on aquapreneurship by Ifejika (2015) establish that fish and fish products improved significantly from 5.01% in 2001 to 23.61% in 2010. Moreover, Miller and Atanda (2010) suggest a 20% upsurge in the yearly progression of aquacultural products, with a huge progress in small-to-medium businesses and a number of large-scale highly sustained fish farms. In the context of this study, aquapreneurs means individuals who rear fish for commercial purposes (Ifejika *et al.*, 2015). In other words, to sustain aquaculture to become lucrative at a tolerable standard for aquapreneurs and other investors, distinctive consideration needs to be given not just to the supply and demand of aquacultural products but also to the economic and financial management of the sector.

Regardless, aquaculture is noted to be a momentous provider to the social and economic growth of developing nations such as Cameroon, the predicament of aquapreneurs-owned trades that govern this segment has been fundamentally deserted over the past decades in policy and provision ingenuities (Brummett, Gockowsky, Pouomogne, & Muir, 2011). Mwangi (2008) and Osure (2011) states that the uncoordinated promotion of fish farming by many institutions, governments, research institutions, universities, NGOs, and regional authorities is the challenge facing fish farming development in Africa. Pouomogne and Pemsl (2008) state that prospects of aquaculture – if some of the challenges were restrained – in Cameroon seem bright especially for fish farming, no matter the scale of production. Challenges include the lack of capital, infrastructure, technical support, poor quality fingerlings and feed, few talents, poor marketing, and management (Pouomogne & Pemsl, 2008). Eventually, these challenges have affected productivity and profitability levels in this sector. The direct consequence is an increased level of neglected fishponds. Furthermore, most aquapreneurs invest in fish farming primarily for profit, which elucidates the increased number of neglected fishponds due to adverse results (Brummett *et al.*, 2011; Pouomogne & Pemsl, 2008). Disregarding the incidence of these

investigations, consideration is thus far needed to address the challenges that disrupt the growth of aquapreneurship in Cameroon. Moreover, the challenges impeding the initiation, growth, and development of this sector were not investigated in the framework of aquapreneurship development in Cameroon. Therefore, this study deals with impeding factors that face aquapreneurship in Cameroon, determined the problems faced by aquapreneurs and identified the factors that affect investment in fish farming in Cameroon. This study is significant because the assessment of impeding factors facing aquapreneurial development will further serve as a framework for formulating new and better policies for aquapreneurial development in Cameroon.

The main objective of this study was to examine the contextual factors impeding the growth and development of aquapreneurship in Cameroon. To address the aforementioned theme, the study presents three sub-objectives, namely:

1. To determine the source through which aquapreneurs get their fingerlings and the challenges they encounter.
2. To determine whether the cost involved in the construction and managing of fishponds harm large scale fish production in selected regions in Cameroon.
3. To determine the challenges that appear to hamper fish farming/aquapreneurship in the selected regions in Cameroon.

This paper is presented in the subsequent arrangement: in the next section, the literature on entrepreneurship perspective in Africa, the concept of aquaculture, the development of aquaculture, contributions and professed constraints in Cameroon followed by sustainable development of aquapreneurship. Thirdly, the research material and methods for the study. Fourthly, the results and discussion are presented. Finally, the concluding remarks are presented.

LITERATURE REVIEW

Entrepreneurship Perspective in Africa

Empirical studies on entrepreneurship in the African continent remain nascent and receive little attention from scholars (Dvouletý & Orel, 2019). However, and despite limited research, there have been numerous efforts over the past two decades to promote the knowledge of entrepreneurial activities in the African continent (Frese & de Kruif, 2000; Kiggundu, 2002; Sriram, & Mersha, 2010; Kshetri, 2011; Munemo, 2012; Röschenthaler & Schulz, 2015; Kuada, 2015; George, Kotha, Parikh, Alnuaimi, & Bahaj, 2016; Lashitew & van Tulder, 2017; Atiase, Mahmood, Wang, & Botchie, 2018; Ratten & Jones, 2018; Dvouletý & Orel, 2019). Dvouletý and Orel (2019) and Rey (2018) note the continuous entrepreneurial transformation in the African continent and distinguish that with the adoption of a pan-Africanism mindset, the majority of African countries are undergoing a digital rebirth, which increases their connectedness and opens markets. Ratten and Jones (2018) argue that entrepreneurial activity is lower in the African continent compared to other regions of the world. These authors note that the aforementioned is due to the past emphasis of governments to control businesses, which discourages private investments in new enterprises such as the aquacultural sector. However, Africa is finally witnessing a transformation as the continent exhibits one of the highest entrepreneurial intents globally.

Dvouletý and Orel (2019) state that entrepreneurship shows a rebirth across the African continent, with overflowing entrepreneurial activities as the potential tool for solving Africa's socio-economic challenges by creating jobs and impacting GDP growth, if countries overcome structural challenges. Some scholars (Chigunta, 2017; Dvouletý, Gordievskaya, & Procházka, 2018) theorise that there is a shift in African countries from the traditional sources of income to experiencing an increasing entrepreneurial activity, more often visible not only as a sustainable job-generating tool but a lead route to economic growth and development.

Although many countries in the African continent have not yet conducted the Global Entrepreneurship Monitor (GEM) for scholars to study their entrepreneurial activities, by relying on existing GEM surveys and other data sources allowed for establishing that entrepreneurial activities in 12 African nations demonstrate the importance of several determinants, which influence the early-stage level of entrepreneurial activity. Nonetheless, the available literature on entrepreneurship focuses on entrepreneurial activities in developed nations (such as the USA, Europe, Australia, and Asia) with huge neglect of entrepreneurship in the aquacultural sector, while the study of the African continent remains minuscule to date.

Despite the large entrepreneurial focus globally towards innovation, technology, manufacturing, and the trade of goods and services as entrepreneurship instruments for economic growth and development, little research focused on the impact of agriculture and aquacultural production as economic enhancers. Therefore, this article brings to the fore the dilemmas of aquapreneurs as the vital element of economic growth and development in a developing country such as Cameroon. Somerville, Cohen, Pantanella, Stankus, and Lovatelli (2014) suggest that the production of domestic food, access to markets, and acquisition of skills are invaluable instruments for securing the empowerment and emancipation of developing countries' population, which can be achieved through aquapreneurship. Moreover, the same authors (Somerville *et al.*, 2014) argue that aquapreneurship can offer the basis for the fair and sustainable socio-economic growth of many developing nations of the world, especially in Africa.

The Concept of Aquaculture

Aquaculture refers to the cultivation of water species, e.g. crustaceans, molluscs, fish and water plants under controlled conditions. In other words, aquaculture may simply mean 'Underwater Agriculture' (Khan, Khan, & Miyan, 2011). Over the decades, there occurred a drop in profitable yield of fresh fish wild stocks and of other fish products as a response to the enormous rise in the growth rate of aquaculture (Khan *et al.*, 2011). According to Khan *et al.* (2011), each aquacultural system has a specific set of circumstances, along with a variation of the total biomass produced from one system to another. Therefore, the selection of a specific aquacultural system centres on environmental region, water type, obtainable resources, talented people, targeted water organisms, the accessibility of seed of the targeted water organisms at the needed period, distinct from a set of dissimilar socio-economic dynamics (Khan *et al.*, 2011). Imperatively, fish and fish products have the highest portion in the number of organisms and production in capacity and worth among all water species used in aquaculture (Khan *et al.*, 2011). Specific fish species or combinations of different compatible fish types could be designated for cultivation in order to yield an increased level of biomass. Khan *et al.* (2011) suggest that fish may be kept in old-style public fishponds, deprived of the added synthetic diet without the proper maintenance of

fishponds. However, to get a better return, modern aquaculture practices rely on intensification, wherein very high stocking density of fish are maintained on artificial feed, while water quality and environmental parameters are monitored to remain in the optimal range required for the high growth rate of the fish.

The Development of Aquaculture, Contributions, and Professed Constraints in Cameroon

Aquaculture in Cameroon began around the 1940s; nevertheless, it is yet to be developed, as it still generates modest production in comparison to other systems of skilful farming (Ndah, Knierim, & Ndambi, 2011). Some authors (Bigwa, 2013; Sadeu, Mikolasek, Barlet, & Chia, 2008) allude that aquaculture is conducted in rural areas with fresh aquatic fishponds of about 350m^2 and establish acceptable methods and the diversity of produced aquatic organisms (FAO, 2013, 2015; Pouomogne & Pemsl, 2008). These fish are nourished with less expensive, natural feed such as plants, weeds, and organic waste from the households. Although in its intensive nature, this aquaculture method can grow profitably, leading to the increased fertilisation of ponds, along with the use of supplementary feed and kitchen manure (Bigwa, 2013). Although aquaculture is practised both in small-scale and large-scale commercial activities, the most predominant aquacultural producers are small-scale farmers (Pouomogne & Pemsl, 2008). The yearly production of fish and fish products remains trivial, at about 870 tonnes a year; although, there appeared indications of state participation through venture capital to assist the growth and development of this sector. Bigwa (2013) established that fish culture is still at its primary state making fish production in Cameroon to remain low.

The demand for fish as food is steadily growing, and aquaculture established itself as an important source for the supply of excellent quality proteins and healthy oils. According to FAO (2015), aquaculture production is already reaching almost 50% of the total fish production for human consumption, including marine and freshwater species. Scholars acknowledge that the prospects of fish farming rest with aquaculture (Béné & Heck, 2005; IUCN, 2007). Godfray, Beddington, Crute, Haddad, Lawrence, Muir, Pretty, Robinson, Thomas, and Toulmin (2010) indicate that aquaculture has a significant positive contribution to food security through extensive and semi-intensive systems of production around the world (FAO, 2015; Lehane, 2013). There are fundamental social and economic differences between extensive/semi-intensive and intensive systems of production, relevant to food security (FAO, 2015). On-farm by-products contain nutritional contributions for semi-intensive production, as they appear to be more affordable than feed used in an intensive system. Due to the low production cost involved in the semi-intensive system, poorer aquapreneurs can afford low-cost inputs thereby making fish to be supplied at considerable and cheaper prices to consumers. Edwards (1997) argues that producing fish intensively at a relatively high cost will only entail profitable marketing at high price due to the costs involved in the production of fish; hence, this will put consumers at a price edge beyond their purchasing power.

Regardless of having a fish-eating convention and considering that aquaculture industry faces instable manageability during its 'quick' improvement in Cameroon, a portion of socio-economic perspectives that impede the development of aquaculture advancement mainly stem from expanding population density with constrained farmland: small land sizes, shortage and poor fishponds inputs, the type of feed that sometimes must be sourced abroad, and the shortage of fingerlings (Oyase & Jemerigbe, 2016). Since those

who practise aquaculture mostly live in rural areas, which consist of the poor majority of the population, the lack of income confines their ability to buy quality sources of feed and fingerlings, which are excessively costly. The quality of freshwater aquaculture has been found to influence fish value and acceptance in some cultures and countries (Badr, Salwa, & Ahmed, 2015). In consequence, freshwater aquaculture is dependably considered to harm freshwater fish. There are likewise issues with insufficient framework advancement like unreliable power that would support the grasping of more detailed outlines (Pouomogne, & Pemsl, 2008; Sanusi, & Danasabe, 2015). Researchers (Badr *et al.*, 2015) attest that, in provincial zones, structures of generation, preparation, circulation, and promotion are lacking. Thus, governmental and private area associations interest in the subsector is a requirement to aquaculture development. Moreover, there is no detailed managerial approach to direct aquaculture management. Since fishponds are situated inside rural farmlands, the application of pesticides on farms harm the ponds, particularly during the wet season. Finally, there are predators that feed on fish, which hinders production.

Sustainable Development of Aquapreneurship

Aquaculture is currently the world's fastest-growing food industry, which accounts for approximately 50% of total global seafood supply (FAO, 2017). Therefore, sustainable aquaculture growth and development is crucial to easing pressure on wild fish stocks, globally under stress due to overfishing (Brandi, 2017). Goddek, Delaide, Mankasingh, Ragnarsdottir, Jijakli, and Thorarinsdottir (2015) state that the aquaculture sector is challenged with the responsibility of feeding a quickly growing world population, and as global seafood consumption rises, sustainable aquacultural production must increase to keep up with the global demand (Conijn, Bindraban, Schröder, & Jongschaap, 2018). However, concerns have emerged around the environmental consequences of such growth and development. Scholars (Brandi, 2017; Goddek & Keesman, 2018) note that with the emergence of innovation and technology, the focus shifted towards the longevity and sustainability of aquaculture. The implementation of certain measures can lead to the sustainable development of aquaculture.

Moving aquaculture into land-based recirculating systems is one of the best ways to reduce or even fully eliminate the environmental impact associated with fish farming. Goddek and Keesman (2018) indicate that the Recirculating Aquaculture System (RAS) gathers technologies that create appropriate conditions for aquaculture by using indoors tanks, pumps, aerators, and filters; with new developments, these can be designed to attain 100% water recycling within the system. However, the possibilities with the implementation of land-based RAS are endless, as they do not only act as a mitigation strategy for traditional aquaculture's environmental effects but also permit for aquaculture to happen anywhere, including urban and desert regions. Kloas, Groß, Baganz, Graupner, Monsees, Schmidt, Staaks, Suhl, Tschirner, Wittstock, Wuertz, Zikova, and Rennert (2015) concur that offshore systems are marine net pens placed out in the open ocean far from the coastline, which result in a more environmentally-conscious option when land space is an issue and using the ocean is the only alternative. However, the open ocean offers deeper water and more powerful currents than in coastal areas; in turn, this means that offshore aquaculture systems allow for more efficient dilution of waste produced from the farm system. Not only that, offshore waters have fewer nutrients and less biodiversity than fragile coastal waters, enabling the faster dispersion of fish waste into the marine food web, with a lesser environmental impact (Kloas *et al.*, 2015).

Aquaculture can be sustained through the implementation of multi-trophic aquaculture, which is a cost-effective way to reduce nutrients accumulation by using filter feeders to replace artificially used filters (Junge, König, Villarroel, Komives, & Jijakli, 2017). The system is advantageous in reducing waste accumulation and assisting the improvement of water quality, all providing additional economic value to the farm. Moreover, the use of renewable energy sources with its marginal cost is one of the best ways to embark on commercial fish farming. Mohtasham (2015) indicates that firms integrated renewable energy systems and aquaculture in several ways, like using wind turbines with installations for shellfish and macroalgae aquaculture, using solar-powered heating and cooling systems, and using wind-powered water pumps. Investing in renewable energy sources to power aquaculture will help to reduce operating costs and boost competitiveness and profitability, and that is before mentioning the reduced environmental footprint. Lastly, scholars (Brandi, 2017; Conijn *et al.*, 2018; Goddek & Keesman, 2018) believe that making environmentally responsible personal food choices is vital to guaranteeing the future of sustainable aquaculture and fisheries. As a consumer of seafood, being informed on the source of what is on your plate, and buying accordingly, can make a lot of difference to how food is grown and manufactured. Eating from sustainable sources means you are consuming fish raised and caught sustainably, and which does not cause overfishing or damage to the ecosystem. Although the implementation of these factors can go a long way to sustain aquaculture and aquapreneurship, but if underestimated, it might still face some challenges in its complete implementation stage to fruition, such as financial. Thus, this forms the basis of the current investigation.

MATERIAL AND METHODS

The research gathered the required data during November and December 2017 on a sample of 150 aquapreneurs (owners-managers) who own and operate fish farms in the Littoral, West, and Central regions of Cameroon. The three regions were selected for their high involvement in aquaculture. The sample was drawn from a population of aquapreneurs (owners-managers). The sample population was invited to take part in survey meetings held at selected farms in the regions. Next, the study employed snowball sampling technique to select aquapreneurs. Those who responded to the invitation through referral were requested to participate in the survey. A total of 195 aquapreneurs were referred, of which 150 aquapreneurs were available and able to fill the self-administered structured questionnaires utilised to compile the results, which made it possible to arrive at a high response rate. The actual sampling frame consisted of 65 aquapreneurs in the Littoral region, 40 aquapreneurs in the Central region, and 45 in the West region, which makes the total of 150 aquapreneurs who own fish farms in the three regions. The significant constraint of this investigation was the sample measure, since the definite population estimate was not justified. Specifically, the unavailability of reliable statistics on the existing aquapreneurs in Cameroon, in which case, could not allow establishing the precise population thus was a major hindrance

Furthermore, the use of samples selected using the snowball sampling technique was due to an unlisted database of aquapreneurs in Cameroon. Moreover, due to resource constraints that could restrict each subject in the population to have an equal chance of being selected could lower the legitimacy and dependability of the investigation. Be that

as it may, this was the most appropriate strategy in the situation because it improved the nature of the gathered information. The complete data of 150 aquapreneurs was analysed descriptively, while inferential statistic, i.e. chi-square, was employed to decide if the observed differences were significant. To test whether there were any significant statistical associations between socio-economic characteristics and participation in fish farming, the study observed gender, age, educational level and marital status.

Ethics-wise, participants were assured of anonymity and the information that could lead to their or their organisations' identification was not revealed. Instead, acronyms were used to ensure confidentiality and protect them from harm. The researcher employed all efforts to obtain participants' consent without coercion. Furthermore, the investigator informed the participants that they could withdraw from the investigation any time and for any reason. Participants were informed of the future use of the data and why their participation was important.

RESULTS AND DISCUSSION

Background Profile of Participants

Background attributes of participants were necessary in light of the challenges that aquapreneurs faces. Table 1 demonstrates a cross-tabulation of respondents' background profile with regards to age, gender, and marital status.

Table 1. Cross-tabulation of participants gender, age, and marital status

Marital status			Age					Total	Summary of Chi-square tests		
			19-23	29-33	34-38	39-43	44 above		Computed X^2	df	p-value
Married	Gender	Male	0	0	26	30	52	**108**			
		%	(0.0)	(0.0)	(19.5)	(22.6)	(39.1)			3	0.000*
		FM	0	3	4	12	6	**25**	18.890	3	0.001*
		%	(0.0)	(2.3)	(3)	(9)	(4.5)				
Single	Gender	Male	1	1	3	3	2	**10**			
		%	(5.9)	(5.9)	(17.6)	(17.6)	(11.8)			4	
		FM	0	3	2	0	2	**7**	4.821		0.306
		%	(0.0)	(17.6)	(11.8)	(0.0)	(11.8)				
Total	Gender	Male	1	1	29	33	54	**118**			
		%	(0.7)	(0.7)	(19.3)	(22)	(36)			4	0.000*
		FM	0	6	6	12	8	**32**	21.577	4	0.001*
		%	(0.0)	(4)	(4)	(8)	(5.3)				
	Total		1	7	35	45	62	**150**			
	%		(0.7)	(4.7)	(23.3)	(30)	(41.3)	**(100)**			

** represents significance at 0.05 error margin; figures in brackets represent percentages.
FM abbreviation used signifies females.
Source: own elaboration based on the survey (n = 150).

As shown in Table 1, the majority (39.1%) of aquapreneurs were married men aged 44 years and above, while only 12% of the married women were aged 39 to 43 years old. A meagre 5.9% were single men aged 23 years and below. The results highlight that people who venture and actively involve themselves in aquapreneurship were married men (39.1%) 44 years old or more, with a very low proportion of married women (12%) aged between 39

to 43 years old. This is not surprising because most of the participants are above 35 years old, which signifies the average marriage age. The low level of aquapreneurial involvement among women can be attributed to their household parental responsibilities. Ngota, Mang'unyi, and Rajkaran (2018) state that it is rooted in most African culture for men to be more involved in activities that financially support their families, while women take charge of household activities. This accounts for the gender imbalance in aquapreneurship involvement, indicating that men are more exposed to high-risk ventures than women.

Moreover, aquapreneurship is very low (5.6%) among the young population of 23 years old and below. This may be explained by the level of expertise and capital needed to get involved in this sector. Furthermore, it appeared that there is a significant statistical relationship between gender, marital status, and age (χ^2 [3, N = 150] = 18.980, ρ = 0.001). The implication is that, aquaculture venture in Cameroon is inclusive, involving individuals of all the different age strata. This finding corroborates Okoronkwo and Ume's (2013) study on small-scale fish cultivators in Cross River State in Nigeria, which affirms that the mean age of table size fish agriculturists in their study was 44.5 years.

Table 2. Socio-economic attributes of respondents

Demographic attributes	No of observations	%	Cumulative
Level of education			
No education	3	2	2
Primary	5	3.3	5.3
High school	43	28.7	34
Tech or university	99	66	100
Total	**150**	100	
Years' of operation			
< 5 years	35	23.3	23.3
5-10 years	74	49.3	72.7
11-15 years	32	21.3	94.0
16-20 years	5	3.3	97.3
>20	4	2.7	100.0
Total	**150**	100	
Other Source of Income			
Food business	40	26.6	26.6
Business & farming	13	8.7	35.3
Oil business	10	6.7	42
Part-time business	11	7.3	49.3
Cocoa farming	1	0.7	50
Real estate	1	0.7	50.7
Restaurant	6	4	54.7
Other retailing business	68	45.3	100
Total	**150**	100	

Source: own elaboration based on the survey (n = 150).

Education-wise, the findings in Table 2 show that a huge number (66%) of aquapreneurs had either acquired a technical or university degree, followed by 28.7% of individuals with a high school certificate, while very few (2%) aquapreneurs has no educational qualification. This simply implies that aquapreneurship required some level of educational

background to successfully venture into it. Moreover, a high proportion (36.7%) of aquapreneurs claimed to have been in business from five to 10 years, with 20% affirming to have operated their fish farms for over 11-15 years. This suggests that most of the aquapreneurs were new in this venture and have been operating for less than a decade. The question whether individuals who pursued aquapreneurship were involved in other income-generating businesses revealed that the majority (43.3%) of the aquapreneurs were engaged in other retail businesses to generate additional income. About 26.6% of respondents said they were engaged in the food business as an additional source of income. However, a meagre proportion (0.7%) of the aquapreneurs were involved in other forms of businesses, such as real estate or cash crops farming like cocoa. I infer from these findings that venturing into aquapreneurship could perhaps be investments in search of additional income. Other businesses and cash crops farming may be the way to raise capital to initiate, maintain, and expand fish farms. These findings imply that even though people are engaged in fish farming, they supplement their income from other sources.

Sources of Fingerlings

Figure 1 displays three key inputs: the primary source of fingerlings, sources to purchase fingerlings and parents, and where fish are reared (cultivated) in commercial aquaculture production.
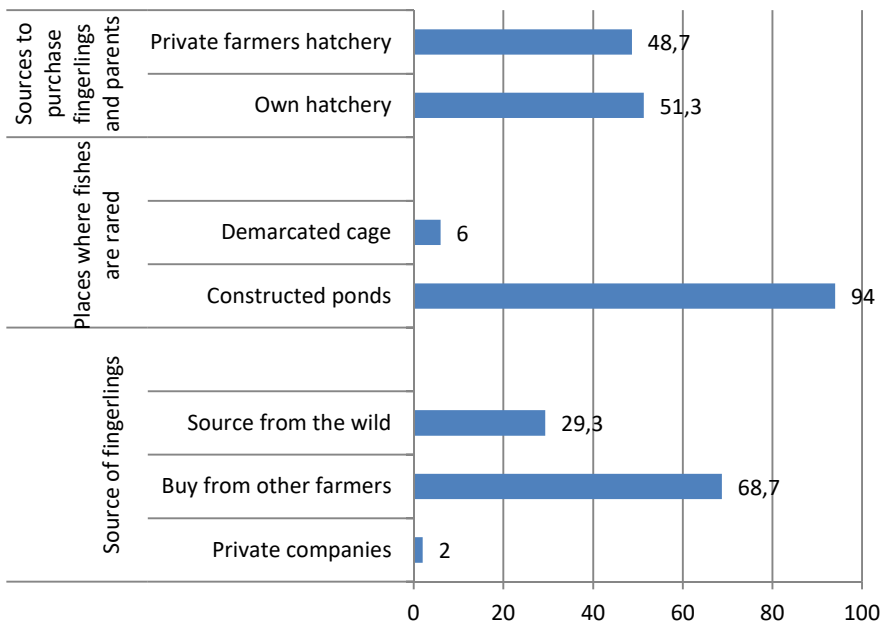
**Figure 1. Source of fingerlings, sources to purchase fingerlings,
parents, and places where fish are bred**
Source: own elaboration based on the survey (n = 150).

As shows Figure 1, nearly half of aquapreneurs (51%) indicated that they have their own hatchery where they source fingerlings, while the other half (49%) specified that they

purchase the fingerlings they need from private farmers. Furthermore, a vast number (68%) of aquapreneurs stated that they prefer to purchase parents and fingerlings from other farmers when necessary, meanwhile some (29.3%) prefer to go to the wild to harvest parents and fingerlings to stock up their ponds, while only a few (2%) buy from private hatcheries. The different sources could be attributed to the lack of adequate financial resources. I find that there is a significant statistical correlation between sources of fingerlings (at X^2 = 49.038; df = 2; P 0.05) and where farmers purchase fingerlings and parents they need. These results may be comparable to studies by some researchers (Agboola, 2011; Ibemere, & Ezeano, 2014) who state that the majority (65%) of aquapreneurs prefers to source fingerlings from private hatcheries in contrast to 38% that source them from governments, and 10% who source them from the wild. Sourcing fingerlings from guaranteed incubation centres of fish that can be reared is the best practice that guarantees the utilisation of value fish seed with great attributes for development. On the contrary, fingerlings harvested from the wild require more incubation facilities to take care of the demand for fingerlings production in Cameroon.

Water Source, the Means of Filling Ponds, and Predators Affecting Fish Survival

I was also interested in determining water sources, the means of filling the ponds, and the type of predators that affect fish survival thereby dwindling production capacities.
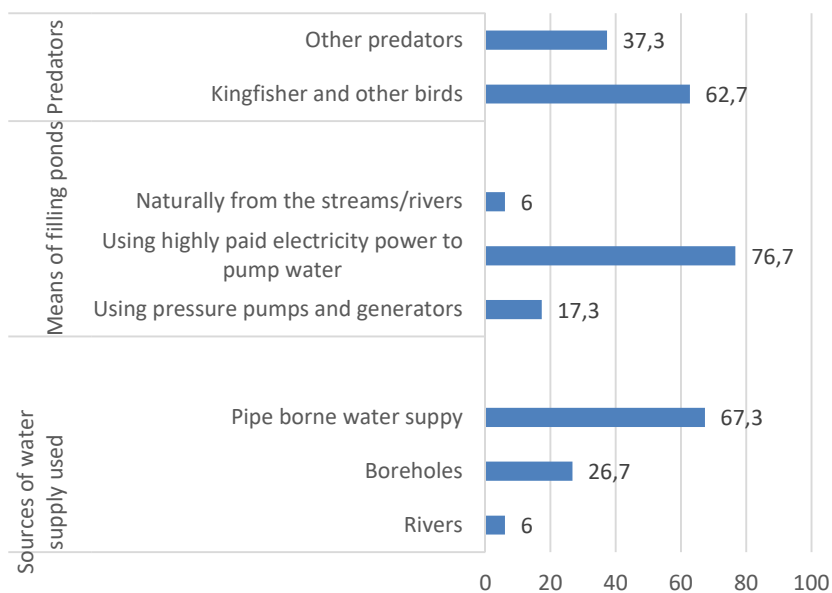
Figure 2. Sources of water, the means of filling ponds, and predators preying on fish
Source: own elaboration based on the survey (n = 150).

As shown in Figure 2, the majority (67.3%) of aquapreneurs indicated that they use pipe-borne water supply to fill their ponds, while only a few (6%) of them use water from a natural running source such as rivers to fill-up their ponds. Meanwhile, using pipe-borne

water supply to fill-up ponds, 76.7% of the aquapreneurs complained of paying high electricity bills for pumping water into the ponds. I find that there is a significant statistical correlation between the source of water supply [χ^2 (2, N = 150) = 150.00, ρ = 0.001] and the means of filling ponds. Moreover, many farmers (63%) indicated that kingfishers and other birds were considered major predators of their fish, while some (37%) indicated that these were other kinds of predators. I find that there is a highly significant statistical correlation between the cost of draining and filling the ponds [χ^2 (1, N = 150) = 10.878, ρ = 0.001] and the impact of predators on fish farms. Hence, these have a high cost of production which, in turn, impact aquaculture production in Cameroon.

Cost of Construction and Managing Ponds

Figure 3 reveals that the majority counting 141 (94%) aquapreneurs faced very high costs both in constructing and managing their ponds, while only nine of them (6%) state it incurs a moderate cost in both constructing and managing their ponds.
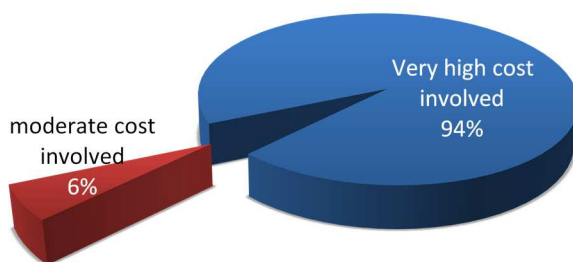
Figure 3. The cost of construction and managing ponds
Source: own elaboration based on the survey (n = 150).

I went a step further to analyse the data using a correlation matrix as shown in Table 3 below.

Table 3. A correlation matrix amid two variables

Variables		What managing ponds entails	The means of water supply
What managing ponds entails	Pearson Correlation	1	0.810**
	Sig. (2-tailed)		0.000
	N	150	150
The means of water supply	Pearson Correlation	0.810**	1
	Sig. (2-tailed)	0.000	
	N	150	150

** – correlation is significant at the 0.01 level. * p < 0.05; ** p < 0.01.
Source: own elaboration based on the survey (n = 150).

This test was to determine whether there was any significant relationship between costs and pond management. This can be attributed to the fact that aquapreneurs who are already established make some profits now, which they invest back into their businesses. A correlation matrix yielded a positive coefficient value of 0.810 and a *p-value* of 0.0001 between the means of filling constructed ponds and the cost of constructing and

managing the ponds, which was significant at 99% level of confidence. The results showed that the high costs of constructing, managing and filling the ponds posed a huge challenge for aquapreneurs in conducting successful business operations in Cameroon.

Aquapreneurial Initiation, Growth, and Developmental Challenges

Furthermore, I asked the respondents to indicate other difficulties they encountered while conducting their aquaculture businesses.
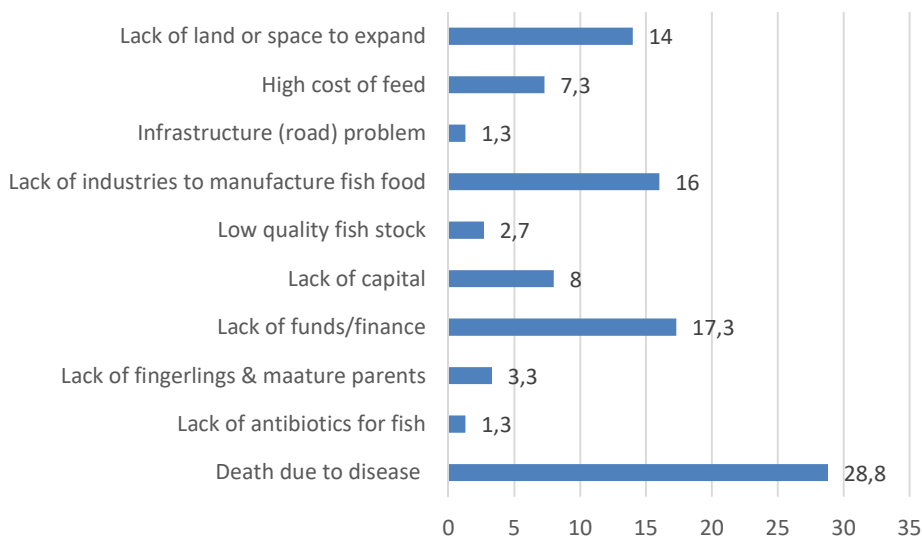
Figure 4. General challenges aquapreneurs encounter
Source: own elaboration based on the survey (n = 150).

Figure 4 illustrates that many aquapreneurs (28.8%) generally faced other challenges such as the lack of funds (17.3%), the absence of industries to produce fish diet (16%), followed by the absence of space for business expansion (14%), and the absence of anti-infection agents and infrastructural problem (1.3%). A study by Shitote, Wakhungu, and China (2012) uncovers that the high cost/the lack of feed was because many of the farmers depended mainly on quite expensive commercial feed. Likewise, a study by the OECD (2010) among fish farming countries notes that fish farming success is due to strong markets, along with access to seed, feed, credit, transportation, and a focus on profits. Aquapreneurs in Cameroon experienced various issues, as elucidated by the respondents of the current research. Authors such as Shitote *et al.* (2012) establish that the high cost of feed, flooding, the high cost of ponds maintenance, poor security, the lack of financing, the drying of ponds during droughts, and the lack of fingerlings were the most challenges that fish farmers encountered.

CONCLUSIONS

The present investigation observed the challenges impeding large scale fish production and the development of aquapreneurship in Cameroon. The examination of the study found that aquapreneurs in Cameroon face significant challenges that hinder the growth and development of aquaculture. This affects investments in this sector as prospects for maximizing profit become pessimistic. The participants were generally negative and doubtful, as they underlined certain crucial issues that hinder the growth and development of aquaculture, including the death of fish due to diseases, the lack of financing, high costs involved in the construction and management of ponds, the effect of predators, the lack of industries to manufacture fish food, the lack of land for expansion, the high cost of feed, and the low-quality bloodstocks that keep on negatively influencing their aquaculture stability and existence. Thus, all this is detrimental to job opportunities and the financial prosperity of the community and Cameroon in general.

Consequently, the following recommendations should assist fish agriculturalists so as to gain the capacity to enhance the usual way of doing things and increase the production, growth, and development of this sector of economy in Cameroon. The government should conduct adequate research to increase the awareness of communities on the impact of aquapreneurship; the government should engage in the growth and production of fingerlings and parents to provide to the aquapreneurs at lower prices. Fish farmers could be trained on feed preparation and fish breeding so as to maintain the constant supply and quality of feed and save on costs for both feed and fingerlings. Formulating guidelines to incorporate aquapreneurs into the financial support systems and further empower them to enter formal credit frameworks will go far in upgrading aquapreneurial growth in Cameroon. Therefore, the Cameroon banking system must improve its policy to accommodate the flexibility of credit for farmers.

REFERENCES

Agboola, W. (2011). Improving Fish farming Productivity towards achieving food security in Osun State, Nigeria: A socioeconomic analysis. *Annals of Biological Research*, *2*(3), 62-74.

Aldrich, H.E., & Zimmer, C. (1986). Entrepreneurship through social networks. In D.L. Sexton & R.W. Smiler (Eds.), *The Art and Science of Entrepreneurship* (pp. 3-23). Newyork: Ballinger.

Aldrich, H. (1999). *Organisations Evolving*. New York: Sage Publications.

Atiase, V.Y., Mahmood, S., Wang, Y., & Botchie, D. (2018). Developing entrepreneurship in Africa: Investigating critical resource challenges. *Journal of Small Business and Enterprise Development*, *25*(4), 644-666.

Badr, M.L., Salwa, O., & Ahmed, Y. (2015). Perceived barriers to consumption of freshwater fish in Morocco. *British Food Journal*, *117*(1), 274-285.

Barnett, W., Greve, H., & Park, D. (1994). An evolutionary model of organizational performance. *Strategic Management Journal*, *15*, 11-28.

Béné, C., & Heck, S. (2005). Fish and food security in Africa. *NAGA, WorldFish Center Quarterly*, *28*(3&4), 8-13.

Bigwa, C. (2013). *Feasibility of aquaculture in Cameroon: the case of the Noun Division in the West region* [final project].

Blanchflower, D., Oswald, A., & Stutzer, A. (2001). Latent entrepreneurship across nations? *European Economic Review*, *45*, 680-691.

Bogne Sadeu, C., Mikalasek, O., Barlet, B., Chia, E., Pouomogne, V., & Eyango, M.T. (2008). Change in the practices and representations of small-scale fish farming activity: a partnership research process in West Cameroon. In *8th International Symposium on Tilapia in Aquaculture 2008*. Yaounde, Cameroon: Arizona.edu.

Brandi, C. (2017). Sustainability standards and sustainable development -synergies and trade-offs of transnational governance. *Sustain Development*, *25*, 25-34. https://doi.org/10.1002/sd.1639

Brummett, R.E., Gockowsky, J., Pouomogne, V., & Muir, J. (2011). Targeting Agricultural Research and Extension for Food Security and Poverty Alleviation: A case study of Fish farming in Central Cameroon. *Aquaculture Economics & Management*, *8*(5/6), 1-10.

Chigunta, F. (2017). Entrepreneurship as a possible solution to youth unemployment in Africa. *Laboring and Learning*, *10*, 433-451.

Clausen, T. (2006). Who identifies and exploits entrepreneurial opportunities. Retrieved from www.ccsr.ac.iuk on June 17,2017.

Conijn, J.G., Bindraban, P.S., Schröder, J.J., & Jongschaap, R.E. (2018). Can our global food system meet food demand within planetary boundaries.? *Agriculture Ecosystem Environmnet*, *251*, 244-256. https://doi.org/10.1016/J.AGEE.2017.06.001

Davidson, P., & Honing, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, *20*, 121.

Dvouletý, O., Gordievskaya, A., & Procházka, D. (2018). Investigating the relationship between entrepreneurship and regional development: Case of developing countries. *Journal of Global Entrepreneurship Research*, *8*(1), 16.

Dvouletý, O., & Orel, M. (2019). Entrepreneurial Activity and Its Determinants: Findings from African Developing Countries. In V. Ratten, P. Jones, V. Braga, & C.S. Marques (Eds.), *Sustainable Entrepreneurship: The Role of Collaboration in the Global Economy* (pp. 9-24). Cham: Springer.

Edwards, P. (1997). Sustainable food production through aquaculture. *Aquaculture Asia*, *2*(1), 4-7.

Evans, M.D. (1989). Immigrant Entrepreneurship: Effects of Ethnic Market Size and Isolated Labor Pool. *American Sociological Review*, *54*(6), 950-962.

FAO. (2004). Fishery Statistics. *Yearbook of Aquaculture Production*, *94*(2), 193.

FAO. (2013). Global aquaculture production statistics for the year 2011.

FAO. (2015). *State of the World fisheries and aquaculture 2015*. Rome.

FAO. (2017). *The state of food and agriculture leveraging food systems for inclusive rural transformation*. Rome: FAO.

Frese, M., & de Kruif, M. (2000). Psychological success factors of entrepreneurship in Africa: A selective literature review. In *Success and failure of microbusiness owners in Africa*. Westport, CT: Quorum Books.

Frimpong, S.K., & Adwani, A. (2015). The challenges and prospects of fish farming in Ghana: A Project Management perspective. *International Journal of ICT and Management*, *3*(2), 29-34.

George, G., Kotha, R., Parikh, Alnuaimi, T., & Bahaj, A. (2016). Social structure, reasonable gain, and entrepreneurship in Africa. *Strategic Management Journal*, *37*(6), 1118-1131.

Goddek, S., Delaide, B., Mankasingh, U., Ragnarsdottir, K., Jijakli, H., & Thorarinsdottir, R. (2015). Challenges of sustainable and commercial aquaponics. *Sustainability*, *7*, 4199-4224. https://doi.org/10.3390/su7044199

Goddek, S., Joyce, A., Kotzen, B., & Burnell, M. (2019). Aquaponics Food Production Systems

Combined Aquaculture and Hydroponic: Production Technologies for the Future Funded. In S. Milliken & H. Stander (Eds.), *Aquaponics and Social Enterprise*. Cham: Springer.

Goddek, S., & Keesman, K. (2018). The necessity of desalination technology for designing and sizing multi-loop aquaponics systems. *Desalination*, *428*, 76-85. https://doi.org/10.1016/j.desal.2017.11.024

Godfray, H.C.J., Beddington, J.R., Crute, I.R., Haddad, L., Lawrence, D., Muir, J.F., Pretty, J., Robinson, S., Thomas, S.M., & Toulmin, C. (2010). Food security: the challenge of feeding 9 billion people. *Science*, *327*, 812-818. https://doi.org/10.1126/science.1185383

Håstein, T.B., Hjeltnes, A., Lillehaug, J., Skåre, U., Berntssen, M., & Lundebye, A. (2006). Food safety hazards that occur during the production stage: challenges for fish farming and the fishing industry. *Review Science Technology*, *25*(2), 607-625.

Holtz-Eakin, D., Joulfaian, D., & Rosen, H. (1994). Sticking it out: Entrepreneurial Survival and Liquidity Constraints. *Journal of Political Economy*, *1*, 102.

Hurst, E., & Lusardi, A. (2004). Liquidity Constraints, Household Wealth, Entrepreneurship. *Journal of Political Economy*, *2*, 112.

Ibemere, I.F., & Ezeano, N. (2014). Status of fish farming in Rivers state, Nigeria. *Journal of Fisheries and Aquatic Sciences*, *9*(5), 321-329.

Ifejika, P.I., Oladosu, I.O., Asadu, A.N., Ayanwuyi, E., Sule, A.M., & Tanko, M. (2015). Assessment of aquapreneur willingness to pay for mobile phone advisory services in anambra state, Nigeria. *International Journal of Agriculture and Forestry*, *5*(6), 330-338.

Ifejika, P. (2015). *Assessment of fish farmers' information behaviour towards mobile phone innovative platform services in selected states of Nigeria*. Ladoke Akintola University of Technology, Ogbomoso, Oyo State.

IUCN. (2007). The advantages and disadvantages of culturing fish. Retrieved from https://doi.org/10.3390/w9030182 on July 12, 2017.

Junge, R., König, B., Villarroel, M., Komives, T., & Jijakli, M. (2017). Strategic points in aquaponics. *Water*, *9*, 182. https://doi.org/10.3390/w9030182

Khan, M.A., Khan, S., & Miyan, K. (2011). Aquaculture as a food production system: A review. *Biology and Medicine*, *3*(2), 291-302.

Kiggundu, M. (2002). Entrepreneurs and entrepreneurship in Africa: What is known and what needs to be done. *Journal of Developmental Entrepreneurship*, *7*(3), 239.

Kim, P, Aldrich, H.E., & Keister, L. (2003). *Access (not) denied: The Impact of financial, human and cultural capital on becoming a Nascent Entrepreneur* (635-378 No. 1). New York.

Kloas, W, Groß, R, Baganz, D, Graupner, J, Monsees, H, Schmidt, U, Staaks, G, Suhl, J, Tschirner, M, Wittstock, B, Wuertz, S, Zikova, A., & Rennert, B. (2015). A new concept for aquaponic systems to improve sustainability, increase productivity, and reduce environmental impacts. *Aquacuture Environment Interaction*, *7*, 179-192. https://doi.org/10.3354/aei00146

Kshetri, N. (2011). Institutional and economic foundations of entrepreneurship in Africa: An overview. *Journal of Developmental Entrepreneurship*, *16*(1), 9-35.

Kuada, J. (2015). Entrepreneurship in Africa – A classificatory framework and a research agenda. *African Journal of Economic and Management Studies*, *6*(2), 148-163.

Lashitew, A.A., & van Tulder, R. (2017). Inclusive business in Africa: Priorities, strategies and challenges. *Entrepreneurship in Africa*, *15*, 71.

Lehane, S. (2013). Fish for the future: aquaculture and food security. Strategic analysis paper, Future Directions International. Retrieved from (tu wstawić podaną stronę http) on July 12, 2017.

Mathews, J. (2002). A Resource-Based View of Schumpeterian economic dynamics. *Journal of*

Evolutionary Economics, *12*(1/2), 29-55.

Miller, J.W., & Atanda, T. (2010). The rise of peri-urban aquaculture in Nigeria. In *The 25th annual conference of Fisheries Society of Nigeria (FISON)*. ASCON Badagry, Lagos State: FISON.

Milliken, S., & Stander, H. (2019). Aquaponics and Social Enterprise. In *Aquaponics Food Production Systems* (pp. 607-619). Switzerland AG: Springer.

Mohtasham, J. (2015). Review Article-Renewable Energies. *Energy Procedia*, *74*(2015), 1289-1297.

Munemo, J. (2012). Entrepreneurship in developing countries: Is Africa different? *Journal of Developmental Entrepreneurship*, *17*(1), 1250004.

Mwangi, H. (2008). *Aquaculture in Kenya, Status Challenges and Opportunities*. Nairobi, Kenya.

Ndah, H.T., Knierim, A., & Ndambi, O. (2011). Fish pond aquaculture in Cameroon: A field survey of determinants for farmers' adoption behaviour. *The Journal of Agricultural Education and Extension*, *17*(4), 309-323.

Ngota, B.L., Rajkaran, S., Balkaran, S., & Mang'unyi, E. (2018). Factors impeding African immigrant entrepreneurs' progression in selected small and medium enterprises: Evidence from a local municipality in South Africa. *South African Journal of Business Management*, *49*(1), 1-9. https://doi.org/10.4102/sajbm.v49i1.10

OECD. (2010). Barriers to fish farming Development as a Pathway to Poverty Alleviation and Food Security. Retrieved from http://www.oecd.org/eco/surveys/South Africa 2013 Overview FINAL.pdf on July 18, 2016.

Okoronkwo, M.O., & Ume, S. (2013). Evaluation of the socioeconomic factors influencing adoption of catfish production technologies in Anambra State, Nigeria. *International Journal of Agriculture and Rural Development*, *16*(1), 1425-1430.

Osure, G. (2011). Introduction to Aquaculture. *Greener Journal of Agricultural Sciences*, *33*(1), 3-7.

Oyase, A., & Jemerigbe, R. (2016). Contribution of aquaculture to poverty reduction and food security in Nigeria. *International Journal of Applied Microbiology and Biotechnology Research*, *4*, 26-31.

Penrose, E. (1959). *The Theory of the Growth of the Firm* (3rd ed.). New York: Oxford University Press.

Pouomogne, V., Brummett, E.R., & Gatchouko, M. (2010). Impacts of aquaculture development projects in Western Cameroon. *Journal of Applied Aquaculture*, *22*(3), 93-108. https://doi.org/1

Pouomogne, V., & Pemsl, D. (2008). *Country Case Study: Development and Status of Freshwater Aquaculture in Cameroon*. Yaounde.

Ratten, V., & Jones, P. (2018). Bringing Africa into entrepreneurship research. In *African Entrepreneurship*. Cham: Palgrave Macmillan.

Rey, S. (2018, December 3). How Africa wins through design-centered and learned entrepreneurship. *Business Report*, pp. 1-2. Retrieved from www.iol.co.za/business-report/opinion/how-africa-wins-through-design-centered-and-learned-entrepreneurship-18364475%0D on March 18, 2019.

Röschenthaler, U., & Schulz, D. (2015). *Cultural entrepreneurship in Africa*. London: Routledge.

Sanusi, S.M., & Danasabe, K. (2015). Problems' and prospects of small -scale fish farming in Minna Agricultural Zone of Niger State, Nigeria, and its implications on increased fish food security. *International Journal of Agricultural Research and Review*, *3*(2), 157-160.

Shane, S.A., & Eckhardt, J. (2003). The individual-opportunity nexus. Handbook of entrepreneurship research: An interdisciplinary survey and introduction. In Z.J. Acs and D.B. Audretsch (Ed.). Boston, MA: Kluwer Academic Publishers.

Shitote, Z., Wakhungu, J., & China, S. (2012). Challenges facing fish farming development in Western Kenya. *Greener Journal of Agricultural Sciences*, *3*(5), 305-311.

Somerville, C., Cohen, M., Pantanella, E., Stankus, A., & Lovatelli, A. (2014). *Small-scale aquaponic*

food production. Integrated fish and plant farming (No. 589). Rome.

Sriram, V., & Mersha, T. (2010). Stimulating entrepreneurship in Africa. *World Journal of Entrepreneurship, Management and Sustainable Development*, *6*(4), 257-272.

Author

Bernard Lama Ngota

Lecturer at the Department of Business Management, Walter Sisulu University, South Africa. He has a Bachelor of Commerce in Management (University of South Africa); Bachelor of Commerce in Business Management (Honours; Walter Sisulu University); Master of Commerce in Business Management (Walter Sisulu University); PhD candidate in Commerce (Business Management; Nelson Mandela University). His research interests include entrepreneurship and small business management, along with marketing and innovative development in marketing and technology. He already authored or co-authored several articles in renowned journals (for instance SAJBM, IJAEE, IRMM).
Correspondence to: Mr. Bernard L. Ngota, Walter Sisulu University, Private Bag X1, Mthatha 5117, South Africa, e-mail: bngota@wsu.ac.za; bencolam@gmail.com
ORCID ⓘ http://orcid.org/0000-0002-0767-4118

Acknowledgements and Financial Disclosure

Copyright and License

Published by Cracow University of Economics – Krakow, Poland

Explorative and exploitative choices in response to initiative failure: Study of entrepreneurs and managers

Piotr Wójcik, Mariola Ciszewska-Mlinarič

A B S T R A C T
Objective: The objective of the article is to investigate how cognitive framing of initiative failure affects strategic decision-making by entrepreneurs and managers in terms of exploitation and exploration.
Research Design & Methods: A set of hypotheses is tested in a quasi-experimental study using a scenario-based approach and a usable sample of 59 participants. Specifically, the data were analysed using two paired t-tests and a one-way multivariate analysis of variance (MANOVA).
Findings: We draw on prospect theory, behavioural theory, and the threat-rigidity hypothesis to investigate the individual intention to make explorative and exploitative choices in response to initiative failure. The study finds that – under the condition of uncertainty – the experience of initiative failure increases entrepreneurs' (decreases managers') willingness to make risky choices and decreases entrepreneurs' (increases managers') willingness to make risk-avoidant choices.
Implications & Recommendations: This study differentiates the notion of initiative failure from the broader notion of entrepreneurial failure, showing that it has a stimulating (discouraging) effect on further entrepreneurial (managerial) intentions in terms of attitudes to risk. The study was conducted on a relatively small sample of participants representing businesses in Poland.
Contribution & Value Added: This study extends existing lines of reasoning by considering initiative failure – clearly delineating it from entrepreneurial failure – and testing its effect on intentions to make strategic choices among entrepreneurs and managers. Decision-makers' responses cannot be explained solely by the behavioural theory and individual factors, as they are also affected by the organisational context.

INTRODUCTION

The topic of perception of and responses to failure has attracted considerable attention in the field of entrepreneurship (Ucbasaran, Westhead, Wright, & Flores, 2013). This is not surprising given that entrepreneurship is a risk-involving activity that leads to failure more often than not (McGrath, 1999). However, most of the research in this area focuses on successes, while limited attention has been paid to failures (Yamakawa, Peng, & Deeds, 2015). This is thought-provoking, since failures may have salient impacts on entrepreneurs' future choices.

Entrepreneurial failure refers to the termination of an entrepreneurial venture (e.g., Shepherd, Wiklund, & Haynie, 2009; Yamakawa, Peng, & Deeds, 2015) or ownership discontinuance (Shepherd, 2003) due to the fall of performance below a critical threshold level, which leads to insolvency or bankruptcy and is often referred to as business failure.

Scholars characterise entrepreneurial failure in terms of causes and consequences for entrepreneurs and the entrepreneurial process (Khelil, 2016). Business failure experience is believed to impact risk attitudes and further choices with appropriate influence on entrepreneurs' perception of risk (Al Mamun, & Ibrahim, 2019; Kozubíková, Dvorský, Cepel, & Balcerzak, 2017). On the one hand, the perception of risk is considered a source of knowledge and learning that contribute to the enhancement of social capital, which in turn is used in further re-entry (Shepherd, 2003; Ucbasaran *et al.,* 2013). On the other hand, failures that are too intense, too numerous or too frequent may have detrimental effects on further entrepreneurial action (Fang He, Sirén, Singh, Solomon, & von Krogh, 2018).

However, while studies in entrepreneurship contribute to the understanding of how *business failure* affects emotions, entrepreneurial learning, and action, they remain silent in regard to the role of *initiative failure* in the same respect. Acknowledging single initiatives in entrepreneurship research is important because of their cumulative influence on a firm's overall performance and, thus, its survival and growth. The entrepreneurial process involves testing different assumptions around which a number of initiatives are organised. The execution of these initiatives can lead to a continuum of outcomes, ranging from below to above the aspiration level, thus affecting decision-makers' related action. As opposed to business failure, initiative failures provide frequent and continuous feedback, incrementally enhancing the knowledge base and, hence, they play a vital role in shaping the entrepreneurial process. Support for the assertion that past experience affects future intentions and behaviour can be found in both the theory of entrepreneurial learning (e.g. Cope, 2011) and the theory of planned behaviour (Ajzen, 1991). Therefore, the analytical level of a particular initiative offers an opportunity to trace cause-effect relationships in a more precise way than business failure at the aggregated level of the entire company, as the ultimate outcome of a business venture may also be affected by external incidental or discontinuous/radical events. At the heart of this issue lies the question of whether – after experiencing an initiative failure – entrepreneurs are more willing to adapt with a flexible response and engage in a significant change in their strategy or would they rather "play it safe" by applying existing solutions, business models, and products? Studies in entrepreneurship and strategy emphasise the importance of cognitive bias and framing effects in this respect (e.g., Simon & Schrader, 2012). However, the existing entrepreneurship research and decision-making theories remain equivocal

on how *initiative failure* could potentially impact responses. Moreover, the literature suggests that individual traits (e.g. Dew, Read, Sarasvathy, & Wiltbank, 2008) and organisational context (Cyert & March, 1963; Ocasio, 1997) affect the level of risk aversion involved in the decision-making process after a decision-maker faces a form of failure. Taken together, the extant studies overlook the relationships between initiative failure, entrepreneurial cognition, and behaviour.

We address this gap by asking: How does cognitive framing of initiative failure affect further strategic decision-making by entrepreneurs and managers in terms of exploitation and exploration? Furthermore, we aim to identify how entrepreneurs and managers differ in their responses to initiative failure.

We conducted a quasi-experimental study with a scenario-based approach, using a cover story followed by a questionnaire and inviting participants to a computer lab. Our purpose was to identify the effect of initiative failure on subsequent intentions to make two strategic choices – exploration and exploitation – which respectively correspond to risk-seeking and risk-averse behaviour. In order to understand the specificity of entrepreneurs' responses, we compare them with managers' responses under the same conditions.

This study makes three contributions to the entrepreneurial failure literature. Firstly, while the majority of studies focus on failure on the aggregate organisational level, they overlook the level of individual initiatives. Our study fills this gap.

Secondly, the entrepreneurship research underlines the importance of entrepreneurs' cognition in the entrepreneurial process (Shepherd, Williams, & Patzelt, 2015). However, the role of cognitive framing of and response to initiative failure in terms of intentions remains unclear. Hence, this study draws from entrepreneurship, behavioural strategy research, and decision-making theories to identify whether and how cognitive bias may affect further strategic choices in response to initiative failure.

Third, entrepreneurial failure research focuses on developed economies, leaving transition economies, especially those of Central and Eastern European (CEE) countries, relatively unaddressed. In this respect, the applicability of entrepreneurship research findings from developed economies to the context of transition economies is questionable (Bruton, Ahlstrom, & Obloj, 2008). Therefore, this study contributes by considering entrepreneurs' and managers' responses to initiative failure by bringing to the fore the empirical setting of Poland.

The remainder of the paper is organised as follows. Firstly, we review the literature on uncertainty as the context for decision-making and explain the relationship between framing effect and decision-making in response to initiative failure. We then develop hypotheses. Next, we present basic information about our sample and justify the use of the experimental method. Further, we test hypotheses by employing paired t-test and one-way MANOVA methods, followed by a discussion of the study results and contributions. We conclude by discussing limitations of the study and presenting avenues for future research.

LITERATURE REVIEW

Uncertainty and Entrepreneurial Choices

Entrepreneurship and uncertainty are inseparable (Kirzner, 1973). Uncertainty stems from an inability to assign probabilities to future events due to a lack of information about cause-effect relationships and a decision's outcome (Hoskisson & Busenitz, 2002; Aulová,

Pánková, & Rumánková, 2019). Some authors consider entrepreneurs as particularly capable of dealing with uncertainty, as their cognitive abilities allow them to effectively identify market opportunities or apply new methods of resource usage (Simon & Schrader, 2012; Křečková & Brožová, 2017; Ključnikov, Civelek, Čech, & Kloudová, 2019). However, sole focus on seeking new opportunities, instead of exploiting existing ones, may be myopic and detrimental on long-term firm performance. Therefore, the appropriate allocation of limited resources between two strategic approaches – seeking new (exploration) and exploiting existing opportunities (exploitation) – plays a major role in new venture's survival and growth (Hitt, Ireland, Sirmon, & Trahms, 2011). Exploitation focuses on the incremental improvement and re-use of existing routines (March, 1991). Exploration focuses on discontinuous changes, experimentation, risk taking, and innovation (March, 1991). As March (1991) argues, "both exploration and exploitation are essential for organisations, but they compete for scarce resources" (p. 71), because they require different structures, capabilities, and processes. As Ireland, Hitt, and Sirmon (2003) put it, the balance between "both opportunity-seeking and advantage-seeking behaviours are necessary for wealth creation, yet neither alone is sufficient" (p. 965). Therefore, exploitation could be argued to align with risk-averse choices, whereas exploration would be aligned with risk-seeking choices.

Initiative Failure

The consequence of choices made under conditions of uncertainty is that entrepreneurs more often face a form of failure rather than the expected success (McGrath, 1999; Hudáková & Dvorský, 2018). The literature mostly interprets entrepreneurial failure in terms of business termination due to not meeting goals (Shepherd, 2003; Shepherd et al., 2009). This article considers a more nuanced view and recognises failure regarding an entrepreneurial initiative. Initiative failure is defined as the termination of an organisational value-creating initiative that has fallen short of its goals (McGrath, 1999; Shepherd et al., 2011). Initiatives have a very close meaning to projects – understood as "new venture, new product, new service, entering new markets, and/or implementing new processes" (Shepherd & Cardon, 2009, p. 923) – but they lack the structure and discipline typical for project management; i.e., an initiative does not necessarily have assigned roles or key performance indicators. Repetition of these failures and their cumulation over time may lead to the venture's termination in the long term but each one separately unlikely result in immediate bankruptcy (Yamakawa et al., 2015). Due to low performance – i.e. below targets defined by the initiative's key resource provider (Shepherd et al., 2009) – initiative failure can be considered as a driver of new emotions and related actions (behaviour) in decision-makers (Shepherd & Cardon, 2009). However, initiative failure triggers a different form of learning and affects further decision-maker's choices differently as compared to business failure. This mechanism stems from the fact that the former type induces shallower financial and emotional losses. For these reasons, in contrast to business failure, initiative failure is more likely associated with "failure tolerance" among leaders. Therefore, it becomes easier for an individual to reframe the initiative failure as an opportunity to learn and regain losses by engaging in a new initiative (see Shepherd et al., 2011).

Framing Effect and Decision-Making

Because failure deviates from expected outcome, being "somehow surprising or confus-ing" (Maitlis, 2005, p. 21), it is subject to interpretation and undergoes the mental pro-cess of sensemaking. Due to uncertainty and decision-makers' personal goals, beliefs, and values, the decision-making process involves the phenomenon of cognitive bias. Preferences towards risk are the product of an individual's values, have been conceptu-alised under the notion of "framing effect," and are argued to depend on context; i.e. individuals are risk-averse in the domain of gains and risk-seeking in the domain of losses (Kahnemann & Tversky, 1982).

Risk connotes decisions made under the condition of outcome certainty. However, because decision-makers in real management situations operate in the space of uncer-tainty rather than risk (Schoemaker, 1990), one needs to make an assumption to be able to apply such a logic to the management context. Decision-makers are convinced that they can control the future to some extent (March & Shapira, 1987) when choosing from among alternative actions. To that end, they are faced with a dilemma of choosing be-tween alternatives that will either lead to a probable success (i.e., meeting or exceeding the goal) or failure (i.e., not meeting the initiative's ultimate goal). In this sense, deci-sions are made depending on the individual belief that one scenario is more probable than another one to bring desired outcomes. Consequently, intentions and ensuing de-cisions can be traced to two alternative scenarios respectively corresponding to risk-seeking and risk-averse choices in a given context; i.e., when a decision-maker believes that the preferable outcome is more or less probable.

Hypotheses Development

Entrepreneurial failure is a complex social phenomenon affecting cognition and emotions. Researchers find that business failure presents opportunities for sensemaking, learning (Ucabasaran *et al.*, 2013; Yamakawa *et al.*, 2015), and developing new business skills (Es-pinoza-Benavides & Díaz, 2019). However, learning is not automatic, because failures in-duce negative emotions such as grief, which reduces individuals' ability to process infor-mation in the short term (Shepherd, Patzelt, Williams, & Warnecke, 2014) and, thus, may have a demotivational effect leading to a decrease of self-confidence and risk-taking pro-pensity of entrepreneurs (e.g., Shepherd, 2003). As a result, changes in the nature of stra-tegic choices in the case of future market re-entry are unlikely to occur. Otherwise, busi-ness failure ultimately enables the exploitation of new entrepreneurial opportunities through entrepreneurs' alertness – i.e. the cognitive capability to recognise and exploit new business ideas (Bilan, Mishchuk, & Pylypchuk, 2017; Boso, Adeleye, Donbesuur, & Gyensare, 2019) – and to enhance firm innovativeness through reflection and constructive conflict (Danneels & Vestal, 2020). A recent study by Kauppinen, Paloniemi, and Juho (2019) shows that when learning is supported by mentors, after failing in their businesses, start-up founders are more likely to try again. In a study of Chinese serial entrepreneurs, Lin, Yamakawa, and Li (2019) found that failure experiences are positively associated with substantial strategic changes in subsequent entrepreneurship endeavours. Likewise, Acheampong and Tweneboah-Koduah (2018), in their study of Ghanian entrepreneurs,

found that past entrepreneurial failure has a positive effect on future entrepreneurial intentions, promoting their explorative learning behaviour. So far, conceptual and empirical studies have considered business failure rather than initiative failure (see McGrath, 1999). For this reason, they seem not to precisely match our issue of interest, i.e. initiative failure. However, empirical studies in the behavioural tradition have provided some indirect arguments allowing us to consider decision-makers' reaction to initiative failure. Namely, the literature shows that decision-makers are more willing to accept risk in problematic situations (e.g., Greve, 2003; Kahneman & Tversky, 1982). Specifically, the above suggests that initiative failure will likely lead to a change in perception of the future situation. Kahneman and Tversky (1979, p. 286-287) overtly assume that entrepreneurs after a loss are "likely to accept gambles that would be unacceptable otherwise." Therefore, the framing effect within prospect theory will likely be applicable in the case of entrepreneurs:

H1a: Entrepreneurs' intention to make explorative choices is significantly higher after experiencing initiative failure than before experiencing it.

H1b: Entrepreneurs' intention to make exploitative choices is significantly lower after experiencing initiative failure than before experiencing it.

The prior research suggests that particular responses to business failure may differ between entrepreneurs and managers.

Firstly, studies in entrepreneurship attribute different responses to personal traits of entrepreneurs and non-entrepreneurs. Entrepreneurs were found to exhibit a higher propensity toward risk than managers (Stewart & Roth, 2001) and exhibit greater optimistic overconfidence (Simon & Shrader, 2012) than non-entrepreneurs. In this regard, a supporting view is offered by the research on decision-making logic among entrepreneurs and managers, who present two distinct approaches: effectuation and causation (Sarasvathy, 2001). In effectual logic, the entrepreneur develops an opportunity in short-term experiments and pivots when new information is available. Effectuation assumes that the entrepreneurial process relies on leveraging environmental contingencies by employing flexible choices (Benazzouz, 2019). Causation assumes that any business undertaking requires creating a clear plan of action aiming to achieve the defined final objective up front (Hauser, Eggers, & Güldenberg, 2019). This approach focuses on selecting between means to maximise expected returns (Sarasvathy, 2001). The application of particular decision-making logic depends on two main factors. First is the stage in a company's lifecycle. Decision-makers shift their decision-making from effectual in the early stage to causal when the firm grows and matures (e.g. Ciszewska-Mlinaric, Obloj, & Wasowska, 2016).

The effectual logic relies on constant experimentation. Entrepreneurs will likely use effectuation and, hence, flexibly react to changing circumstances by adjusting goals to available means. In this way, they will be less concerned with future threats (Read, Sarasvathy, Dew, & Wiltbank, 2016). Flexibility contributes to exploratory learning and choices by identifying, understanding, and applying new knowledge in response to rapidly changing environments (Cai, Guo, Fei, & Liu, 2017). Causation logic predicts that – in the case of adverse experience or low performance – managers adapt via defined rules related to avoiding uncertainty, revealing a tendency to maintain existing procedures. Actual outcomes falling below desired goals in the short term stimulate the search for existing and known solutions to the problem (i.e. exploitative choices; Cyert & March, 1963). In this

regard, Zahra (1996) shows that managers are less willing to make risky choices in times of performance downturn than in times of prosperity.

Secondly, the potential source of difference in choices of response to failure is associated with the decision-making context, which leads to the development of different cognitive schemata. Greater uncertainty favours effectuation, while risk-related situations favour causation (Vershinina, Barrett, & McHardy, 2017). Managers focus on different types of issues in their work than do firm owners. This resonates with the attention-based view of the firm, which suggests that organisations create the context for decision-making by imposing appropriate structures that "allocate and distribute the stimuli that channel the attention" (Ocasio, 1997, pp. 187-188).

Therefore, entrepreneurship and strategy research suggest that in the context of initiative failure, entrepreneurs will more likely make explorative choices and less likely make exploitative choices compared to managers.

H2a: After experiencing an initiative failure, entrepreneurs demonstrate significantly higher intention to make explorative choices than managers.

H2b: After experiencing an initiative failure, entrepreneurs demonstrate significantly lower intention to make exploitative choices than managers.

MATERIAL AND METHODS

Participants

Participants included 40 practicing entrepreneurs and 36 managers. Participation in this study was on a voluntary basis. Recruited through two entrepreneurship associations, the entrepreneurs were founders actively running their businesses in the information technology (IT) industry and had one to ten years of experience in establishing and running a business (Mean = 4.38). The managers were recruited through a university MBA program for middle-level decision-makers in the IT industry. The experience in decision-making in sales and marketing ranged from three to seven years (Mean = 5.08). We ensured that the recruited managers did not have any entrepreneurial experience or intention by controlling for entrepreneurial intention (Liñán & Chen, 2009). We checked for prior entrepreneurial experience in direct questions. Participants who reported a high level of entrepreneurial intention (i.e., mean score above 3.5 on a seven-point Likert scale) or with previous experience as entrepreneurs were excluded from further analyses. In total, 76 questionnaires were completed and returned. We excluded answers indicating careless responses based on unusually short measure time (i.e. less than the mean minus the standard deviation, as measured in the survey software tool; cf. Meade & Craig, 2012). The ultimate usable sizes of research groups were, respectively, 34 entrepreneurs and 25 managers. The respondents' demographic data are summarised in Table 1.

The study context is Poland, which has undergone the process of transformation from a centrally planned to a market economy. However, this market development has come with challenges of transformation. Despite remarkable economic development in the past 30 years, both aspiring and experienced entrepreneurs have faced many difficulties due to underdeveloped country institutions, reflected in poor access to financing (Czemiel-Grzybowska & Skowronek-Mielczarek, 2017), weak institutional support, insufficient innovation capacity, resource constraints, and legal and political instability

(Gorączkowska, 2018; Lewandowska & Stopa, 2018; 2019). Furthermore, these conditions expose entrepreneurs to higher environmental uncertainty compared to their peers from developed markets (e.g., Covin & Miller, 2014). These institutional conditions offer a unique opportunity to extend prior research and help to understand the context of entrepreneurs' decision-making. In such an unfavourable and quickly changing external environment, the entrepreneurial process has for a long time involved a relatively large number of challenges vis-à-vis developed economies.

Table 1. Respondents' demographic data

Respondent category	N	Age (years)	Gender	Total experience in current position (years)	Total experience in IT industry (years)
Entrepreneurs	34	25-41 Mean = 29.2	Male = 18 Female = 16	Mean = 4.38 Dominant = 4	Mean = 5.14
Managers	25	32-47 Mean= 37.3	Male = 12 Female = 13	Mean = 5.08 Dominant = 4	Mean = 9.21

Source: own study.

Materials and Procedure

To address our research questions, we employed a quasi-experimental design. This method has been extensively used in different management disciplines and is now gaining popularity in entrepreneurship studies (Hsu, Simmons, & Wieland, 2017b). The experimental design assumes the application of a laboratory setting, thus a simplification of reality: "The goal of experiments is to examine causality (internal validity) rather than to generalise results to other situations or populations (e.g., external validity)" (p. 399). Our study considers one particular initiative and its failure: an event that we create artificially. In doing so, we can extract the 'pure' effect of initiative failure on further choices for analytical purposes. Hence, we believe that our research design provides a reliable test of our research question. In contrast to correlational design, experimental design allows us to address theoretical questions but requires caution when applying the findings in a business setting.

Our experimental study took the form of a questionnaire using scenarios, conducted via a popular online survey tool. Participants were invited to participate anonymously in the study in a computer lab and could not communicate among themselves. They were asked to fill in a questionnaire consisting of three parts. The first part included questions related to gender, entrepreneurial and professional experience, and entrepreneurial intention.

In the second part, respondents read a short cover story asking them to imagine themselves in the position of a CEO of a young technological venture operating in the audiobook industry. It presented an imaginary market situation with the aim of evoking a high sense of market uncertainty. To create an artificially high level of uncertainty, we used a description of the industry's characteristics (competitors, distribution channels, etc.) and provided limited information about the causes of arising rivalry. Respondents were then asked about the strategy they believed to be appropriate to follow and were presented with statements referring to exploration and exploitation constructs. We operationalised initiative failure in the third part. We elicited the sense of failure among respondents by showing a message on a screen stating that a computer algorithm had analysed their answers and concluded that their decisions would most likely lead to significant losses and subsequent bankruptcy in the next 18 months. Participants were also informed that there was a chance to rebuild their

firm's market position. The message on the computer screen asked them to make another set of decisions based on both exploration and exploitation measures simultaneously.

The categories of the independent variable were formed by two groups of participants (entrepreneurs and managers). This was done for the purpose of the analysis regarding hypothesis 2. Dependent variables (i.e., exploration and exploitation) were measured using He and Wong's (2004) four-item scales. All survey items used a five-point Likert scale. We enhanced the validity of the construct measures with a pre-test and adapted them to the audiobook industry. For exploration measure, participants were asked to indicate the extent to which they agree with each of the following statements: (1) introduce new products (e.g., headphones, personal audio players); (2) extend product range (e.g., newspapers, poems, weekly magazines); (3) enter new markets (addressing new customer segments, foreign expansion); (4) enter new technology fields (development of software for fast text-to-voice translation). For exploitation measure, the following statements were used: (1) improve existing product quality; (2) improve existing sales and marketing; (3) reduce audiobook production cost (e.g., reduce the number of "superproductions" with celebrities); (4) improve the number of produced audiobooks or reduce operational costs.

To determine the internal consistency of multi-item scales, we examined Cronbach's alphas. The results showed acceptable values, which allowed us to combine the scores into mean values for both dependent variables (Nunnally, 1978). In all cases, Cronbach's alphas were greater than 0.6 and varied between 0.607 and 0.915; thus, they satisfied Nunnally's threshold level of acceptable reliability (Álamo-Vera & Suárez-Ortega, 2005).

RESULTS AND DISCUSSION

Statistical analysis was conducted using the SPSS software. Table 2 presents the descriptive statistics.

Table 2. Descriptive statistics

Variable	Respondent Category	N	Before failure		After failure	
			Mean	SD	Mean	SD
Exploitative choices	Entrepreneurs	34	3.63	0.65	2.56	0.83
	Managers	25	3.39	0.79	3.46	0.76
Explorative choices	Entrepreneurs	34	3.35	0.71	4.03	0.42
	Managers	25	3.66	0.65	3.28	0.75

Source: own study.

Dependent variables' scores were normally distributed for each research group, as assessed by the Shapiro-Wilk test ($p \geq 0.05$), whose results are presented in Table 3.

Before the hypotheses were tested, we checked for differences between answers of the two studied groups as a response to the scenario before they were shown a failure message. To do this, we used the one-way multivariate analyses of variance (MANOVA). The differences were not statistically significant at $F(4,176) = 1.65, p = 0.160$, Wilk's $\lambda=0.923$, $\eta_{\rho}^2=0.036$.

Table 3. Shapiro-Wilk's normality tests

Variable	Respondent category	Statistics	Df	Sig.
Exploitation	Entrepreneurs	0.951	34	0.131
	Managers	0.960	25	0.422
Exploration	Entrepreneurs	0.954	34	0.162
	Managers	0.947	25	0.265
Exploitation (follow-up test)	Entrepreneurs	0.938	34	0.053
	Managers	0.919	25	0.050
Exploration (follow-up test)	Entrepreneurs	0.961	34	0.259
	Managers	0.949	25	0.240

Source: own study.

To test hypothesis 1, a paired t-test was conducted for entrepreneurs (Table 4, Figure 1). The results showed that entrepreneurs revealed significantly lower exploitation scores after receiving the failure message ($t(33)$=-7.20, $p < 0.001$). In turn, the experimental factor showed a significant increase of 0.676 in exploration scores, $t(33)$=5.94, $p < 0.001$ ($M_{before} = 3.350, SD = 0.710; M_{after} = 4.029, SD = 0.421$). Therefore, hypotheses 1a and 1b are supported.

Table 4. Paired sample t-tests (entrepreneurs)

	Variable	Mean	SD	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	Exploitative choices	-1.073	0.869	0.149	-7.200	33	0.000
Pair 2	Explorative choices	0.676	0.664	0.114	5.937	33	0.000

Source: own study.
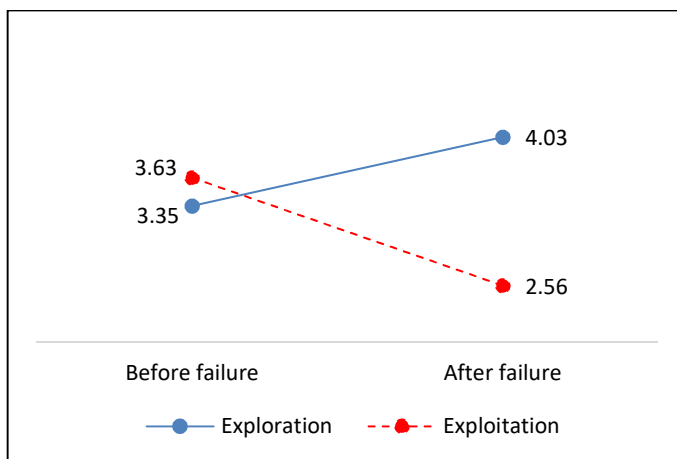
Figure 1. The effect of failure on strategic choices among entrepreneurs
Source: own elaboration.
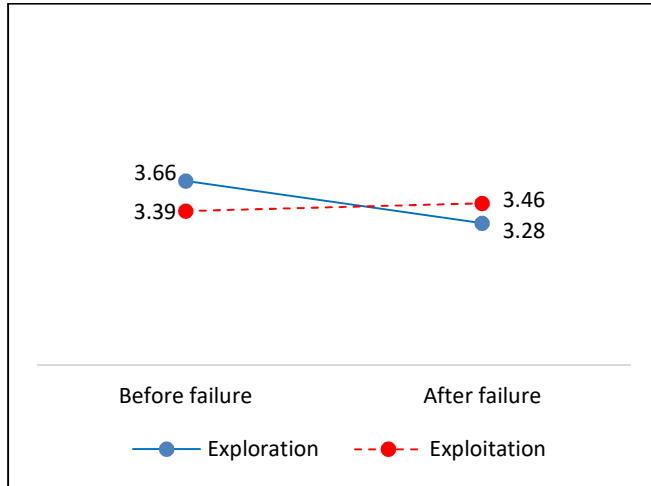
Figure 2. The effect of failure on strategic choices among managers
Source: own elaboration.

Hypothesis 2 was tested using the one-way MANOVA. There appeared homogeneity among variance-covariances matrices, as assessed by Box's test of the equality of covariance matrices (*M*=10.240, *p*=0.020). There was the homogeneity of variances, as assessed by Levene's test (*p*>0.05). There also appeared a statistically significant difference between the decision-makers' types on the combined dependent variables, $F(2, 56) = 28.993, p < 0.001, \text{Wilk's } \lambda = 0.491, \eta_\rho^2 = 0.509$. Entrepreneurs showed significantly higher mean exploration scores than managers. For exploitation, entrepreneurs revealed significantly lower scores than did managers (Figure 3). These results support hypothesis 2a and hypothesis 2b.
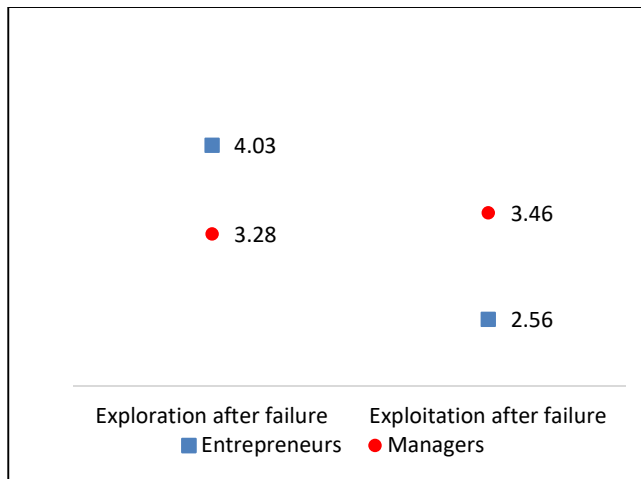
Figure 3. The effect of failure on strategic choices between entrepreneurs and managers
Source: own elaboration.

Prior work focuses on the relationships between business failure, learning from such failure (Cope, 2011; Fang He *et al.*, 2018), and emotions as moderators of this relationship (Fang He *et al.*, 2018; Hsu *et al.*, 2017a; Shepherd *et al.*, 2009). This paper revisits and extends prior research by addressing the issue of cognitive framing of *initiative* failure and its impact on further strategic choices in the context of the transition economy of Poland. The results of this study provide an empirical test of three hypotheses, and the results support hypotheses H1 and H3. Ultimately, our findings present implications for extant theoretical and empirical studies.

Firstly, prior research on entrepreneurial failure focuses on the aggregate level of the company (i.e. *business* failure). In this study, we apply a lower-level theoretical lens to distinguish *initiative* failure; a notion conceptually close to that of *project* failure. Following Shepherd *et al.* (2011), we argue that initiative failure is more common than business failure, and its cumulative effect on ultimate business failure is significant; nonetheless, research to date has remained silent about it. Interestingly, the results of this study are in line with the suggestion of prior studies on business failure in that initiative failure increases (decreases) the intention to make explorative (exploitative) choices (Acheampong & Tweneboah-Koduah, 2018; Cardon *et al.*, 2005; Hayward *et al.*, 2006; Lin *et al.*, 2019). In this respect, we suggest that – in new ventures – initiatives serve as vehicles for testing assumptions that incrementally provide continuous feedback and enhance the knowledge base. In this sense, they affect future choices. These results seem to confirm the assumption that entrepreneurs exhibit a "positive" bias and demonstrate greater optimism and self-confidence (Simon & Shrader, 2012), which makes them more risk-prone on a systemic basis relative to managers (Stewart & Roth, 2001).

Secondly, this study shows that initiative failure is subject to interpretation and stimulates decision-makers to a behavioural response. Similarly to a business failure, initiative failure affects future behavioural intentions. Considering individual and organisational factors, we were able to offer new insights into the antecedents of individual risk-related choices. We found that response to the initiative failure (in terms of bias from expected performance) led to flexible behaviour. Contrary to what psychology and organisational decision-making theories suggest – but in line with effectuation theory (Acheampong & Tweneboah-Koduah, 2018; Lin *et al.*, 2019) – the entrepreneurs we studied displayed an increased tendency towards risk-seeking behaviour (i.e. intention to make explorative choices) in response to initiative failure. Moreover, this effect was stronger than the one observed among managers. This finding seems to converge with Sarasvathy, Simon, and Lave's (1998) results. They found that entrepreneurs control the outcomes at a given risk level and frame problems in accordance to their personal values. In turn, managers tend to control the risk within structured problem spaces and avoid situations in which they risk high levels of personal responsibility.

This suggests that prospect theory (Kahneman & Tversky, 1979) well explains entrepreneurs' behaviour after experiencing initiative failure. The opposite explanation holds for managers. Therefore, our results tend to support escalation bias (McCarthy *et al.*, 1993) in the case of entrepreneurs. In sum, our findings call into question the assumption that failure induces demotivation, trauma, grief, and debilitation (e.g., Cope, 2011; Shepherd, 2003). Our findings may be attributable to the fact that our focus of interest is initiative failure, which causes a relatively low level of negative emotions, as opposed

to business failure. This may suggest that small failures play a motivating role for entrepreneurs, inclining them to other experiments.

Thirdly, although there is significant research in developed economies (e.g., Fang He *et al*., 2018; Hsu *et al*., 2017a; Yamakawa *et al*., 2015) and a growing body of literature in emerging and transitional economies (e.g., Acheampong & Tweneboah-Koduah, 2018) on *entrepreneurial* failure, very few scholars examined how *initiative* failure affects future choices in transitional economies. Relying on data obtained from Poland, our results indicate that initiative failure positively influences explorative decision-making and that this effect is stronger for entrepreneurs than managers. Our findings contribute to research on entrepreneurial failure by extending the application of prospect theory and effectuation in transitional economies in the context of initiative failure. These results remain consistent with prior findings in that effectuation logic is a more effective strategy in new ventures in transition economies (Cai *et al*., 2017).

CONCLUSIONS

In this study, we set out to understand how cognitive framing of initiative failure affects further strategic decision-making by entrepreneurs and managers, in terms of exploitation and exploration. Our findings suggest that initiative failure increases explorative (decreases exploitative) choices of entrepreneurs to a larger degree than those of managers. We contribute to the literature in three ways. Firstly, we offer a nuanced perspective, by differentiating the notion of initiative failure from business/venture failure. We show that these two phenomena differ in terms of framing effects and how decision-makers react to them. Secondly, we test this psychological effect by empirically measuring changes in the intentions to pursue exploration and exploitation strategy, considering them as distinct but not mutually exclusive constructs. Thirdly, we provide the context of the transitional economy of Poland.

This study has practical implications for entrepreneurs, as it suggests that they should understand the role of initiative failure as an opportunity to learn and improve future actions. Moreover, our findings offer an important policy-making lesson, by emphasising the importance of support for entrepreneurs who face initiative failures. Moreover, public institutions should promulgate acceptance for entrepreneurial failure in society; not as a sign of weakness but that of strength and a vehicle of economic growth.

As all research, this study has limitations that point to directions for future research. Firstly, we should keep in mind that the decision-making considered in this study takes the form of *intentions*, which do not necessarily translate directly into actual behaviour (actions). For instance, managers who participated in our study were abstracted from their daily professional decision-making context. Therefore, we recommend that future research jointly analyse cognitions, intentions, and behaviours. Secondly, by taking into account only one condition (that of high uncertainty), our design sacrifices some external validity. The reflection of the situation in the real world depends upon the assumptions we applied. In the case of this study, we simplified reality by assuming that participants immediately know the results of their actions and make immediate decisions in response to this information. We distilled the 'pure' effect of failure for analytical purposes without taking into consideration a variety of additional factors; i.e. personal traits and external conditions that can potentially affect the ultimate decision outcome. We cannot claim the representativeness of the total

population, which limits generalisation. Therefore, future (correlational) studies could consider a more complex design involving moderating variables. Specifically, exploring different types of entrepreneurial experience – in terms of quality and quantity – time spans, emotions, and individual characteristics as mediators or moderators would offer fruitful directions for further research. We believe that our assumptions provide a reliable test of our research question. We want to emphasise here that laboratory research allows for addressing theoretical questions (Davis *et al.*, 2009) but requires caution in the application of its findings. In other words, laboratory research allows for testing a theory but is limited in terms of effects application (Calder *et al.*, 1981). Despite these limitations, we believe that this study offers a contribution to the field of entrepreneurship.

REFERENCES

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, *50*(2), 179-211.

Álamo-Vera, F.R., & Suárez-Ortega, S.M. (2005). SMES' internationalization: firms and managerial factors. *International Journal of Entrepreneurial Behaviour and Research*, *11*(4), 258-279.

Amankwah-Amoah, J., Boso, N., & Antwi-Agyei, I. (2018). The effects of business failure experience on successive entrepreneurial engagements: An evolutionary phase model. *Group and Organization Management*, *43*(4), 648-682.

Arend, R.J., Sarooghi, H., & Burkemper, A. (2015). Effectuation as ineffectual? Applying the 3E theory-assesment framework to a proposed new theory of entrepreneurship. *Academy of Management Review*, *40*(4), 630-651.

Brinckmann, J., Grichnik, D., & Kapsa, D. (2010). Should entrepreneurs plan or just storm the castle? A meta-analysis on contextual factors impacting the business planning-performance relationship in small firms. *Journal of Business Venturing*, *25*(1), 24-40.

Bruton, G.D., Ahlstrom, D., & Obloj, K. (2008). Entrepreneurship in emerging economies: Where are we today and where should the research go in the future. *Entrepreneurship Theory and Practice*, *32*(1), 1-14.

Cai, L., Guo, R., Fei, Y., & Liu, Z. (2017). Effectuation, exploratory learning and new venture performance: evidence from China. *Journal of Small Business Management*, *55*(3), 388-403.

Calder, B.J., Phillips, L.W., & Tybout, A.M. (1981). Designing research for application. *Journal of Consumer Research*, *8*(2), 197-207.

Ciszewska-Mlinaric, M., Obloj, K., & Wasowska, A. (2016). Effectuation and causation: Two decision-making logics of INVs at the early stage of growth and internationalisation. *Journal of East European Management Studies*, *21*(3), 275-297.

Cope, J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. *Journal of Business Venturing*, *26*(6), 604-623.

Covin, J.G., & Miller, D. (2014). International entrepreneurial orientation: Conceptual considerations research themes, measurement issues, and future research directions. *Entrepreneurship Theory and Practice*, *38*(1), 11-44.

Cyert, R., & March, J. (1963). *A Behavioural Theory of the Firm*. Englewood Cliffs: Prentice Hall.

Czemiel-Grzybowska, W., & Skowronek-Mielczarek, A. (2017). Entrepreneurship research in Poland. *Technological and Economic Development of Economy*, *23*(3), 504-519.

Dahlin, K.B., Chuang, Y.-T., & Roulet, T.J. (2018). Opportunity, Motivation, and Ability to Learn from Failures and Errors: Review, Synthesis, and Ways to Move Forward. *Academy of Management Annals*, *12*(1), 252-277.

Danneels, E., & Vestal, A. (2020). Normalizing vs. analysing: Drawing the lessons from failure to enhance firm innovativeness. *Journal of Business Venturing*, *35*(1), 105903.

Dew, N., Read, S., Sarasvathy, S.D., & Wiltbank, R. (2008). Outlines of a behavioural theory of the entrepreneurial firm. A retrospective look at a behavioural theory of the firm. *Journal of Economic Behaviour and Organization, 66*(1), 37-59.

Espinoza-Benavides, J., & Díaz, D. (2019). The entrepreneurial profile after failure. *International Journal of Entrepreneurial Behaviour and Research, 25*(8), 1634-1651.

Fang He, V., Sirén, C., Singh, S., Solomon, G., & von Krogh, G. (2018). Keep Calm and Carry On: Emotion Regulation in Entrepreneurs' Learning from Failure. *Entrepreneurship Theory and Practice*, *42(*4), 605-630.

Greve, H.R. (2003). A Behavioural Theory of R&D Expenditures and Innovations: Evidence from Ship building. *Academy of Management Journal*, *46*(6), 685-702.

Hauser, A., Eggers, F., & Güldenberg, S. (2019). Strategic decision-making in SMEs: effectuation, causation, and the absence of strategy. *Small Business Economics*, 1-16.

He, Z.-L., & Wong, P.-K. (2004). Exploration vs. Exploitation: An Empirical Test of the Ambidexterity Hypothesis. *Organization Science*, *15*(4), 481-494.

Hitt, M.A., Ireland, R.D., Sirmon, D.G., & Trahms, C.A. (2011). Strategic Entrepreneurship: Creating Value for Individuals, Organizations, and Society. *Academy of Management Perspectives*, *25*(2), 57-75.

Hoskisson, R.E., & Busenitz, L.W. (2002). Market uncertainty and learning distance in entrepreneurship entry mode choice. In M.A. Hitt, R.D. Ireland, S.M. Camp, & D.L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new integrated mindset* (pp. 151-172). Oxford, UK: Blackwell Publishers.

Hsu, D.K., Wiklund, J., & Cotton, R.D. (2017a). Success, Failure, and Entrepreneurial Reentry: An Experimental Assessment of the Veracity of Self-Efficacy and Prospect Theory. *Entrepreneurship Theory and Practice*, *41*(1), 19-47.

Hsu, D. K., Simmons, S.A., & Wieland, A.M. (2017b). Designing entrepreneurship experiments: A review, typology, and research agenda. *Organizational Research Methods*, *20(*3), 379-412.

Ireland, R.D., Hitt, M.A., & Sirmon, D.G. (2003). A Model of Strategic Entrepreneurship: The Construct and its Dimensions. *Journal of Management*, *29*(6), 963-989.

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2), 263-291.

Kahneman, D., & Tversky, A. (1982). Variants of uncertainty. *Cognition*, *11*(2), 143-157.

Kauppinen, A., Paloniemi, K., & Juho, A. (2019). Failed firm founders' grief coping during mentoring: Learning as the single catalyst of their restarting performance narratives. *The International Journal of Management Education* (in press), 100288.

Khelil, N. (2016). The many faces of entrepreneurial failure: Insights from an empirical taxonomy. *Journal of Business Venturing*, *31*(1), 72-94.

Kirzner, I.M. (1973). *Competition and Entrepreneurship*. Chicago, IL: University of Chicago Press.

Lin, S., Yamakawa, Y., & Li, J. (2019). Emergent learning and change in strategy: empirical study of Chinese serial entrepreneurs with failure experience. *International Entrepreneurship and Management Journal*, *15*(3), 773-792.

Liñán, F., & Chen, Y. (2009). Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions. *Entrepreneurship Theory and Practice*, *33*(3), 593-617.

Maitlis, S. (2005). The Social Processes of Organizational Sensemaking. *Academy of Management Journal*, *48*(1), 21-49.

March, J.G. (1991). Exploration and Exploitation in Organizational Learning. *Organization Science*, *2*(1), 71-87.

March, J.G., & Shapira, Z. (1987). Managerial Perspectives on Risk and Risk Taking. *Management Science*, *33*(11), 1404-1418.

McCarthy, A.M., Schoorman, F.D., & Cooper, A.C. (1993). Reinvestment decisions by entrepreneurs: Rational decision-making or escalation of commitment?. *Journal of Business Venturing*, *8*(1), 9-24.

McGrath, R.G. (1999). Falling Forward: Real Options Reasoning and Entrepreneurial Failure. *Academy of Management Review*, *24*(1), 13-30.

Meade, A.W., & Craig, S.B. (2012). Identifying careless responses in survey data. *Psychological Methods*, *17*(1), 437.

Ocasio, W. (1997). Towards an Attention-based View of the Firm. *Strategic Management Journal*, *18*(S1), 187-206.

Read, S., Sarasvathy, S., Dew, N., & Wiltbank, R. (2016). *Effectual entrepreneurship*. Taylor & Francis.

Sarasvathy, S. (2001). Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, *26*(2), 243-263.

Schoemaker, P.J.H. (1990). Are Risk-Attitudes Related Across Domains and Response Modes?. *Management Science*, *36*(12), 1451-1463.

Shepherd, D.A. (2003). Learning from Business Failure: Propositions of Grief Recovery for the Self-Employed. *Academy of Management Review*, *28*(2), 318-328.

Shepherd, D.A., & Haynie, J.M. (2011). Venture failure, stigma, and impression management: A self-verification, self-determination view. *Strategic Entrepreneurship Journal*, *5*(2), 178-197.

Shepherd, D.A., & Cardon, M.S. (2009). Negative Emotional Reactions to Project Failure and the Self-Compassion to Learn from the Experience. *Journal of Management Studies*, *46*(6), 923-949.

Shepherd, D.A., Wiklund, J., & Haynie, J.M. (2009). Moving forward: Balancing the financial and emotional costs of business failure. *Journal of Business Venturing*, *24*(2), 134-148.

Shepherd, D.A., Patzelt, H., & Wolfe, M. (2011). Moving Forward from Project Failure: Negative Emotions, Affective Commitment, and Learning from the Experience. *Academy of Management Journal*, *54*(6), 1229-1259.

Shepherd, D.A., Patzelt, H., Williams, T.A., & Warnecke, D. (2014). How does project termination impact project team members? Rapid termination, 'creeping death', and learning from failure. *Journal of Management Studies*, *51*(4), 513-546.

Shepherd, D.A., Williams, T.A., & Patzelt, H. (2015). Thinking about entrepreneurial decision making: Review and research agenda. *Journal of Management*, *41*(1), 11-46.

Simon, M., & Shrader, R.C. (2012). Entrepreneurial actions and optimistic overconfidence: The role of motivated reasoning in new product introductions. *Journal of Business Venturing*, *27*(3), 291-309.

Stewart, W.H., & Roth, P.L. (2001). Risk propensity differences between entrepreneurs and managers: A meta-analytic review. *Journal of Applied Psychology*, *86*(1), 145-153.

Tushman, M.L., & O'Reilly, C.A. (1996). Ambidextrous Organizations: Managing Evolutionary and Revolutionary Change. *California Management Review*, *38*(4), 8-29.

Ucbasaran, D., Shepherd, D.A., Lockett, A., & Lyon, S.J. (2013). Life After Business Failure: The Process and Consequences of Business Failure for Entrepreneurs. *Journal of Management*, *39*(1), 163-202.

Vershinina, N., Barrett, R., & McHardy, P. (2017). Logics and rationalisations underpinning entrepreneurial decision-making. *Journal of Small Business and Enterprise Development*, *24*(1), 158-175.

Yamakawa, Y., Peng, M.W., & Deeds, D.L. (2015). Rising From the Ashes: Cognitive Determinants of Venture Growth After Entrepreneurial Failure. *Entrepreneurship Theory and Practice*, *39*(2), 209-236.

Authors

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

Piotr Wójcik

PhD in Strategy (Warsaw School of Economics). Assistant Professor at Kozminski University, Department of Strategy. His research interests include dynamic capabilities, decision-making, and international business.

Correspondence to: Dr Piotr Wójcik, Kozminski University, Jagiellońska 59, 03-301 Warszawa, Poland, e-mail: pwojcik@kozminski.edu.pl

ORCID ⓘ http://orcid.org/0000-0003-2275-1318

Mariola Ciszewska-Mlinarič

PhD in Strategy (Kozminski University). Associate Professor at Kozminski University, Department of Strategy. Her research interests include the internationalisation strategy of emerging market firms, internationalisation process, and decision-making.

Correspondence to: Prof. ALK dr hab. Mariola Ciszewska-Mlinarič, Kozminski University, Jagiellońska 59, 03-301 Warszawa, Poland, e-mail: mariolac@kozminski.edu.pl

ORCID ⓘ http://orcid.org/0000-0001-6048-2644

Acknowledgements and Financial Disclosure

Copyright and License

Tax aggressiveness of family firms in emerging countries: How does resource-based view explain it?

**Usil Sis Sucahyo, Theresia Woro Damayanti,
Ronny Prabowo, Supramono Supramono**

A B S T R A C T
Objective: The objective of the article is to empirically examine the effects of three resource categories based on the resource-based view – represented by firm size, top manager's experience, and closeness to governments – on family firms tax aggressiveness in emerging countries.
Research Design & Methods: The study used data from the World Bank's Productivity and the Investment Climate Survey that covers several issues, including taxation. The survey was held in 2006-2018. We use data from 19 848 family firms as our sample. Data is analysed with the Ordered Probit Model.
Findings: The results of the analysis showed that family firms with resources of firm size, top manager's better experience, and closeness to government have the options to engage in greater tax aggressiveness than other family firms.
Implications & Recommendations: The governments of emerging countries need to pay more attention to larger family firms and the firms led by more experienced top managers to enhance tax compliance because these firms potentially engage in greater level of tax aggressiveness.
Contribution & Value Added: This study offers a better understanding of the tax aggressiveness of family firm that is relatively poorly understood in the literature with the resource-based view approach.

INTRODUCTION

In emerging economies, family firms (FFs) are considered to have significant economic impacts (Gedajlovic, Carney, Chrisman, & Kellermsirmanns, 2012; Schulze & Gedajlovic, 2010), because they can contribute to job creation and economic growth (Lucky, Minai, & Isaiah, 2011), along with economic recovery during economic crisis (Bonilla, Sepulveda, & Carvajal, 2010). Thus, it is understandable that governments pay much attention to FFs' development (Monticelli, 2017). Even Kim, Kandemir, and Cavusgil (2004) emphasize that the key factor of FFs' development is their closeness to governments, commonly labeled as political connections. According to the resource-based view (RBV), this closeness is indeed one of firms' resources included in the category of organizational resources.

However, closeness to government is often exploited by FFs for their interests, including tax purposes (Welter, 2011), by carrying out tax aggressiveness aimed at reducing their tax obligations. Tax aggressiveness itself is defined as intentional activities to avoid tax obligations and payments (Martinez, 2017). Tax aggressiveness can be done by companies through marking up costs or recording lower real revenue. It is possible that closeness to government is not the only resource that allows tax aggressiveness for FFs but also relates to other resources.

The resource-based view (RBV) classifies firms' resources into three categories, namely physical capital resources, human capital resources, and organizational resources (Barney, 1991; Michalisin, Smith, & Douglas, 1997). Physical capital resources are firms' physically existing capital commonly indicated by firm size. Cabrera-Suárez, Déniz-Déniz, and Martín-Santana (2014), Huybrechts, Voordeckers, Lybaert, and Vandemaele (2016), and Smulders, Stiglingh, Franzsen, and Fletcher (2017) identify that firms' resources – as measured by firm size – negatively affect tax aggressiveness. Meanwhile, human capital resources refer to the characteristics of top management, such as experience, which also negatively affects tax aggressiveness behaviour (Bjuggren & Sud, 2005; Smulders *et al.,* 2017). Although the results of previous studies showed a negative effect, there remains a possibility that the size and experience of top management has a positive effect on tax aggressiveness. Larger FFs will also add tax burden so they tend to be more motivated to carry out tax aggressiveness. Likewise, with the experience of top management, increasingly experiencing a deeper understanding of the ins and outs of taxation including efforts to reduce tax liabilities so as to encourage top management to aggressively tax. The above arguments require further study.

The objective of the article is to empirically examine the effects of the three resource categories based on the RBV, namely physical capital resources, human capital resources, and organizational resources that are represented by firm size, top manager's experience, and closeness to governments on FFs' tax aggressiveness in emerging countries. This paper contributes to the literature by offering a better understanding of FFs' tax aggressiveness, which is relatively understudied, in at least two ways. Firstly, we analyse the issue from FFs' heterogeneous and unique resources and not from the agency perspective as do other studies. However, this study uses the RVB framework that has a prominent position in strategic management research because it provides a comprehensive explanation regarding the combination of firm's internal resources and capabilities as a key to achieving sustainable competitive advantage. Secondly, we add closeness to government as firm resources, which was

analysed by previous studies. This study uses data from the World Bank's Productivity and Investment Climate Survey that covers several issues, including taxation. The survey was held in 2006-2018 with the total of 136 889 respondents. We use only FFs from emerging countries as our sample that meet several criteria: firms with single ownership of more than 50% of total ownership and formal firm. The above criteria produce the final sample of 19 848 firms. We test our hypothesis by using the ordered probit model (OPM).

The rest of the article is structured as follows. The second section presents the literature review and the theoretical arguments underlying the research hypotheses on the effects of firm size, top managers' experience, and closeness to governments on firms' tax aggressiveness. The third section presents the research data and methods. Next, the fourth section discusses the results of hypothesis testing. Lastly, the fifth section concludes and suggests future research directions.

LITERATURE REVIEW

Barney's article (1991) "Firm Resources and Sustained Competitive Advantage" was an important milestone for the RBV, commonly known as the resource-advantage theory. Principally, RBV considers firm as a collection of resources and capabilities. Differences in resources and capabilities from competitors create the competitive advantage of firms (Peteraf & Barney, 2003). Firms develop their competitive advantage by utilizing and managing their resources productively to create valuable, rare, inimitable, and non-substitutable resources (Kabue & Kilika, 2016). When firms operate in industries that do not facilitate them to develop inimitable or non-substitutable resources, they need to build competencies to convert imitable and substitutable resources into inimitable and non-substitutable resources so as to ensure sustainable competitive advantage. Thus, firms must be creative and entrepreneurs must create competitive advantage (Barney, 2001). Competence building is the product of organizational culture and values that will shape firms' behaviours.

Similarly in FFs, they must properly manage their resources in order to increase their competitive advantage. A family firm can be dominantly controlled by a family with the vision to potentially sustain family control across generations (Zellweger, 2017, pp. 98-99). This definition of a FF is in line with the definition conveyed by Chua, Chrisman, and Sharma (1999), which emphasizes two central attributes: the controlling family and control across generations. For dominant control interests to remain in the hands of the family, ownership or voting rights of more than 50% are required (Bednarz, Bieliński, Wołowik, & Otukoya, 2017). Basically, the nature of FFs will be determined by the cultural and behavioural aspects introduced by the controlling family (Chrisman, Chua, & Steier, 2005; Zellweger, Eddleston, & Kellermanns, 2010). The intention of the founder of the family company is not only to create wealth that will only be enjoyed by the founder but has a vision to be passed to future generations. The existence of a family business is inseparable from the existence of several strengths and weaknesses. For example, Zellweger (2017, pp. 162) identifies the strengths of FFs, including lower agency costs, efficient leadership, continuity, and long-term orientation. Meanwhile, their weakness was high dependence on family and challenges of succession.

From the RBV perspective, firms' resources can be classified into three types, namely physical capital resources, human capital resources, and organizational resources (Barney, 1991; Michalisin *et al.*, 1997). Firms need to interact with these three resource types

to achieve their objectives. Enz (2008) argues that a resource does not suffice to build a competitive advantage. In this respect, firms need to organize various resources in certain ways to build capabilities in creating competitive advantage as the basis of firm behaviour. Firm size is often associated with reputation and information openness. Larger firms exhibit a better reputation (Waluyo, 2017). FFs' managers tend to avoid tax aggressiveness to protect their firms' long-term reputation (Isakov & Weisskopf, 2015; Sánchez-Marín, Portillo-Navarro, & Clavel, 2016). In terms of governance, relatively larger FFs likely have better governance than smaller ones. The argument is also supported by Madhani (2016) who shows the positive correlation between size and governance. Besides, larger firms have greater incentives to disclose information to reduce political cost because they attract public scrutiny (Eilbert & Parket, 1973) and have sufficient resources to produce information. Better governance and more disclosed information disincentivize FFs to engage in tax aggressiveness.

However, it is possible that family firm size will positively impact tax aggressiveness with several arguments, including the fact that larger firms tend to have greater profits than smaller firms, and the tax burden is higher, which encourages firms to take actions to reduce their tax payments (Irianto, Sudibyo, & Wafirli, 2017). The larger firms also have more complexity in their transactions, which provides more opportunities in the effort to avoid taxation (Rego, 2003). Moreover, the Political Power Theory – as initially proposed by Siegfried (1972) – also hypothesizes that larger firms have greater political power that they can use to engage in political negotiations to facilitate tax aggressiveness, and larger firms also have a better financial ability to hire tax experts to carry out tax planning. The above arguments receive support from previous studies conducted by Irianto *et al.* (2017), Ogbeide (2017), Wang, Campbell, and Johnson (2014), Nicodème (2007), Dyreng, Hanlon, and Maydew (2008), and Mills, Nutter, and Schwab (2013), which prove that firm size has a positive and significant influence on tax aggressiveness. Based on the above discussion, we propose the following hypothesis:

H1: Family firm size positively affects firms' tax aggressiveness.

RBV positions human capital resources as the source of sustainable competitive advantage. These human capital resources can be in the form of individual experiences in an organization. Several studies relate top managers' experience to firms' financial performance (Peni, 2014; Saidu, 2019). The results demonstrate the positive correlation between Chief Executive Officer's (CEO) experience and firm's financial performance. CEOs' longer experience also contributes to the reputation of CEOs and firms. More reputable CEOs are associated more with firms' resources than less reputable ones (Stanwick & Stanwick, 2003; Wade, Porac, Pollock, & Graffin, 2008). In the taxation context, FFs managed by more experienced CEOs will focus on their performance and reputation, so they are likely to exhibit lower tax aggressiveness.

There is also a reason that manager's experience is positively related to tax aggressiveness. Experienced managers can be associated with their ability to manage firm resources more efficiently. According to Koester, Shevlin, and Wangerin (2016), managers with higher ability to manage resources efficiently are likely to be involved in greater tax avoidance. This is based on three arguments. Firstly, higher-ability managers have a good understanding of how to identify and exploit tax planning opportunities. Secondly, higher ability managers are likely to choose a reduction in tax costs compared to operational cost,

because the former do not have a direct adverse effect on the firm's operations (Dyreng, Hanlon, & Maydew, 2010). Thirdly, managers with higher ability try to make cash tax savings that are redeployed to more productive uses through profitable investment activities. Furthermore, Koester *et al.* (2016) succeeded in providing empirical evidence that managers with a higher ability are more likely to engage in tax aggressiveness by reducing tax cash payments. Therefore, we argue that FFs managed by experienced managers can potentially reduce tax aggressiveness or vice versa. This leads to our hypothesis:

H2:   Family firms' top managers' experience positively affects firms' tax aggressiveness.

FFs' closeness to governments is an example of organizational resources. Closeness to governments or political connections is a pervasive phenomenon in transitioning and developing countries (Wu *et al.,* 2012). The political connection can take various forms such as the presence of at least one government official in a firm's ownership structure, the board of director, or audit committee (Khlif & Amara, 2018). Firms with close connections to governments will arguably receive special treatment such as loans or a lowered risk of tax inspection (Hanny & Niandari, 2018). Such special treatments imply that politically connected firms are more tax aggressive than firms distant to government. Besides, firms use tax aggressiveness to reduce political cost (Kim & Zhang, 2015).

Previous studies demonstrate that politically connected firms tend to enjoy tax benefits by paying lower Effective Tax Rate (ETR; Wu, Wu, Zhou, & Wu, 2012). In the same vein, politically connected firms are more tax aggressive as measured by book-tax differences than non-politically connected firms (Aswadi, Wahab, Ariff, Marzuki, & Sanusi, 2017; Kim & Zhang, 2011). Based on this discussion, we propose the following hypothesis:

H3:   Family firms' political connections positively affect firms' tax aggressiveness.

MATERIAL AND METHODS

This study uses an explanatory method because it seeks to explain effects of the three firm resources based on RBV categories – firm size, top manager's experience, and closeness with the government – on tax aggressiveness behaviour and focus in the family firm context in emerging countries.

The study uses data from the World Bank's Productivity and Investment Climate Survey that covers several issues, including taxation. The survey was held in 2010-2018 with the total of 136 889 respondents. The data collection method used by the World Bank is a field survey through face-to-face interviews with respondents consisting of firm owners, top managers, accountants, and human resources specialists. Target firm data is sourced from the master list of companies obtained from the country's statistical office and other government agencies such as tax or business licensing authorities. For the sake of sample representation, the selection of surveyed companies is based on multistage random sampling based on firm size, business sector, and geographic region within a country.

As our sample, we only use FFs that meet several criteria; firstly, firms with single ownership of more than 50% of total ownership (Bednarz *et al.,* 2017). Next, we only use observations from emerging countries as defined by the IMF, namely Argentina, Bangladesh, Brazil, Bulgaria, Chile, China, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, Filipina, Poland, Romania, Russia, South Africa, Thailand, Turkey, Ukraine,

and Venezuela. Secondly, the formal firm considering the focus of this study is tax compliance (Gokalp, Lee, & Peng, 2017). Thirdly, outliers are not included. The above criteria produce the final sample of 19 848 firms.

The study involves tax aggressiveness as the response variable, along with firm size, top manager's experience, and closeness to government as predicting variables and several control variables. Tax aggressiveness is measured with the response to the question "Over the last year, how many times was this establishment either inspected by tax officials or required to meet with them?" We use the question related to tax inspection because more frequent tax inspections indicate that taxpayers have more tax-related problems (OECD, 2014). Thus, firms inspected by tax officials more frequently are likely more tax aggressive.

Table 1. List of variable measurement

Variable	Measurement
Tax aggressiveness (TC)	Measured with the frequency of tax inspections. Classified into three categories, 1 = never inspected, 2 = 1-30 times inspected, and 3 = inspected more than 30 times.
Firm size (SIZE)	Classified into three categories, 1 = small (the firm has up to 20 employees), 2 = medium (the firm has 20-99 employees), and 3 = large (the firm has more than 100 employees).
Top Manager's Experience (EXP)	Measured with how long the top manager worked in the same industry as the one in which the firm operates.
Closeness to the Government (GOV)	A dummy variable that equals 1 if the firm seeks to secure government contracts and 0 if otherwise.
Industry (IND)	A dummy variable that equals 1 if the firm operates in the manufacturing industry and 0 if otherwise.
Firm age (AGE)	Measured with the natural logarithmic value of the number of the firm's operating years.

Source: own study.

We measure firm size with the number of employees. Based on the classification of company size conducted by the World Bank (2009), we classify firms into three categories: small (up to 19 employees), medium (20-99 employees), and large (more than 100 employees). Next, the top manager's experience is measured with his/her years of experience in managing similar firms. Next, we measure closeness to government with the question of "Over the last year, has this establishment secured or attempted to secure a government contract?"

We use both industry-level and firm-level control variables. The industry-level control variable is a dummy variable that equals one if the firm is in the manufacturing industry and zero if otherwise. Meanwhile, firm age is the firm-level control variable.

Because the dependent variable of this study is measured with ordinal scale, we test our hypotheses by using the following ordered probit model (OPM) equation (Greene, 2018, pp. 111):

$$y* = \beta'x + \varepsilon \qquad (1)$$

in which $y*$ is the response variable, x is the vector of predictors variable, β is a vector of unknown parameters to be estimated, and ε_{ni} is the random error term capturing the effect of unobserved factors, which is assumed to follow a normal distribution with zero

mean and unit variance. The response variable ($y*$) of this study (tax aggressiveness) is measured by using three levels, namely (1) low tax aggressiveness, (2) moderate tax aggressiveness, and (3) high tax aggressiveness.

$$y\,(TA) = \begin{cases} 1, if\ TA < \omega1 \\ 2, if\ \omega1 \leq TA \leq \omega2 \\ 3, if\ TA > \omega2 \end{cases} \quad (2)$$

Thus, the following is the equation

$$TA*i = \ \beta0 + \ \beta1SIZEi + \ \beta2EXPi + \ \beta\Sigma GOVi + \ \beta\Sigma INDi + \ \beta\Sigma AGEi + \ \varepsilon i \quad (3)$$

in which TA is the tax aggressiveness level, EXP is top manager's experience, SIZE refers to firm's size classified into three measures (small, medium, and large). Further, GOV is a dummy variable that equals 1 if the firm has close ties with the government and 0 if otherwise. Similarly, IND is also a dummy variable that equals 1 if the firm belongs to the manufacturing industry and 0 if otherwise, while AGE is firm's age.

RESULTS AND DISCUSSION

Descriptive Statistics

The descriptive statistics of 19 848 observations reveal that 46.68% of total observations fall into the non-tax aggressive category, while 51.96% of total observations fall into moderately aggressive. Only relatively few firms – 1.36% of total observations – fall into the very aggressive category.

Small and medium firms dominate the observations. Specifically, 40.84% of total observations are small firms, while 37.09% of total observations are medium firms. Meanwhile, 22.07% of total observations are large firms.

Table 2. Descriptive statistics of dependent, explanatory, and control variables

Category	n	Proportion (%)
Tax Aggressiveness		
Not aggressive	9 265	46.68
Moderately aggressive	10 314	51.96
Very aggressive	269	1.36
Firm Size		
Small	8 107	40.84
Medium	7 361	37.09
Large	4 380	22.07
Closeness to the Government		
No	16 571	83.49
Yes	3 277	16.51
Industry Type		
Manufacture	12 855	64.77
Non-Manufacture	6 993	35.23

Source: own study.

In terms of closeness to government, 83.49% of total observations show no closeness to government as indicated by firms' efforts to secure contracts from governments. Furthermore, 64.77% of total observations are manufacturing firms and the rest are non-manufacturing firms.

The correlation matrix demonstrates the relationship between firm size, top manager's experience, closeness to government, industry type, and firm age. Table 3 also shows no high correlation coefficients between independent variables, thus indicating no serious multicollinearity issue. Thus, the results suggest that all independent variables can be used for our ordered probit analysis.

Table 3. Spearman correlation matrix of explanatory and control variables

Variables	(1)	(2)	(3)	(4)	(5)
Firm Size(1)	1.000				
Top Manager's Experience (2)	0.0802 0.000***	1.000			
Closeness to Government (3)	0.0428 0.000***	0.0471 0.000***	1.000		
Industry Type (4)	0.1777 0.000***	0.0899 0.000***	-0.0548 0.000***	1.000	
Firm Age (5)	0.2108 0.000***	0.2743 0.000***	0.0351 0.000***	0.1635 0.000***	1.000

Notes ***$p < 0.01$
Source: own elaboration in Stata.

Ordered Probit Model (OPM) Analysis

Table 4 shows that the pseudo R^2 value is 0.0285, indicating that 2.91% of the variant proportion of tax aggressiveness variable is explained by the predicting variables. Similar to research in the field of health – in behavioral studies – the low pseudo R^2 is acceptable because numerous factors determine a behavior (Martin, 2013). Furthermore, Martin (2013) also states that the main point lies in reliable relationships; especially in studies involving large sample sizes. The χ^2 probability of the model is <0.0001, implying that at least one of the regression coefficients in the model is not equal to zero. The OPM does not produce an intercept as a constant but a cutpoints value (/cut) as the determinant of tax aggressiveness when the firm size, top manager's experience, and political connection variables are equal to zero. The cutpoints 1 value of 0.5168 indicates that tax aggressiveness will be lower if variables other than the research variables are 0.5168 or lower and, conversely, they will be higher if variables other than the research variables are 3.716 (cutpoints 2) or higher. If the values of other variables fall within the range of 0.5168-3.716, then tax aggressiveness is moderate.

Next, the coefficient of firm size is 0.263 (p-value < 0.000), suggesting that larger firms tend to engage in a greater level of tax aggressiveness (H_1 is supported). The results also show that managers with longer experience in the same industry usually engage in greater tax aggressiveness (H_2 is supported), as indicated by its coefficient value of 0.020 (p-value 0.034). Furthermore, the coefficient value of closeness to government is 0.367 (p-value < 0.000), also indicating that firms with close ties with governments tend to exhibit a greater level of tax aggressiveness (H_3 is supported). Thus, firms have the option to engage in

greater tax aggressiveness due to larger firm size, longer manager's experience, and close ties with governments.

For control variables, the industry type and firm age variables are positively associated with tax aggressiveness (coef. 0.030 p-value 0.060; coef. 0.002 p-value 0.033). Thus, besides the variables of interest – firm size, top manager's experience, and closeness to government – industry type and firm age as control variables also affects tax aggressiveness.

Table 4. OPM estimates of tax aggressiveness

Variable	Coef	p-value
Firm Size	0.263	0.000***
Top Manager's Experience	0.020	0.034**
Closeness to Government	0.367	0.000***
Control Variable		
Industry Type	0.030	0.060*
Firm Age	0.002	0.033**
/cut1	0.517	
/cut2	3.717	

Notes: the number of observations = 19 848; Wald χ2 = 809.81; probability χ2= 0.0000;Pseudo R2 = 0,0291
*p < 0.1; **p < 0.05; ***p < 0.01.
Source: own elaboration in Stata.

Discussion

The study demonstrates that larger FFs in emerging countries exhibit a greater level of tax aggressiveness. The results are in line with previous studies that show that firm size is associated with the level of tax aggressiveness (Irianto *et al.,* 2017; Ogbeide, 2017; Wang *et al.,* 2014). FFs with an increasingly large size are not balanced with awareness to meet their tax obligations but, instead, motivated to make tax avoidance. Larger firm size motivates FFs to not only focus on family values but also on profit maximization, including through tax aggressiveness. Larger FFs in emerging countries are likely to make use of their financial advantages to influence parties related to taxation and the complexity of their transactions to facilitate tax aggressiveness.

We also observe that managers who have longer experience in the same industry tend to engage in greater tax aggressiveness. The finding implies that – in FFs in emerging countries – managers with long experience in similar industries also have a better experience in engaging in aggressive tax behaviour. Managers with longer experience tend to have a higher ability to manage various aspects of FFs, including taxation aspects. This can lead to the behaviour of managers to carry out tax aggressiveness, which may seek cash savings that can be used as an alternative source of financing firm development. Cash obtained from tax savings will be allocated in firm projects that are expected to generate a positive return on investment (Koester, *et al.,* 2016). In FFs, managers' longer experience will shift the objectives of owning families from building FFs in societies into satisfactory income to continue the business.

The likely explanation of our results with previous studies on non-FFs – both for firm size and top manager's experience – is the difference in FFs' stages. FFs have four phases,

namely development, management, transformation, and preservation. During the development and management phases, owning families still likely maintain their ideal objectives of owning FFs (family values and reputation). Thus, FFs will thoroughly analyse impacts of tax aggressiveness on firms' long-term wealth and reputation (Isakov & Weisskopf, 2015; Sánchez-Marín *et al.,* 2016). However, during the transformation and preservation phases – characterised by professionalism in managing firms – the ideal objectives of owning families will arguably wane, and FFs will mostly focus on maximizing profits because of their obligations to bequeath FFs' assets to following generations (Casson, 1999).

In terms of closeness to government, our results show a similar result to other studies focusing on non-FFs. Thus, firms with close ties with governments exhibit a greater level of tax aggressiveness. Our study supports the findings of Aswadi *et al.* (2017), Kim and Zhang (2015), and Wu *et al.* (2012). FFs' closeness to government is a component of organizational resources that cause these firms to receive special treatments, such as receiving loans and having a low risk of tax inspection. The argument implies that politically connected firms tend to be more tax aggressive than non-politically connected firms.

The results elaborate on the conflicting results of previous studies on tax aggressiveness of FFs. In particular, several studies show that FFs are more aggressive (Martinez & Ramalho, 2014; Chen, Chen, Cheng, & Shevlin, 2010; Mafrolla & Amico, 2016; Steijvers & Niskanen, 2014), while others indicate that FFs are not aggressive (Pierk, 2016; Gaaya, Lakhal, & Lakhal, 2017). FFs' aggressiveness, especially in emerging countries, is affected by their resources, measured by this study using firm size, top manager's experience, and closeness to government. Thus, FFs' heterogeneous and unique resources are determinants of tax aggressiveness as explained by the RBV.

However, our study finds that larger firm size, more experienced top manager, and closeness to government exhibit a greater level of tax aggressiveness. Thus, besides creating a competitive advantage – as suggested by Peteraf and Barney (2003) – firms' resources can also motivate firms to exhibit dysfunctional behaviour such as tax aggressiveness. Consequently, in minimizing tax aggressiveness, FFs in emerging countries need to manage their resources productively so as to create valuable, rare, inimitable, and non-substitutable resources.

CONCLUSIONS

Management literature often mentions the important role of FFs in developing countries such as drivers of economic growth and job creation and economic buffering during crises, However, the question arises as to how far FFs comply with their tax obligations and whether the strength of resources owned by FFs leads to tax compliance or tax aggressiveness, in which tax becomes the main source of financing for developing country development. This study has empirically analysed FFs' tax aggressiveness based on their resources by using 19 848 sample firms in emerging countries. The results demonstrate that FFs with resources of firm size, top manager's experience, and closeness to government exhibit greater levels of tax aggressiveness.

Therefore, our article offers implications relevant for academicians, policymakers, and practitioners. More specifically, the study offers a better understanding of FFs' tax aggressiveness by using the RBV, which is relatively understudied in the literature. Currently, the RBV as initiated by Barney (1991), offers a framework of the strategic role of firms' resources

– which consist of physical capital resources, human capital resources, and organizational resources that are valuable, rare, inimitable, and non-substitutable (Kabue & Kilika, 2016) – as the basis of sustainable competitive advantage. However, as our study finds, the RBV also offers the framework as the basis of FFs' tax aggressiveness behaviour. Our results indicate that 51.34% of FFs in emerging countries tend to engage in tax aggressiveness. The findings suggest that governments of emerging countries must pay more attention to the behaviour of FFs in meeting their tax obligations. Governments must continue to increase the supervision of financial reporting of FFs through audit activities – especially for larger FFs and FFs led by more experienced top managers – so as to enhance tax compliance, because these firms potentially engage in greater levels of tax aggressiveness. Moreover, our study supports previous studies (Aswadi *et al.*, 2017; Kim & Zhang, 2015; Wu *et al.*, 2012) that find that FFs with closeness to government tend to use this close relationship for tax aggressiveness. The findings suggest that government officers must remain objective in levying taxes on all FFs, regardless of their closeness to government. This requires law enforcement, as governments must also impose strict sanctions on officers who do not act objectively. Meanwhile, practical implications for business actors are that top managers of FFs should prioritize the use of their resources to increase their firms' competitive advantage and reputation to support long-term firm existence rather than for the benefit of saving money through activities intended to avoid tax obligations and payments.

REFERENCES

Aswadi, E., Wahab, A., Ariff, A.M., Marzuki, M.M., & Sanusi, Z.M. (2018). Political connections, corporate governance, and tax aggressiveness in Malaysia. *Asian Review of Accounting*, *25*(3), 424-451. https://doi.org/10.1108/ARA-05-2016-0053

Bednarz, J., Bieliński, T., Wołowik, A.N., & Otukoya, A. (2017). Sources of the competitive advantage of family enterprises: An international approach focusing on China, Nigeria and Poland. *Entrepreneurial Business and Economics Review*, *5*(2), 124-142. https://doi.org/10.15678/EBER.2017.050207

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*, 99-120.

Bjuggren, P., & Sud, L.G. (2005). Organization of transfers of small and medium-sized enterprises within the family. *Family Business Review*, *18*(4), 305-320. https://doi.org/10.1111/j.1741-6248.2005.00050.x

Bonilla, C.A., Sepulveda, J., & Carvajal, M. (2010). Family ownership and firm performance in Chile. *Family Business Review*, *23*, 148-154.

Casson, M. (1999). The economics of the family firm. *Scandinavian Economic History Review*, *47*(1), 10-23.

Cabrera-Suárez, M.K., Déniz-Déniz, M., & Martín-Santana, J.D. (2014). The setting of non-financial goals in the family firm: The influence of family climate and identification. *Journal of Family Business Strategy*, *5*(3), 289-299. https://doi.org/10.1016/j.jfbs.2014.05.003

Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are Family Firms more tax aggressive than non-Family Firms?. *Journal of Financial Economics*, *95*, 41-61.

Chrisman, J.J., Chua, J.H., & Steier, L. (2005). Sources and consequences of distinctive familiness: An introduction. *Entrepreneurship: Theory and Practice*, *29*, 237-247. https://doi.org/10.1111/j.1540-6520.2005.00080.x

Dyreng, S., Hanlon, M., & Maydew,E. (2008). Long-run corporate tax avoidance. *The Accounting Review, 83*, 61-82.

Dyreng, S., Hanlon, M., & Maydew, E. (2010). The effects of executives on corporate tax avoidance. *The Accounting Review, 85*(4),1163-1189. https://doi.org/10.2308/accr.2010.85.4.1163

Enz, C.A. (2008). Creating a competitive advantage by building resource capability: The case of Outback Steak House, Korea. *Cornell Hospitality Quarterly*, *49*, 73-78. http://dx.doi.org/10.1177/193896550731164

Eilbert, H., & Parket, I.R. (1973). The current status of corporate social responsibility. *Business Horizons*, *16*, 5-14.

Gaaya, S., Lakhal, N., & Lakhal, F. (2017). Does family ownership reduce corporate tax avoidance? The moderating effect of audit quality. *Managerial Auditing Journal*, *32*(7), 731-744. https://doi.org/10.1108/MAJ-02-2017-1530

Gedajlovic, E., Carney, M., Chrisman, J., & Kellermanns, F. (2012). The adolescence of family firm research taking stock and planning for the future. *Journal of Management*, *38*, 1010-1037.

Gokalp, O.N., Lee, S.H., & Peng, M.W. (2017), Competition and corporate tax evasion: An institution-based view, *Journal of World Business*, *52*(2), 258-269. https://doi.org/10.1016/j.jwb.2016.12.006

Greene, W.H. (2018). *Econometric analysis: Global Edition* (8th Edition). United Kingdom: Pearson.

Hanny R., & Niandari, N. (2018). Tax avoidance practice: political connection, firm characteristics and audit quality test at banking Industrial in Indonesia. *International Journal of Business Management and Economic Research*, *9*, 1296-1303.

Huybrechts, J., Voordeckers, W., Lybaert, N., & Vandemaele, S. (2016). The distinctiveness of family-firm intangibles: A review and suggestions for future research. *Journal of Management & Organization*, *17*(2), 268-287. https://doi.org/10.1017/s1833367200001656

Irianto, B.S., Sudibyo, Y.A., & Wafirli, A. (2017). The influence of profitability, leverage, firm size and capital intensity towards tax avoidance. *International Journal of Accounting and Taxation, 5*(2), 33-41.

Isakov, D., & Weisskopf, J.P. (2015). Pay-out policies in founding Family Firms. *Journal of Corporate Finance*, *33,* 330-344.

Kabue, L., & Kilika, J. (2016). Firm resources, core competencies and sustainable competitive advantage: An Integrative Theoretical Framework. *Journal of Management and Strategy*, *7*(1), 98-108

Khlif, H., & Amara, I. (2018), Financial crime, corruption and tax evasion: a cross-country investigation. J*ournal of Money Laundering Control*, *26*(2), 401-411. https://doi.org/10.1108/JFC-01-2018-0004

Koester, A., Shevlin, T., & Wangerin, D. (2016). Does operational efficiency spill over onto the tax return?. *Management Science, 63*(10), 3285-3310*.* http://dx.doi.org/10.1287/mnsc.2016.2510

Kim, B., Li, Y., & Zhang, L. (2011). Corporate tax avoidance and stock price crash risk: a firm-level analysis. *Journal of Financial Economics*, *100*(3), 639-662.

Kim, C., & Zhang, L. (2015). Corporate political connections and tax aggressiveness. *Contemporary Accounting Research, 3*(1), 78-114.

Kim, D., Kandemir, D., & Cavusgil, S.T. (2004). The role of family conglomerates in emerging markets: what western companies should know. *Thunderbird International Business Review*, *46*, 13-38.

Lucky, E.I., Minai, M.S., & Isaiah, A.O. (2011). A conceptual framework of family business succession: bane of family business continuity. *International Journal of Business and Social Science*, *2*, 106-133.

Madhani, P.M. (2016). Firm size, corporate governance and disclosure practices: Inter-relations. *SCMS Journal of Indian Management*, *13*(2), 17-39.

Mafrolla, E., & Amico, E.D. (2016). Tax aggressiveness in Family Firms and the non-linear entrench-ment effect. *Journal of Family Business Strategy*, *7*(3), 178-184. https://doi.org/10.1016/j.jfbs.2016.08.003

Martin, K.G. (2013). Can a regression model with a small R-squared be useful?. The analysis factors. Retrieved from https://cpb-us-w2.wpmucdn.com on May, 29, 2020.

Martinez, A.L. (2017). Tax aggressiveness: a literature survey. *Revista de Educação e Pesquisa em Contabilidade Journal of Education and Research in Accounting, 11*(6), 104-121. http://dx.doi.org/10.17524/repec.v11i0.1724

Martinez, A.L., & Ramalho, G.C. (2014). Family Firms and tax aggressiveness in Brazil. *International Business Research*, *7*(3), 129-136. https://doi.org/10.5539/ibr.v7n3p129

Michalisin, M.D., Smith, R., & Douglas, M.K. (1997). In search of strategic assets. *The International Journal of Organizational Analysis*, *5(*4), 360-387.

Mills, L., Nutter, S., & Schwab. (2013). The effect of political sensitivity and bargaining power on taxes: Evidence from federal contractors. *The Accounting Review*, *88*, 977-1005.

Monticelli, J.M. (2017). Family business in emerging and developed economies: similarities and dif-ferences. *Conference: International Family Research Academy*. Retrieved from https://www.re-searchgate.net/publication/320024714 on May 20, 2020.

Nicodème, G. (2007). Do larges companies have lower effective corporate tax rates? A European survey. A European survey (Centre Emile Bernheim Working Paper No. 07/001). (Centre Emile Bernheim Working Paper No. 07/001). Retrieved from https://core.ac.uk/display/6491749 on May 20, 2020.

Peni, E. (2014). CEO and chairperson characteristics and firm performance. *Journal of Management & Governance*, *18*(1), 185-205.

Peteraf, M. & Barney, J. (2003). Unravelling The Resource-Based Tangle. *Managerial and Decision Economics, 24*, 309-323. https://doi.org/10.1002/mde.1126

Pierk, J. (2016). Are private firms really more tax aggressive than public firms? (WU International Taxation Research Paper Series No. 2016-02). Retrieved from SSRN: https://ssrn.com/ab-stract=2758756 or http://dx.doi.org/10.2139/ssrn.2758756 on May 20, 2020.

Rego, S.O. (2003). Tax avoidance activities of U.S. multinational corporations. *Contemporary Ac-counting Research, 20(*4), 805-833.

Saidu., S. (2019). CEO characteristics and firm performance: focus on origin, education and owner-ship. *Journal of Global Entrepreneurship Research*, *9*, 8-15. https://doi.org/10.1186/s40497-019-0153-7

Sánchez-Marín, G., Portillo-Navarro, M.J., & Clavel, N.J.G. (2016). The influence of family involvement on tax aggressiveness of Family Firms. *Journal of Family Business Management*, *6*(2), 1-46.

Schulze, W.S., & Gedajlovic, E.R. (2010). Whither family business*?. Journal of Management Studies*, *47,* 191-204.

Smulders, S., Stiglingh, M., Franzsen, R., & Fletcher, L. (2017). Determinants of external tax compli-ance costs: Evidence from South Africa. *South African Journal of Accounting Research*, *31(*2), 134-150.

Siegfried, J.J. (1972). The publishing of economic papers and its impact on graduate faculty ratings; 1960-69. *Journal of Economic Literature,* 10(1), 31-49.

Stanwick, P.A., & Stanwick, S.D. (2003). CEO and ethical reputation: visionary or mercenary. M*an-agement Decision, 41*(10), 1050-1057.

Steijvers, T., & Niskanen, M. (2014). Tax aggressiveness in private family firms: An agency perspec-tive. *Journal of Family Business Strategy*, *144*, 1-11.

Wade, J.B., Porac, J.F. Pollock, T.G., & Graffin, S.D. (2018). Star CEOs: benefit or burden.? *Organizational Dynamics*, *37*(2), 203-210. https://doi.org/10.1016/j.orgdyn.2008.02.007

Waluyo, W. (2017). Enterprise size, enterprise age, and enterprise growth on corporate social responsibility in Indonesia: the case of real estate companies. *European Research Studies Journal*, *20*(4A), 360-369.

Wang, Y., Campbell, H., & Johnson. D.(2014). Determinants of effective tax rate of China publicly listed companies. *International Management Review*, *10*(1), 10-20.

Welter, F. (2011). Contextualizing entrepreneurship-conceptual challenges and ways forward. *Entrepreneurship Theory and Practice*, *35*, 165-184.

World Bank (2009). Enterprise survey and indicator surveys: sampling methodology. Retrieved from www.enterprisesurveys.org on March 17, 2018.

Wu, W., Wu, C., Zhou, C., & Wu, J. (2012). Political connections, tax benefits and firm performance: Evidence from China. *Journal of Accounting and Public Policy 31*, 277-300.

Zellweger, T.M., Eddleston, K.A., & Kellermanns, F.W. (2010). Exploring the concept of familiness: Introducing family firm identity. *Journal of Family Business Strategy*, *1*, 54-63. http://dx.doi.org/10.1016/j.jfbs.2009.12.003

Zellweger, T. (2017). *Managing the family business: Theory and Practice*. Cheltenham, UK: Edward Elgar Publishing.

Authors

The contribution of co-authors is equal and can be expressed as 25% per each of the authors: U. S. Sucahyo prepared the introduction and literature review, T.W. Damayanti prepared the literature review and the material and methods section, R. Prabowo prepared data, the statistical analysis, and discussion, while S. Supramono drew conclusions, proofread, and supervised the paper for publication.

Usil Sis Sucahyo
Assistant Professor at the Department of Accounting, Faculty of Economics and Business, Universitas Kristen Satya Wacana. His research interests include cost accounting, accounting for non-profit organizations, and management control systems. Among other places, Usil Sis Sucahyo published his articles in *International Journal of Recent Technology and Engineering*.
Correspondence to: Dr. Usil Sis Sucahyo, Faculty of Economics and Business, Universitas Kristen Satya Wacana, Jln Diponegoro 52, Salatiga, Indonesia, e-mail: usil.sucahyo@uksw.edu
ORCID http://orcid.org/0000-0001-8552-7909

Theresia Woro Damayanti
Associate Professor at the Department of Accounting, Faculty of Economics and Business, Universitas Kristen Satya Wacana. She is also the head of the Department of Accounting. Her research interests include taxation and tax system evaluation. She was the author and co-author of several articles in reputable international journals such as Business: Theory and Practice, Gender in Management: An International Journal, Montenegrin Journal of Economics, and Polish Journal of Management Studies.
Correspondence to: Dr. Thresia Woro Damayanti, Faculty of Economics and Business, Universitas Kristen Satya Wacana, Jln Diponegoro 52, Salatiga, Indonesia, e-mail: theresia.damayanti@uksw.edu
ORCID http://orcid.org/0000-0002-4065-3562

Ronny Prabowo
Associate Professor at the Department of Accounting, Faculty of Economics and Business, Universitas Kristen Satya Wacana. His research interests include cost accounting and taxation. He published papers in several national and international scientific journals such as *Business: Theory and Practice* and *European Accounting Review*, among other places.
Correspondence to: Ronny Prabowo, PhD, Faculty of Economics and Business, Universitas Kristen Satya Wacana, Jln Diponegoro 52, Salatiga, Indonesia, e-mail: ronny.prabowo@uksw.edu
ORCID http://orcid.org/0000-0003-0785-3156

Supramono Supramono
Professor in Finance at the Department of Management, Faculty of Economics and Business, Universitas Kristen Satya Wacana. His research interests include behavioural finance, capital market, corporate finance, and corporate tax. He published several articles in reputable international journals as Montenegrin *Journal of Economics*, *Central European Management*, *Journal Gender in Management: An International Journal*, *Business: Theory and Practice*, and *Polish Journal of Management Studies*.
Correspondence to: Prof. Supramono, Faculty of Economics and Business, Universitas Kristen Satya Wacana, Jln Diponegoro 52, Salatiga, Indonesia, e-mail: supramono@uksw.edu
ORCID http://orcid.org/0000-0002-2110-0671

Published by Cracow University of Economics – Krakow, Poland

Does the presence of governance structure affect small and medium-sized enterprise performance? Evidence from an emerging market

Daniel Okofo-Darteh, Emmanuel Selase Asamoah

A B S T R A C T
Objective: The objective of the article is to determine the effect of governance structure components (audit committee presence, board size adequacy, and board leadership) on SMEs' performance and the moderating effect of chief executive officer (CEO) tenure on the influence of governance structure on SMEs' performance in Ghanaian context.
Research Design & Methods: We sampled 145 respondents from selected SMEs in the Ghanaian manufacturing, telecommunication, and financial sectors for the study. All selected participants completed questionnaires on governance structure and shared their informed perception of the enterprises' performance. The data gathered were analysed using multiple regression analysis and Hayes' process macro.
Findings: The results indicated that board leadership, the presence of an audit committee, and board size adequacy do not significantly influence SMEs' performance. The results further revealed that CEO tenure is a significant negative moderator to the influence of the governance structure on SMEs' performance.
Implications & Recommendations: Future studies must focus on how SMEs in Ghana can put CEOs and board succession plans in place so as to ensure creativity/innovation.
Contribution & Value Added: This study contributes to the body of knowledge relating to the governance structure's influence on various indicators of business performance of SMEs in Ghana. Therefore, this study sought to assess the contribution of corporate governance structures to the performance of SMEs in Ghana. This would help SMEs to know which aspects of their governance structure should be strengthened to effectively contribute to their success.

INTRODUCTION

Small and medium-sized enterprises (SMEs) are considered critical to economic growth and equitable development in developing economies (Agwu & Emeti, 2014). They are usually regarded as efficient, creative, and fruitful job creators, the seeds of future big industry giants, and the fuel of national economy (Abor & Quartey, 2010). As important as SMEs are to various economies, it is important to ensure their effective management and good corporate governance. The major aim is long-term shareholder value, while taking into account the interests of other stakeholders (Abor & Adjasi, 2007). Abor and Adjasi (2007) opined that – since corporate governance regulates the internal affairs of large scale companies – it may also improve SME performance, if regulators make it a mandatory requirement. Moreover, the majority of SMEs in Ghana find themselves in the owner/chief executive officer (CEO)/manager situation, in which they take it upon themselves to shoulder all major decisions (Abor & Adjasi, 2007).

This appears to be a problem for the SME sector in Ghana because most of such entrepreneurs usually possess limited formal education, access to cutting-edge technologies, and market information; thus, scholars believe these entrepreneurs to be characterised by the lack or inadequate presence of proper governance systems (Abor & Biekpe, 2007). Most efforts to help remedy this phenomenon by researchers appear to be mainly limited to studies on SMEs in developed economies (Bennett & Robson, 2004) to the near neglect of emerging markets in Africa and specifically Ghana.

The focus of corporate governance studies in emerging markets has largely ignored SMEs. The few existing studies on SMEs' governance in Ghana justifiably employ objective measures. However, the present study appears to be one of the very few studies – if not the sole study – to use subjective measures. The novelty of our study lies in the fact that it departs from usual corporate governance studies on large corporations to bring to light what pertains in the SME circles in Ghana by using subjective measures and determining the moderating influence of CEO tenure on the governance structure-enterprise performance link. While it is imperative to examine corporate governance in the SME sector in the context of an emerging economy such as Ghana, the question of whether the presence of governance structures in SMEs contributes to their performance appears to have no recent empirical elaboration with subjective measures.

Therefore, the objectives of our study are to discover the effect of governance structure components on the performance of SMEs in Accra and to determine the moderation effect of CEO tenure on the relationship between governance structure and enterprise performance in SMEs. The literature review presents empirical studies on the relationship between components of governance structure of this study's interest – board size adequacy, the presence of an audit committee, board leadership, and CEO tenure – and performance.

LITERATURE REVIEW AND THEORY DEVELOPMENT

Ghanaian Business Context

The business sector of Ghana is thriving and characterised by small, medium-sized, and large enterprises. The main sectors include: agriculture which contributes 18.3% of GDP, and employs about 34% of the country's workforce; manufacturing accounts for about 31.5% of

GDP, which is dominated by mining, lumbering, light manufacturing, aluminium smelting, food processing, cement production, small commercial ship building, and petroleum; whereas the largest component of the economy is the service sector that comprises about 43% of GDP, employing about 48% of the working population (NORDEA, 2020). Altogether, SMEs in the country contribute 85% of employment in the manufacturing sector, represent about 70% of GDP and account for about 85% of general business in the country. Policymakers, development practitioners, and community leaders continue to develop policies and strategies to improve the sector (Okofo-Darteh, Amartei-Kwei, & Boahen, 2020).

What Is an SME in Ghana?

An SME is usually defined using the number of employees of the enterprise or the value of the enterprise's fixed assets (Abor & Quartey, 2010). The Ghana Statistical Services (GSS), the Ghana Enterprise Development Commission (GEDC), and the National Board for Small Scale Industries (NBSSI) consider either the number of employees or value of fixed assets or both as criteria for their unique categorisation of enterprises, respectively.

However, the current study favours the definition by the Regional Project on Enterprise Development Ghana, which classifies enterprises into: (i) micro enterprise, with less than five employees; (ii) small enterprise, with five to 29 employees; (iii) medium enterprise, with 30-99 employees; (iv) large enterprise, with a 100 and more employees. Therefore, for the purpose of this study, SMEs are enterprises that employ from five to 99 employees in Ghana. While most SMEs in Ghana are family-controlled businesses, others are listed on the stock exchange and tend to have limited control of the business by a family. The focus of this study is generally on small and medium-sized enterprises in Ghana: listed and unlisted.

Corporate Governance

The OECD (2004) defines corporate governance as a set of relationships between a company's board, its shareholders, and other stakeholders. Cadbury (1992) also defines corporate governance as a whole system of controls, both financial and other, with which a company is directed and controlled. Both definitions reveal the fact that corporate governance represents the conscience of an enterprise in all its dealings. Therefore, the study considers both definitions. Other theories also help build on the concept by propounding theories that explain the corporate governance issue, namely the agency theory, the stewardship theory, the resources dependence theory, and the stakeholder theory.

The agency theory necessitates a contract under which business owners (principal) employ someone as a CEO and others as board members (agents) to run the business in the interest of the owners. Instead, the stewardship theory opines that the main aspiration of management is to maximise the enterprise's performance by being a good custodian of corporate assets (Muth & Donaldson, 1998). The resource dependence theory by Pfeffer (1973) and Pfeffer and Salancik (1978) emphasises that board directors should be non-executives who have valuable social capital and connections to enhance the enterprise's ability to acquire resources from various sources. According to this theory, board directors usually become the conduit for resource acquisition mainly through their social and professional networks (Johannisson & Huse, 2000). The stakeholder theory expresses the need for enterprises to consider the interests of various other stakeholder groups – including employees, customers, suppliers, the local community – in addition to interests of investors (Freeman, 1984; Gibson, 2000). This will result in the enterprise's ability to build consensus among all

critical stakeholders. What applies better in the case of family-owned SMEs employing non-family members to the board are the stewardship and stakeholder theories.

Corporate Governance through the Prism of New Institutional Economics

New institutional economics (NIE) focuses on coordination processes that lead to particular decisions about resource allocation rather than on results of resource allocation. Klepczarek (2017) believes that the new institutional economics concept relies on institutions, governance structures, and individuals' interaction in the organization, which determines the performance of the organization and the economy. Researchers currently agree with Sonmez and Yildirim (2015) that corporate governance is usually concerned with issues of shareholders' value maximization (the agency theory) and the role of stakeholders in the management system of enterprises (the stakeholder theory). They also believe that agency and stakeholder theory along with all other institution-related corporate governance theories are partial paradigms or perspectives that always go together just as the NIE perspective suggests; even in the case of SMEs in Ghana that practice corporate governance.

Why Ghanaian SMEs May Find Corporate Governance Important?

SMEs in Ghana are increasingly embracing the concept of good corporate governance as it leads to sustainable business growth (Kyereboah-Coleman & Amidu, 2008). There have also been several calls from professional institutions concerning the need for SMEs to have a good governance framework in place. First is the continual advice by Ghana's Trade and Industry Ministry to SMEs to adopt governing boards and proper management systems to provide enterprises with strategic direction for their operation. Second, Ghana's Companies Act of 2019 (Act 992) stipulates that all companies registered under the law, regardless of their size or public interest level, must be audited by certified auditors and must file audited financial statements with the Registrar General. The Act also stipulates the need to appoint directors, and it defines the role of board chairs. Now, since most SMEs register as companies, they are enjoined by law to comply. Therefore, proper compliance with law implies the need for good corporate governance practices, and governing boards to oversee the compliance internally. Moreover, the introduction of the SME capital market – the Ghana Alternative Exchange (GAX), which is a category of listing on the exchange to SMEs – has also implicitly influenced most SMEs in Ghana to establish governing boards to be able to list on the exchange when thinking of scaling-up their businesses. Finally, while the SMEs in Ghana may not really want to institute a board, they may still find it necessary out of sheer mimicry, since they want to appear like the larger more successful companies that profess to have a board and tout their operations to be guided by board decisions.

Components of Governance Structure

The following provides an analysis of the empirical literature on the components of governance structures within enterprises.

Board Size Adequacy

There are two distinct schools of thought on the adequacy of size of the boards. The first believes that a smaller board size – while competent and closely-knit – would contribute to the success of an enterprise (Mayur & Saravanan, 2017) more than a large board size (Coles, Daniel, & Naveen, 2008). Other studies indicate that a large board will support and

advise enterprise management more effectively in a complex business environment (Bertrand, Black, Jensen, & Lleras-Muney, 2019). Kumar and Singh (2013) opine that a large board size will gather much more information for enterprise performance. Empirical studies in Ghana expose inconclusive relationships between the adequacy of board size and performance. A study by Ansong (2015) in Ghana reveals that there is a significant positive relationship between board size adequacy and enterprise performance. This is corroborated by Abor and Biekpe (2007) who find that there is positive association between board size and performance. Kyereboah-Coleman and Amidu (2008) find instead a negative correlation between board size and performance. Their argument is that large boards are less effective and easier for the CEO to control as opposed to smaller boards whose size reduces the possibility of free-riding by individual directors, which increases the effectiveness of smaller boards' decision-making processes. However, a study by Topak (2011) reveals that that board size adequacy does not have a significant influence on enterprise performance. The current study hypothesises that:

H1:   Board size adequacy will have a significant positive influence on enterprise performance.

Audit Committee

Accounting irregularities are rife in corporate organizations, which results in compliance issues; therefore, audit committees should be established in organizations (Kyereboah-Coleman, 2007). This helps to make such committees independent. Thus, Kyereboah-Coleman (2007) advance that a wholly independent audit committee should consist solely of Non-Executive Directors and non-affiliates of the company, such as the enterprise's previous directors. Omer, Shelley, and Tice (2019) reveal that earning reports improve once audit committees are established, since its establishment engenders transparency and compliance. It is expected that the work of audit committees helps to achieve enterprise performance (Badolato, Donelson, & Ege, 2014). A study by Kyereboah-Coleman and Amidu (2008) in Ghana reveals that the presence of audit committees to oversee day-to-day financial commitments of enterprises and make prudent use of funds enhances performance. Dzigba (2015) reveals that, among SMEs in Ghana, audit committees were the most relevant among all other subcommittees to financial performance and access to credit. Ojeka, Iyoha, and Obigbemi (2014) in Nigeria also report a significant positive relationship between an audit committee and financial performance, because of the former's financial expertise. Apparently, SMEs with audit committees are successful according to previous empirical studies. The current study hypothesises that:

H2:   The presence of audit committees will have a significant positive influence on enterprise performance.

Board Leadership Structure

CEO and chairperson positions may be held by the same person, which may likely pose serious problems (Emile, Ragab, & Kyaw, 2014). According to Ponnu (2008), some enterprises employ a combined leadership structure, in which the CEO doubles as board chair, while other employ a separated structure, which clearly distinguishes the positions of CEO from board chairmanship. Most researchers favour the separated structure because it ensures the balance of power of both positions in addition to avoiding a conflict of

interest. Ponnu (2008) and Emile *et al*. (2014) further assert that it is also to promote fair judgment. Many studies identify the implications of CEO duality. Enterprises involved in earnings manipulations usually have a CEO doubling as the board chair (Ponnu, 2008). To this, Ponnu (2008) furthers that in all types of enterprises, when the combined leadership structure is employed, such a situation leads to the board being compromised so that its opinions and recommendations are dogmatically the same as that of the CEO, despite the presence of independent directors.

Abor and Biekpe (2007) report that there is a positive relationship between CEO duality and enterprise performance. This suggests that in SMEs where an individual combines both CEO and board chairman roles (one-tier board leadership structure), enterprise performance is better than those with two individuals performing such roles (two-tier board leadership structure). Conversely, Sanda, Mukaila, and Garba (2003) find in the Nigerian context a positive relationship between enterprise performance and the board leadership structure where the functions of the CEO and Chairman are separated. Instead, Rashid (2009) shows on the example of Bangladesh that board leadership structure does not influence enterprise performance. Clearly, there is inconclusive empirical evidence of the influence of board leadership structure on enterprise performance. Nevertheless, the current study hypothesises that:

H3: Board leadership structure will have a significant positive influence on enterprise performance.

Enterprise Performance

One of the most appropriate objective measures for enterprise performance for this study is Tobin's Q, which is probably the most frequently used valuation measure in empirical corporate finance. Tobin's Q is the ratio of market value to the replacement value of an enterprise's assets. As an approximation for measurement, the market value of assets is normally computed as market value of equity plus book value of assets, minus book value of equity (Kyereboah-Coleman & Biekpe, 2008). The result is then divided by the book value of assets to obtain the Tobin's Q, which indicates that management has done well in its investment decisions. However, the researchers were constrained, since the enterprises were protective of the necessary information needed to calculate the Tobin's Q. However, subjective performance measures have proven to also be reliable for measuring enterprise performance (Venkatraman & Ramanujam, 1987). Subjective performance measures increase the response rate in which objective data are neither available nor are there respondents willing or able to reveal the information. Enterprise performance in this study is defined as the composite index of perceptions of profitability, sales, market share, and productivity.

Moderating Variables

Moderators are variables that seek to affect the relationship between dependent and independent variables. The present study tests CEO tenure as a moderator.

CEO Tenure

CEO tenure in this study is expressed as the number of years a CEO has held the position. Rashid, Islam, and Anderson (2008) state that moderating variables play an important role in the relationship between independent and dependent variables. Merika, Triantafyllou,

Kalogeropoulou, and Kalokairinos (2016), Galoji, Ahmed, and Johari, (2013), Allgood and Farrell (2000) and Luo, Kanuri, and Andrews (2013) find that CEO tenure positively influences performance, and the longer a CEO serves, the more enterprise performance improves. This is because it affords the CEO's the opportunity to witness the results of their decisions (Kyereboah & Coleman, 2007).

Nonetheless, we should note that CEO tenure may also negatively affect enterprise performance. The leader life cycle theory proposed by Hambrick and Fukutomi (1991) asserts that performance slumps as CEO interest in tasks gradually decrease, usually after six years (Giambatista, 2004). Therefore, in our study we tested CEO tenure as a moderating variable in the SME context. It advances the argument that CEO tenure constitutes another important governance mechanism (Kyereboah-Coleman, 2007). The present study aims to determine the effect of governance structures' components on the performance of SMEs and the moderating effect of CEO tenure on governance structures and SMEs performance. Thus, we formulated following hypothesis:

H4: CEO tenure will have a significant positive moderation influence on the relationship between governance structure and enterprise performance.

MATERIAL AND METHODS

Population and sample

The population of interest for this study included all SMEs in Ghana. Information from the Association of Ghana Industries (AGI) suggests an estimated registered population of about 1500 SMEs nationwide. The estimated population of registered SMEs in Accra was about 800 registered SMEs. Purposive-snowball sampling technique was employed. Purposive sampling technique was employed for choosing enterprises, because the study focused on SMEs that made efforts to establish a governance board and relevant committees. These should have been in operation for at least five consecutive years, so that their CEOs would have completed the "honeymoon period" defined as the first three years of office (Limbach, Schmid, & Scholz, 2015). Such enterprises would have a great deal of experience with sustained governance structures. For the respondents of the study, we employed the snowball sampling technique.

The sampling frame for the study comprised senior-level employees who interact with the governance structure of enterprises or companies. The sample size was determined using the sample size formula by Tabachnik and Fidell (2007), which stipulates that for an appropriate sample size in studies that employ multiple regression, the minimum sample size (N) should be (N>50+8M) in which M is the total number of independent variables. As there are three independent variables in the study, the minimum sample size required for this study was 74; *i.e.* 50 + 8(3) = 74. Therefore, the sample size of 145 respondents each representing 145 enterprises more than satisfies the acceptable sample size for the present study.

Instrumentation

The study employs the following measuring instruments:

Governance Self-Assessment Test

This instrument was originally developed by Gill, Flynn, and Reissing (2005) and covers some governance structure essentials that boards ought to display for effective governance. Therefore, the instrument was used to measure perceptions of variables such as the presence of audit committee, board size adequacy, and board leadership. Responses to these statements were measured on a five-point Likert scale. Hence, the respective variables were computed as the mean of aggregate responses to question items relating to each governance structure component. Governance structure was also operationalised as a mean scores index of computed governance structure components.

Enterprise Performance Survey

In a single statement, the researchers subjectively measured enterprise performance with respect to profitability, sales, market share, and productivity. Responses to these statements were measured on a five-point Likert scale. Therefore, enterprise performance was computed as a mean of the aggregate of responses on the enterprise performance survey. Therefore, enterprise performance in this study is defined as the composite index of perceptions of profitability, sales, market share, and productivity.

Reliability and Validity

The reliability of the Governance Self-Assessment Test was tested using a test-retest procedure. The researchers repeated measurements of the same respondent by using the same questionnaire within an interval of seven days. The researchers repeated the measurement of the same tool using the same questionnaire under similar conditions. Using the Statistical Package for Social Sciences (SPSS) version 21, the reliability of the tools was calculated to ensure a Cronbach's alpha (α) at or above 0.6, which is the acceptable value. If the results are similar then the questionnaire has high reliability. The value of Cronbach's alpha coefficient was expected to be 1.0, which indicates the high reliability of the instrument. Nunnally and Bernstein (1994) state that, a Cronbach's alpha value equal to or greater than 0.70 is considered satisfactory. Reliability estimates between 0.60 and 0.70 are acceptable; whereas a Cronbach's alpha below 0.60 is usually regarded as unacceptably low. The final reliability tests obtained were Governance Structure, $\alpha = 0.853$, and enterprise performance, $\alpha = 0.870$.

The Assumption of Normality Test

A normality test was conducted for all variables, and it satisfied the requirement that data collected must be normally distributed. The inferential statistic information obtained is that the *p* values for variables ranged from 0.081 to 0.296, according to the Shapiro-Wilk normality test. The normality test showed that all values were significant as the data met the threshold of 0.05.

RESULTS AND DISCUSSION

The following section presents the results of data analysis and findings. The analyses are presented per each research objective.

Enterprises Demographics

Table 1 also shows the demographic distribution of the SMEs.

Table 1. Enterprises' Demographic Description

Variables	Items	Frequency	Percentage (%)
Enterprise Age	5 years	18	12.4
	6 years	30	20.7
	7 years	29	20.0
	8 years and more	68	46.9
Enterprise size	5-29 employees	98	67.6
	30-99 employees	47	32.4
CEO Duality	Yes	93	64.1
	No	52	35.9
CEO Tenure	3 years	22	15.2
	4 years	45	31.0
	5 years and more	78	53.8

Source: own elaboration of research results (n=145).

Out of the 145 SMEs, 18 (12.4% of all studied SMEs) operated for at least five years, 30 (20.7%) were in business for six years, 29 (20%) for seven years, and 68 (46.9%) for eight years and more. Ninety-eight (98) enterprises (67.6%) were small-sized businesses ranging from five to 29 employees, while 47 enterprises (32.4%) were medium-sized businesses with 30 to 99 employees. The majority of CEOs (78; 53.8% of all studied CEOs) controlled their enterprises for five years and more, followed by 45 (31%) CEOs who held the position for four years. Twenty-two (22) CEOs (15.2%) held their posts for three years. The question of CEO duality required a 'Yes' or 'No' answer. A 'Yes' answer is interpreted to mean that the CEO (owner) is also the board chair. The 'No' answer means the opposite. Therefore, 93 CEOs (64.1 % of all studied CEOs) acted as board chairs, whereas 52 CEOs did not double as board chairs, which meant that different individuals lead their boards.

First Research Objective

The first research objective sought to determine the effect of governance structure components – board size adequacy, the presence of an audit committee, board leadership – on enterprise performance. Table 2 provides the coefficient matrix of governance structure and performance of small and medium-sized enterprises.

The study found that board size adequacy did not significantly contribute to enterprise performance (β = -0.063, p = 0.460). Hence, we reject the hypothesis H_1 "Board size adequacy will have a significant positive influence on enterprise performance," and we accept the null hypothesis. This is contrary to findings by Ansong (2015) and Abor and Biekpe (2007) who revealed that the relationship of board size to enterprise performance is direct, statistically significant, and positive. The finding of Kyereboah-Coleman and Amidu (2008) that there is a negative relationship was also not confirmed. However, Topak (2011) corroborates the findings of the present study, as he found that board size does not have a significant influence on enterprise performance. This means that the size of the board

does not play any important role in the performance of enterprises. This is quite close to saying that boards in Ghanaian SMEs are probably just for show.

Table 2. Regression of governance structure components on enterprise performance

Variables	Unstandardised Coefficients	Standardised Coefficients		x		Collinearity Statistics	
Model	B	se	Beta	t	p	Tolerance	VIF
1(Constant)	14.150	2.227	x	6.353	0.000	x	x
BSizeAd	-0.063	0.084	-0.063	-0.740	0.460	0.985	1.015
Audit	0.003	0.101	0.002	0.027	0.979	0.866	1.154
BLead	0.023	0.088	0.023	0.257	0.789	0.878	1.139

Note: dependent variable is enterprise performance.
B – unstandardised beta, se – standard error, t – t-test value, p – significance value, VIF – Variance Inflation Factor.
Source: own elaboration based on research results (n=145).

Our study also found that audit committees do not contribute significantly to enterprise performance ($\beta = 0.003$, $p = 0.979$). Hence, we reject the hypothesis H_2 "The presence of audit committees will have a significant positive influence on enterprise performance" and accept the null hypothesis. These committees are established to ensure compliance with requirements of regulatory bodies, ensure internal auditing and help to minimise unnecessary expenditure within organisations. In line with the agency theory, an audit committee functions as an additional control mechanism that ensures that shareholders' interests are secured (Ahmed & Gabor, 2012). The frequency of audit committee meetings is supposed to enable them to perform their functions effectively by concurrently safeguarding the interest of shareholders. The non-influence of committees on performance may result from inadequate and ineffective meetings. Another reason for that may stem from CEOs' dual roles, hence domination of their whims over the committees.

Furthermore, board leadership ($\beta = 0. 023$, $p = 0.789$) failing to influence enterprise performance necessitated our rejection of the hypothesis H_3 "Board leadership structure will have a significant positive influence on enterprise performance" and accept the null hypothesis. The board leadership literature reveals mixed findings in regard to the extent of CEOs' effectiveness doubling as board chairmen; whereas some observe positive influence (Harjoto & Hoje, 2008), others notice negative influence (see Schmid & Zimmermann, 2005) or show indifferent findings (Elsayed, 2007; Rahman & Haniffa, 2005). According to Lokuwaduge (2011), agency theory and stewardship theory address the board leadership structure.

Second Research Objective

The second research objective focused on determining the moderation effect of CEO tenure on the relationship between governance structure (independent variable) and enterprise performance in small and medium scale enterprises. The results of coefficients table for CEO tenure moderation are provided in the table below.

According to the moderation analysis, CEO tenure significantly influenced performance, as $\beta = 0.62$, $t (141) = 3.74$, $p= 0.0003$. However, governance structure failed to significantly contribute to enterprise performance, as $\beta = 0.019$, $t (141) = 0.42$, $p = 0.68$. Nonetheless, when the interaction term was added to the model, it significantly contributed to the overall enterprise performance model, as shows the significant interaction $\beta =$

-0.13, t (141) = -2.23, p= 0.03. The findings revealed that CEO tenure is a significant nega-tive moderator of the relationship between governance structure and enterprise perfor-mance. The overall model also proved significant F (3, 141) = 5.3887, p = 0.0015, R^2= 0.103. Therefore, we reject the hypothesis H$_4$ that "CEO tenure will have a significant positive moderation influence on the relationship between the governance structure and enter-prise performance" and accept the null hypothesis.

Table 3. The regression of CEO tenure moderation effects on governance structure-enterprise performance link

Variables	B	se	t	p
constant	13.7103	0.1530	89.5963	0.0000
CEO Tenure	0.6157	0.1647	3.7393	0.0003
Governance Structure	0.0191	0.0460	0.4155	0.6784
Interaction	-0.1282	0.0576	-2.2268	0.0275

Interactions: governance structure and CEO tenure.

B – unstandardised beta, se – standard error, t – t-test value, p – significance value.

Source: own elaboration of research results (n=145).
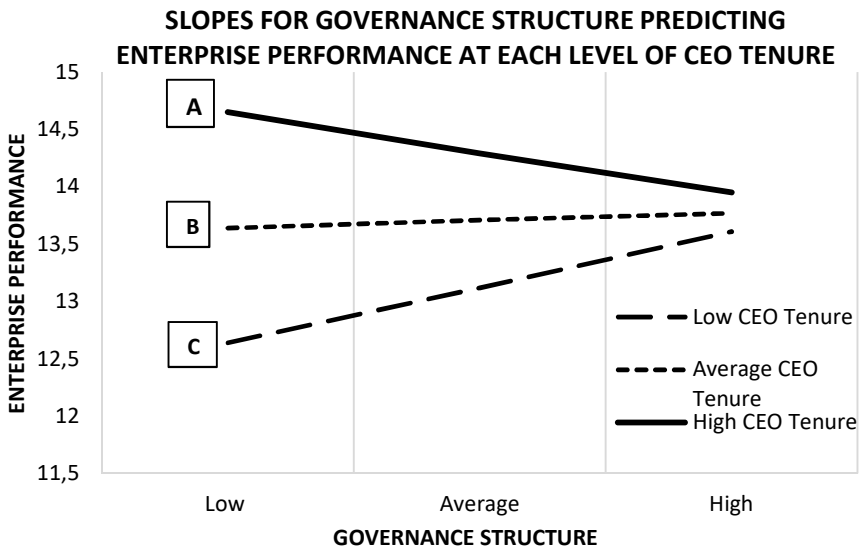
Figure 1. Slopes for governance structure predicting enterprise performance at each level of CEO tenure
Source: own elaboration based on the 2019 study (n=145).

Figure 1 shows that CEO tenure is a significant negative moderator of the relationship between governance structure and enterprise performance. The horizontal (x) axis repre-sents three (3) levels of governance structure, whereas the vertical (y) axis – labelled en-terprise performance – depicts the various mean levels of enterprise performance when

the low, average, or high levels of the moderator (CEO tenure) is introduced into the relationship between governance structure and enterprise performance. From Figure 1, we read that the simple slope C for enterprise performance at one standard deviation (1 *SD*) below the mean was 12.64, the unstandardised simple slope B for enterprise performance at the mean level was 13.64, and the unstandardised simple slope A for enterprise performance at 1 *SD* above the mean of CEO tenure was 14.65. This slope A is what depicts a significant negative moderation effect by CEO tenure.

Therefore, at low CEO tenure – when the CEO holds the position for a few years – governance structure can predict increasing enterprise performance depicted by the dashed simple slope C. At average CEO tenure – when the CEO stays at post for a reasonable period of time – governance structure predicts insignificant change in levels of enterprise performance depicted by the dotted simple slope B. At high CEO tenure – when the CEO stays at post for an extended period of time – governance structure predicts decreasing enterprise performance, as depicted by the inverse downward movement of the solid simple slope A from left to right. We may deduce from the findings that CEO tenure seems either too short or too long so that its moderation effect on the governance structure-performance link is significantly negative. According to Limbach *et al.* (2015), very short or long CEO tenures are linked to performance inefficiencies. Tornyeva and Wereko (2012) explain that CEOs may either take strategic decisions that are short term, medium-term, or long term.

Granting long tenures to CEOs may assure CEOs job security and influence their investment decisions, because they would be around to observe the progress and fruits of their decisions. Therefore, the CEOs are likely to be proactive and magnanimous in their decisions because of such a psychological influence (Kyereboah-Coleman, 2007). Thus, the CEO's tenure is a significant moderator. On the other hand, the longer a CEO runs an SME, the more likely they are to become lax and seek to amass more power and control, hence leading to empire-building to the detriment of the business' welfare. This confirms the leader life cycle theory proposed by Hambrick and Fukutomi (1991), which asserts that performance slumps as CEOs' interest in tasks gradually decreases, usually after six years on the job (Giambatista, 2004). Therefore, there is a need to discover what tenure is too long or too short in the Ghanaian SME context.

CONCLUSIONS

This study showed that individual components of governance structures did not influence the performance of SMEs. According to Lam and Lee (2008), CEO duality usually results in CEO dominance, leading to the ineffective monitoring of management, thus defeating the board's purpose. The audit committee was also not found to significantly influence enterprise performance, although the audit committee functions as an additional control mechanism that ensures that shareholders' interests are secured (Ahmed & Gabor, 2012). The frequency of audit committee's meetings allows it to perform their functions effectively, as they can do concurrent monitoring to safeguard the interest of shareholders. The leadership structure of boards does not directly influence the performance of the enterprise in any way. However, CEO tenure proved to have a significant negative moderating effect on the governance structure-enterprise performance link.

The current study is not without limitations. First is the limited number of governance structure components considered for the study. More components could have been added

to the model, which could then have yielded a different result and expanded the discourse of the study. Furthermore, instead of employing the simple random sampling technique – which is more unbiased – the purposive-snowball sampling technique was used instead. Thus, structural equation modelling (SEM) was not used, which deprived the analysis of rigor. Future studies must focus on how SMEs in Ghana can put CEOs and board succession plans in place so as to ensure sustainable creativity and innovation in enterprises.

REFERENCES

Abor, J., & Biekpe, N. (2007). Corporate governance, ownership structure and performance of SMEs in Ghana: implications for financing opportunities. *Corporate Governance, 7*(3), 288-300.

Abor, J., & Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International Research Journal of Finance and Economics*, *39*(6), 215-228.

Agwu, M.O., & Emeti, C.I. (2014). Issues, challenges, and prospects of small and medium scale enterprises (SMEs) in Port-Harcourt City, Nigeria. *European Journal of Sustainable Development*, *3*(1), 101.

Allgood, S., & Farrell, K.A. (2000). The effect of CEO tenure on the relation between enterprise performance and turnover. *Journal of Financial Research*, *23*(3), 373-390.

Ansong, A. (2015). *Effects of corporate governance on financial performance of small and medium scale enterprises in the Accra metropolis, Ghana* (Doctoral dissertation, University of Cape Coast). Retrieved from https://ir.ucc.edu.gh/jspui/bitstream/…/3797/1/AN-SONG%2C%202015.pdf on January 10, 2015.

Badolato, P.G., Donelson, D.C., & Ege, M. (2014). Audit committee financial expertise and earnings management: The role of status. *Journal of Accounting and Economics*, *58*(2-3), 208-230.

Bertrand, M., Black, S.E., Jensen, S., & Lleras-Muney, A. (2019). Breaking the glass ceiling? The effect of board quotas on female labour market outcomes in Norway. *The Review of Economic Studies*, *86*(1), 191-239.

Cadbury, A. (1992). The financial aspects of corporate governance (Cadbury report). *London, UK: The Committee on the Financial Aspect of Corporate Governance (The Cadbury Committee and Gee and Co, Ltd)*. Retrieved from https://ecgi.global/sites/default/files/codes/documents/cadbury.pdf on June 7, 2019.

Coles, J.L., Daniel, N.D., & Naveen, L. (2008). Boards: Does one size fit all? *Journal of Financial Economics*, *87*(2), 329-356.

De Silva Lokuwaduge, C. (2011). Analysis of governance and performance of Australian universities. In *Journal of the World Universities Forum, 4*(2), 69-84. Chicago, USA: Common Ground Publishing.

Dess, G.G., & Robinson, R.B. (1984). Measuring organizational performance in the absence of objective measures: the case of the privately-held enterprise and conglomerate business unit. *Strategic Management Journal*, *5*(3), 265-273.

Elsayed, K. (2007). Does CEO duality really affect corporate performance? *Corporate Governance: An International Review*, *15*(6), 1203-1214.

Emile, R., Ragab, A., & Kyaw, S. (2014). The Effect of Corporate Governance on Enterprise Performance, Evidence from Egypt. *Asian Economic and Financial Review*, *4*(12), 1865.

Freeman, E. (1984). *Strategic Management*: *A Stakeholder Approach*. Boston, MA: Pitman.

Galoji, S.I., Ahmed, F., & Johari, H. (2013). A moderating effect of leadership tenure on the relationship between leadership self-efficacy and effective leadership behaviour. *Jurnal Teknologi, 64*(3), 61-67. Retrieved from https://sainshumanika.utm.my/index.php/sainshumanika/article/viewFile/69/69 on June 7, 2019.

Gibson, K. (2000). The moral basis of stakeholder theory. *Journal of Business Ethics, 26,* 245-57.

Gill, M., Flynn, R.J., & Reissing, E. (2005). The governance self-assessment checklist: An instrument for assessing board effectiveness. *Nonprofit Management and Leadership*, *15*(3), 271-294.

Harjoto, M.A., & Jo, H. (2008). Board leadership and enterprise performance. *Journal of International Business and Economics*, *8*(3), 143-154.

Hambrick, D.C., & Fukutomi, G.D. (1991). The seasons of a CEO's tenure. *Academy of Management Review*, *16*(4), 719-742.

Hayes, A.F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, USA: Guilford publications. Retrieved from http://afhayes.com/introduction-to-mediation-moderation-and-conditional-process-analysis.html on June 7, 2019.

Johannisson, B., & Huse, M. (2000). Recruiting outside board members in the small family business: An ideological challenge. *Entrepreneurship and Regional Development, 12*, 353-378.

Klepczarek, E. (2017). Corporate Governance Theories in the New Institutional Economics Perspective. The Classification of Theoretical Concepts. *Studia Prawno-Ekonomiczne*, *105*, 243-258.

Kumar, N., & Singh, J.P. (2013). Effect of board size and promoter ownership on enterprise value: some empirical findings from India. *Corporate Governance 13*(1), 88-98. https://doi.org/10.1108/14720701311302431

Kyereboah-Coleman, A. (2007). The impact of capital structure on the performance of microfinance institutions. *The Journal of Risk Finance*, *8*(1), 56-71.

Kyereboah-Coleman, A., & Amidu, M. (2008). The link between small business governance and performance: The case of the Ghanaian SME sector. *Journal of African Business*, *9*(1), 121-143.

Kyereboah-Coleman, A., Biekpe, N. (2006). The link between corporate governance and performance of the non-traditional export sector: evidence from Ghana. *The International Journal of Business in Society, 6*(5), 609-623.

Limbach, P., Schmid, M., & Scholz, M. (2015). Do CEOs matter? Corporate performance and the CEO life cycle. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2626340

Luo, X., Kanuri, V.K., & Andrews, M. (2014). How does CEO tenure matter? The mediating role of enterprise-employee and enterprise-customer relationships. *Strategic Management Journal*, *35*(4), 492-511.

Mayur, M., & Saravanan, P. (2017). Performance implications of board size, composition and activity: empirical evidence from the Indian banking sector. *Corporate Governance: The International Journal of Business in Society, 17*(3), 466-489. doi.org/10.1108/CG-03-2016-0058

Merika, A., Triantafyllou, A., Kalogeropoulou, S., & Kalokairinos, M. (2016). *The causal relationship between CEO tenure and enterprise financial performance in the shipping industry, 17*(1), 1-25. Paper presented at European Financial Management Association (EFMA) Conference in Basel, Switzerland. Retrieved from https://www.researchgate.net/publication/313250394_The_Causal_Relationship_Between_CEO_Tenure_and_Firm_Financial_Performance_in_the_Shipping_Industry.

Muth, M.M., & Donaldson, L. (1998). Stewardship theory and board structure: a contingency approach. *Corporate Governance, 6*(1), 5-28.

NORDEA (2020). *Ghana: Economic and Political Overview*. Nordea trade. Retrieved from https://www.nordeatrade.com/en/explore-new-market/ghana/economical-context on May 2, 2020.

Nunnally, J.C., & Bernstein, I.H. (1994). The assessment of reliability. *Psychometric Theory*, *3*(1), 248-292.

OECD. (2004). *OECD Principles of corporate governance*. Paris, OECD.

Ojeka, S., Iyoha, F.O., & Obigbemi, I.F. (2014). Effectiveness of audit committee and firm financial performance in Nigeria: an empirical analysis. *Journal of Accounting and Auditing: Research & Practice, 2014*(2014), https://doi.org/10.5171/2014.301176

Okofo-Darteh, D., Amartei-Kwei, A., & Boahen, S.O. (2020). Perceived leadership styles and SME performance in Ghana: Organizational culture as a mediator? *Journal of Academy of Business and Economics, 20*(1), 49-66.

Omer, T.C., Shelley, M.K., & Tice, F.M. (2019). Do director networks matter for financial reporting quality? Evidence from audit committee connectedness and restatements. *Management Science,* 1-28. https://doi.org/10.1287/mnsc.2019.3331.

Pearce, J.A., Robbins, D.K., & Robinson, R.B. (1987). The impact of grand strategy and planning formality on financial performance. *Strategic Management Journal, 8*(2), 125-134.

Pfeffer, J., & Salancik, G.R. (1978). *The External Control of Organisations: A Resource-Dependence Perspective*. New York, NY: Harper & Row.

Pfeffer, J. (1973). Size, composition and function of corporate boards of directors: the organisation-environment linkage. *Administrative Science Quarterly, 18*, 349-64.

Ponnu, C.H. (2008). Corporate governance structures and the performance of Malaysian public listed companies. *International Review of Business Research Papers, 4*(2), 217-230.

Rahman, R.A., & Haniffa, R.M. (2005). The effect of role duality on corporate performance in Malaysia. *Corporate Ownership and Control, 2*(2), 40-47.

Rashid, A. (2009, July). Board composition, board leadership structure and firm performance: Evidence from Bangladesh. In *Proceedings of the 2009 AFAANZ Conference*. Accounting & Finance Association of Australia and New Zealand.

Sanda, A.U., Mukaila, A.S., & Garba, T. (2003). Corporate Governance Mechanisms and Firm Financial Performance in Nigeria. *Final Report Presented to the Biannual Research Workshop of the AERC*, Nairobi, Kenya, 24-29.

Schmid, M.M., & Zimmermann, H. (2005). Should chairman and CEO be separated? *Leadership structure and enterprise performance in Switzerland SSRN eLibrary*.

Sonmez, M., & Yildirim S. (2015). A Theoretical Aspect on Corporate Governance and Its Fundamental Problems: Is It a Cure or Another Problem in the Financial Markets?. *Journal of Business Law and Ethics,* 20-35.

Tabachnick, B.G., Fidell, L.S., & Ullman, J.B. (2007). *Using multivariate statistics* (5th ed, pp. 481-498). Boston, MA: Pearson.

Topak, M.S. (2011). The effect of board size on firm performance: Evidence from Turkey. *Middle Eastern Finance and Economics, 14*(1), 1450-2889.

Tornyeva, K., & Wereko, T. (2012). Corporate governance and enterprise performance: Evidence from the insurance sector of Ghana. *European Journal of Business and Management, 4*(12), 95-112.

Venkatraman, N., & Ramanujam, V. (1987). Measurement of business performance in strategy research: A comparison of approaches. *Academy of Management Review, 11*(4), 801-814.

Yeh, Y.H., Lee, T.S., & Ko, C.E. (2002). *Corporate governance and rating system.* Taipei, Taiwan: Sunbright Culture Company.

Appendix:

Governance structure variables – the presence of an audit committee, board size adequacy, and board leadership – were computed as the mean of aggregate responses to question items relating to each governance structure component. Governance structure was also operationalised as the mean scores index of computed governance structure components. Enterprise performance was computed as the mean of the aggregate of responses to the four question items on the enterprise performance survey. Therefore, enterprise performance in this study is defined as the composite index of perceptions of profitability, sales, market share, and productivity.

Authors

Daniel Okofo-Darteh Jr conceived the concept of the study, conducted the data analysis, and prepared the manuscript, while Emmanuel Selase Asamoah critically reviewed the literature, proofread, and reviewed the manuscript for submission.

Daniel Okofo-Darteh Jr

MPhil in Leadership (the University of Professional Studies Accra, Ghana). His research interests include higher education management, small and medium-sized business performance, leadership in organizations, and public sector business management.
Correspondence to: Daniel Okofo-Darteh Jr, the University of Professional Studies Accra, Faculty of Management Studies, Department of Business Administration, P.O. Box LG 149, Accra, Ghana, e-mail: daniel.okofo-darteh@upsamail.edu.gh
ORCID ⓘ http://orcid.org/0000-0003-4524-3578

Emmanuel Selase Asamoah

PhD in Economics and Management (Tomas Bata University, Zlín). His research interest lies in the area of business competitiveness and performance.
Correspondence to: Emmanuel Selase Asamoah, the University of Professional Studies Accra, Faculty of Management Studies, Department of Business Administration, P.O. Box LG 149, Accra, Ghana, e-mail: emmanuel.asamoah@upsamail.edu.gh
ORCID ⓘ https://orcid.org/0000-0002-6200-4563

Copyright and License

Published by Cracow University of Economics – Krakow, Poland

Building aware and unaware consumers' trust towards family business: Evidence from Poland

**Anna M. Nikodemska-Wołowik, Joanna Bednarz, Dagmara Wach,
Joseph P. Little, Mark A. Kubik**

A B S T R A C T
Objective: The objective of the article is to examine what attributes are assigned to family firms by consumers familiar and not familiar with family business in the context of trust-building and purchase intention.
Research Design & Methods: A nationwide quantitative survey on a statistically representative random-cluster sample of 1 091 consumers was conducted in 2018, based on the fundamentals of pre-survey qualitative research.
Findings: This study proves a low level of consumers' familiarity with family firms and indicates attributes assigned to family firms by two segments of buyers. The findings show for which segments the concept of endorsed identity could be influential in the purchasing process, and for which might it be a subordinate stimulus when compared to consumers' trust.
Implications & Recommendations: Although a family firm's origin can serve as a cue to purchase, there is a challenge in educating the audience regarding the low level of consumers' knowledge of family businesses. A legal construct provided in this study may reinforce trust towards family firms accompanied with purchase.
Contribution & Value Added: This study is based on a representative large sample of consumers, additionally divided into two portrayed segments. It proposes a process of how a family business identity may be endorsed. The proposed legal construct is a novelty in the market and has not been investigated in other scientific research.

INTRODUCTION

As family businesses (FBs) identity communication is gaining more attention for several years now (*e.g.* Nikodemska-Wolowik, 2006; Carrigan & Buckley, 2008; Micelotta & Raynard, 2011; Botero *et al.*, 2013; Beck & Kenning, 2015; Wolf, 2018; Lušňáková, Ju-ríčková, Šajbidorová, & Lenčéšová, 2019), the problem is worth investigating in specific aspects. One of them is individual consumers' perspective towards FB, with a special focus on trust for this type of entity.

Although the importance of trust is recognised in prior studies, the increased uncertainty in the business environment awoke major interest in the role of trust since the mid-1990s (Ma & Orgun, 2006; Bhati, 2015). Regarding the general decrease in trust towards businesses and institutions, which became evident since the financial crisis in 2008, this study attempts to find a guarantee that can be accepted by buyers and help them make purchase decisions. In this context, FB is a convincing example. According to prior research, more buyers trust FBs over non-FBs (Eddleston *et al.*, 2010; Beck & Prügl, 2018; Lude & Prügl, 2018; Rosina, 2018; Košičiarová, Kádeková, Holotová, Kubicová, & Predanocyová, 2020). Paradoxically, only 51% of consumers know which firms they buy from are FBs (Edelman Trust Barometer, 2017).

Moreover, firms in developed economies are more likely to brand themselves as family businesses than those in emerging economies (Hall & Astrachan, 2015). This reveals a question: how do firms communicate the fact that they are a FB, especially in post-communist countries, who entered the European Union (EU) in the twenty-first century? A study on Polish firms may serve here as a case in point.

During the market transformation in Central and Eastern Europe, Poland was perceived as a leader of that process (Dąbrowska, 2011; Brunet-Tornton, 2017) and – as an EU member since 2004 – has been a development success, catching up with Europe's most advanced economies (Bogdan *et al.*, 2015). Regarding some socio-economic conditions, Poland was "comparable with Mediterranean and even Anglo-Saxon countries" (Neesham & Tache, 2010, p. 358). But contrary to these countries, Poland avoided recession during the 2008 financial crisis and became the eighth-largest economy in the EU and "Europe's new growth engine" (Bogdan *et al.*, 2015). What is substantial from this research perspective, in Polish society with high family and group collectivism, family *per se* is the most treasured value, not only by elderly citizens but also by young Poles (Trends in consumers' behaviour in Poland, 2017; Zupan *et al.*, 2017). Another rationale for investigating Polish buyers concerns the international milieu. Polish diaspora is one of the largest in the world, and native goods are targeted to meet this segment's needs across the UK, the USA, or Ireland (Burrell, 2016; de Wenden, 2016). Hence, Poland has evinced a profound interest of worldwide inquiries, focused on various economic analyses. However, the issues of consumer perceptions of FB expounded in this paper were mislaid.

In general, prior research demonstrates stronger consumer trust to FB, alongside their poor knowledge of which firm is family owned. Astoundingly, some Polish non-FBs try to take advantage of positive FB perceptions and purport to be kin-owned enterprises, misleading their customers. Thus, the objectives of the article are:

− to examine what attributes are assigned to FB by consumers familiar and unfamiliar with FBs in the context of trust-building and purchase intention,

− to detect if a direct and clear message of being a FB addressed to consumers would
   have potential.

This article attempts to fill the gap in prior studies regarding buyers' perceptions of
FB, divided into two segments: aware and unaware consumers. The article contributes to
extant literature by presenting a means how FB identity may be endorsed, *i.e.* enriched by
an external, independent brand. The proposed legal construct is a novelty in the market
and was not investigated in other scientific research to date. Moreover, according to re-
cent profound overviews of scientific articles on the subject of FBs status and individual
buyers, there is a lack of quantitative studies (Botero, 2013; Rosina, 2018; Wolf, 2018). The
biggest sample noticed in the aforementioned surveys included 278 one-country respond-
ents, which was not representative (Rosina, 2018). Dated January 2018, our survey cov-
ered a representative sample of 1091 buyers, being the first one on such a scale. It con-
tributes to very rare quantitative studies on FBs, the majority of which is conceptual.
Therefore, the present article seeks to answer the following research questions:

RQ1:   What attributes are assigned to FB by aware and unaware consumers?

RQ2:   What is the role of endorsed FB identity in trust-building?

RQ3:   What is the potential of a proposed legal construct in encouraging buyers to
           purchase?

The paper is structured as follows. The next section covers the literature review, while
section three presents the materials and methods applied in the research, section four
exhibits the survey findings accompanied with a discussion, and section five concludes.
Although in the existing literature there is no consensus on the codified definition of FB,
this article adopted the concept of the European Commission (EC, 2009), which accentu-
ates family ownership, decision-making rights, and involvement in governance.

LITERATURE REVIEW

Based on the recent literature review there are few articles that assumed consumers'
perspective and directly assessed FBs' perceived trust (Beck & Prügl 2018; Rosina, 2018;
Wolf, 2018).

Research conducted among consumers shows that they associate trust with FB when
compared to non-FBs (Orth & Green, 2009; Eddleston *et al.*, 2010; Binz *et al.*, 2013; Binz
Astrachan *et al.*, 2014; Beck & Kenning, 2015; Bednarz, *et al.*, 2017; Lude & Prügl, 2018).
This means that trust could be perceived as a key element in the explanation of a FB's
success (Cruz *et al.*, 2010; Carrigan & Buckley, 2008). Consumer perceptions of a firm result
in trust towards this entity and its products (Vassilikopoulou *et al.*, 2018) and vice-versa:
trust becomes essential when discovering means that lead to positive buyers' perceptions
of FBs (Wolf, 2018; Botero *et al.*, 2013). Facing the lack of a dominant trust definition,
scholars propose a list of terms that prevail in such interpretations (Castelfranchi & Fal-
cone, 2010; Hobbs & Goddard, 2015; Kim & Chao, 2019; Skvarciany, Jurevičienė, Iljins, &
Gaile-Sarkane, 2018). Besides, sometimes the concept of trust considers from the position
of the "lack of trust" (Ners, 2017) or as one of the factors influencing the economic behav-
iour (Roudposhti, Nilashi, Mardani, Streimikiene, Samad, & Ibrahim, 2018). Therefore,
from our perspective, trust comprises reliability, longevity, business with a human face,

high quality products, and commitment towards local communities. The current study also focuses on FB attributes which regarded Polish consumers' trust.

Regarding purchase intention, an extensive literature review by Bozic (2017) proves that trusting consumers are loyal, committed, and disposed to accept new products and company activities in the market. Thus, willingness to buy is the constituent of trust. As this inquiry conducted no market experiment, the reasoning applied to avowed purchases, another term for the intention to buy. Buyers associate better relational qualities with FBs compared to non-FB counterparts and consequently prefer goods offered by the former (Binz *et al.*, 2013). Zanon *et al.* (2019) noticed the positive impact of consumer awareness of FBs on their actions, including purchase. FBs imprint their values and beliefs into the essence of their firms. Long-lasting family tradition, related to trust, can indicate high quality in the future. From this perspective, Lude and Prügl (2018) find that buyers indicate higher brand trust from the communication of a firm's family nature, resulting in stronger purchase intentions. Hence, this study intends to highlight references to family ownership as a trigger in communication between FBs and buyers.

Communication with consumers through an explicit identity, a properly imparted FB status may underpin trust as one of its strongest values (Mayo & Fielder, 2006). FB identity is understood as a firm self-concept, embracing the idiosyncratic attributes resulting from kin-ownership (Nikodemska-Wolowik, 2006; Botero *et al.* 2013; Blombäck & Ramírez-Pasillas, 2012). Concerning market communication, explicit signals are more effective than indirect messages (Hartnett *et al.*, 2016), furthermore, the possibilities of their effective usage increase significantly in terms of intensive ICT development (Bilan, Mishchuk, Samoliuk, & Grishnova*,* 2019; Janšto, Polakovič, Hennyeyová, & Slováková, 2019; Botos, Szilágyi, Felföldi, & Tóth, 2020;). According to Zanon *et al.* (2019), a large number of FBs worldwide explicitly communicate their family status to stakeholders, but there are countries like Poland, in which consumers are not always able to identify themselves as family-owned. This low level of awareness was confirmed by Schwass and Glemser (2016) who suggest that an FB must be positioned in audience's perceptual space. Moreover, a plain communication strategy to capitalize on the FB status is widely recommended (Wolf, 2018; Rosina, 2018). It can create appropriate market advantages for social enterprises, which are kin-owned to a great extend and at the same time they are especially important for the labour market problems mitigation (Bilan, Mishchuk, & Pylypchuk, 2017). Buyers build their trust for a brand on their positive experiences alongside communication activities (Brunner *et al.*, 2019), including available information concerning employer brand (Urbancová &Hudáková, 2017). Correspondingly, Botero *et al.* (2019) advise to explore how the audience perceives FB in regard to the type of a branding strategy used by FB. The authors present three concepts yet do not deliberate the option proposed in the current study. Therefore, this article aims to highlight the importance of designing a clear yet credible message sent to buyers. Prior studies confirm that information from a firm is less credible than the information from an independent source (Brunner *et al.* 2018; Dutta & Pullig, 2011). Nonetheless, scholars claim that the family firm category can be defined as a brand of its own (Botero *et al.*, 2013; Wolf, 2018). To reconcile both perspectives, this article proposes a category of an endorsed mark, similar to an 'umbrella brand,' protected by law. In Polish legislation, comparable to the EU and international regulations, such a

brand is registered by an organization like an association of producers, which enables buyers to distinguish goods or services certified by the proprietor of the brand; in legal terminology: collective certification trademark. Contrary to an individual brand, the owner cannot use the brand him/herself (Regulation (EU) 2017/1001, 2017). Concurrently, the brand is registered for the purpose of licensing it to its members as a sign of membership in that particular organization. According to the signalling theory presented below, the brand sends a message to the buyers that the firm belongs to a certain association and owns the rights to use this mark, which help to shape consumer trust. However, there were only a few scientific papers related to this matter, and most concerned food products. Norberg (2000) argues that these brands can assist consumers in their buying decision.

To achieve the aforementioned goals, this study partly used a concept proposed by Schellong *et al.* (2018), based on signalling theory with an assumption that a FB status is a credible signal to consumers. In signalling theory, a sender sends a signal to a recipient in a communication process with asymmetric information (Spence, 1973). The sender decides how to signal information to the receiver, who interprets this signal. Referring to this theory, Issock (2018) argues that trust becomes a vital factor for purchasing when the buyer feels susceptible. In this paper, three elements were added to a simple model used by Wolf (2018): aware and unaware buyers, the means of communication, a tangible brand and trust embracing purchase intention. Wolf's research focuses on FB identity communication in the signalling theory context. The Wolf's B2B approach extends here to B2C markets and a legal construct with a direct message of being a FB addressed to consumers.

In the previous analyses of FB, consumers were not divided into segments of those familiar and unfamiliar with FB, albeit the two groups emerged. Such an approach is applied in this study in line with Brunner's *et al.* (2019) who uses the signalling theory, exploring brands, purchase intensions, and opposite segments. Moreover, Christidis *et al.* (2011), Woodside and Summers (2012), Wang *et al.* (2015), divide buyers into those aware and unaware while investigating awareness of various market offers. Martin and Strong (2016) link two opposite groups with trust, branding, and purchase intention. The enumerated frameworks orient this article towards a search for the potential direct message signalling FB status. Moreover, they proved the necessity of understanding whether this signal might have a potential influence on trust-building accompanied by purchasing behaviour.

Besides the aforementioned research questions, the above line of reasoning motivates us to propose the following hypotheses:

H1:   Positive perceptions of FB prevail in both segments.

H2:   The potential influence of an endorsed FB identity on purchase intention is stronger among aware than unaware consumers.

To summarize, the reviewed literature noticeably indicates that there exists a dearth of knowledge on the relationships comprising buyers' awareness of FB, signalling FB status, trust, and purchase intentions. The approach adopted in this study is presented on the Figure 1.

potential in building consumer trust towards FB accompanied with purchase

Family Business

COMMUNICATING

Family Business origin

with endorsed identity:
COLLECTIVE CERTIFICATION TRADEMARK

aware
consumers
familiar with FB

unaware
consumers
not familiar with FB

potential in building consumer trust towards FB accompanied with purchase
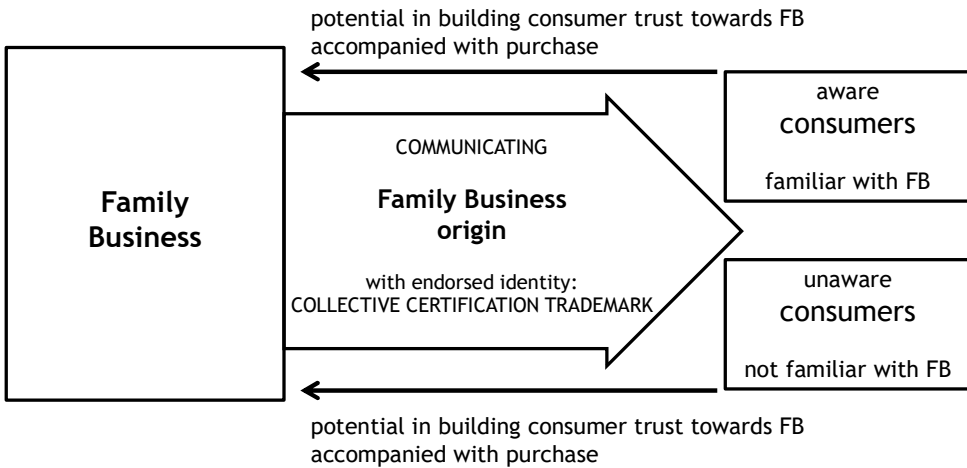
Figure 1. Conceptual framework
Source: own elaboration.

MATERIAL AND METHODS

For the purpose of this study, a nationwide quantitative survey of a unique statistically representative random-cluster sample of 1 091 consumers was conducted in January 2018 by using the online survey method. In Poland, it was a 'neutral' shopping period, therefore reducing the impact of environmental influences and ensuring the respondents' accessibility.

Methods and Techniques

The sample covered Polish active buyers – in traditional shops and those who purchase offline and online – aged 16-60 who shared their shopping experiences with others, who potentially and actually influenced other buyers, and who used the Internet on a regular basis.

Adopting these characteristics of the surveyed population ensued from the article's aims. All these criteria were checked in a filtering question. Before the primary survey, a pilot study was conducted to confirm the research procedure assumptions and comprehensibility of the online questionnaire. It ensured the instrument reliability and validity for complete data collection. This approach was based on the fundamentals of pre-survey qualitative research pursuant to the protocol proposed by Mariampolski (2001), Anninou, Foxall, Saldana, and Omasta (2018) conducted in the second half of 2017. The protocol includes 10 participant observations in 10 shops selected appropriately for the enquiry aims and 20 in-depth interviews with consumers who fulfilled the precise criteria. Describing trust, the respondents used such words as reliability, longevity, business with a human face, high quality products, and commitment towards local communities, which was consistent with prior studies. Thus, later in the survey, trust was replaced by phrases instead of direct investigation. Those stages were vital to prepare, among other things, 14 attributes on the consumers' associations with FB included in the question: "What are your associations with FB?" And on six statements regarding FB included in the question: "To what

extent do you agree (or disagree) with the following statements on FB in Poland?" In both questions, a five-point Likert scale was applied with opposite answers: from strongly agree to strongly disagree. With support of an external company of high expertise, ABM – Marketing Research Agency from Warsaw, the online questionnaire with three filtering, 11 major, and three personal questions was addressed to eligible respondents. The sample reflected statistics on gender, age, place of living, according to the population marginal distribution in Poland. The respondents also reported their education level, type of household, and assessment of financial status. Descriptive statistics are reported in Table 1.

Table 1. Respondent demographic characteristics

Demographic attribute		n = 1091
gender	Female	51%
	Male	49%
age	16-19	10%
	20-25	15%
	26-30	12%
	31-40	19%
	41-50	23%
	51-60	21%
type of household	alone	8.6%
	with a partner but without children	31.5%
	with a partner and with children	29.9%
	with children but without a partner	6.7%
	with other people	23.3%

Source: own study.

Data Analyses

Frequencies, sums, means, and standard deviations were calculated for full data and separately for groups of aware and unaware consumers and for the demographic variables. Statistical significance level was p = 0.05.

The evaluation of test usability was based on reliability analysis: the degree of consistency with which the test results reflected the analysed feature. In the assessment of the cohesion of scale positions, an integrity analysis was performed using the internal consistency method. All items in the test contain more than two categories of answers on a five-point Likert scale; hence, the Cronbach's alpha coefficient of reliability was determined, as this is the best indicator of reliability for such a test. The higher the index value, the more reliable the scale (see: Jakubowska & Radzymińska, 2019).

The factor analysis was used to explain the observed relationship between test questions within individual characteristics. First, Bartlett's test of sphericity was used to verify the null hypothesis that the correlation matrix is a unit matrix (H0: R = I). Then the Kaiser-Meyer-Olkin Test was used to verify the usefulness of factor analysis for the evaluation of relations between the observed variables. The significance of eigenvalues was assessed by isolating factors using the Principal Components Analysis method (see Kargol-Wasiluk & Wildowicz-Giegiel, 2018). This factor extraction method was used to form uncorrelated linear combinations of the observed variables. The number of factors/attributes for further analysis was determined according to the Kaiser criterion (Kaiser, 1960) and the scree

plot. The Varimax method was used for factor rotation. This method minimised the number of variables that have high loads for each factor, simplifying the interpretation of the factors. Statistical analysis was conducted using IBM SPSS version 25.

Furthermore, according to the literature review (Christidis *et al.*, 2011, Woodside & Summers, 2012; Wang *et al.*, 2015, Martin & Strong 2016; Brunner *et al.*, 2019) and the qualitative stage results, the buyers were divided into two segments. The first one covered 11.37% of the whole sample – n=124 buyers familiar with FBs and portraying such firms with proper criteria – while the second one covered 46.84% of the whole sample: n = 511 buyers with no knowledge of FBs, which was statistically verified. Other buyers declared that they knew 'something' about FBs but were unable to provide any details, and their ambiguous answers excluded them from the most of analyses.

RESULTS AND DISCUSSION

The innovative and original idea of this paper was to examine what attributes are assigned to FBs by consumers familiar and unfamiliar with FBs in the context of trust-building accompanied by purchase intentions. Moreover, this study aimed to indicate a means of how communicating family-owned business nature, especially in Poland perceived twofold: as a strong economic leader among transition states (Bogdan *et al.*, 2015) yet with a rather traditional family-oriented society (Trends in consumers' behaviour in Poland, 2017; Zupan *et al.*, 2017).

Attributes Assigned to FBs by Aware and Unaware Consumers in Poland

Most of the buyers from segment 1 could list at least one name of a Polish FB. On the other hand, an overwhelming number of consumers from segment 2 could not give any examples of an FB (Table 2).

Table 2. Two major consumer segments

Segment 1. Aware consumers		Segment 2. Unaware consumers	
could list at least one name of a Polish FB	57.26%	could list at least one name of a Polish FB	14.48%
did not mention any FB	42.74%	did not mention any FB	85.52%

Source: own study.

In general (in the whole sample of 1 091 consumers), the familiarity with Polish FB was stronger among older buyers. Younger consumers aged 20-25 (84.52%) and 26-30 (81.25%) did not list any FB compared to 65.09% of those aged 51-60.

In order to identify groups of attributes characterising an FB, the following question was posed: "What do you associate with FB?" Fourteen starting attributes were assumed. Surprisingly, despite declaring unfamiliarity with FBs, the unaware buyers were able to ascribe some attributes to FBs. Both segments had explicit associations with FBs based on their prior experiences. Such a phenomenon is explained by Woodside and Summers (2012), who claim, that awareness alone does not cause consumer response.

The results of calculations showed that three eigenvalues exceeded the value of one, according to Kaiser's criterion. As can be seen from Table 3, variables fall into three groups of factors, which can be defined as positive (feature 1, 4, 5, 7, 8, 12, 13 and 14 in the group of aware consumers while 1, 4, 5, 7, 12, 13 and 14 in the group of unaware

consumers), neutral (feature 2, 3 and 6 in the group of aware consumers while 2, 3 and 8 in the group of unaware consumers), and negative (feature: 9, 10 and 11 in the group of aware consumers while 6, 9, 10 and 11 in the group of unaware consumers). Trust for FBs understood as reliability, longevity, business with a human face, high quality products, and commitment towards local communities (Hosmer, 1995; Harris *et al.*, 2003; Hill & O'Hara, 2006; Castelfranchi & Falcone, 2010; Hobbs & Goddard, 2015) was reflected in this study in dominant features ascribed by both segments: reliability, long presence on the market, 'human' approach to the client, high quality products, good for the local community (attributes 1, 4, 12, 13, 14).

Table 3. Rotated factor matrix and indicators that determine the suitability of data to detect the structure of FB attributes

FB attributes	Aware consumers n=124			Unaware consumers n=511		
	positive	negative	neutral	positive	neutral	negative
1. reliability	**0.828**	-0.058	-0.047	**0.815**	0.223	-0.006
2. relations, managed by family members	0.169	0.031	**0.740**	0.125	**0.826**	0.113
3. passes from generation to generation	0.533	-0.158	**0.545**	0.432	**0.775**	0.006
4. operates long on the market	**0.704**	0.081	0.340	**0.565**	0.266	0.094
5. organic products	**0.755**	-0.016	-0.253	**0.779**	-0.012	0.097
6. goods, services a bit more expensive	0.027	0.348	**0.564**	0.270	0.395	**0.517**
7. local Polish products	**0.818**	-0.096	0.173	**0.800**	0.196	0.055
8. tradition	**0.693**	-0.178	0.385	0.568	**0.595**	-0.089
9. with trouble (incompatibilities in the family)	-0.103	**0.828**	-0.017	-0.008	-0.119	**0.837**
10. underinvested	0.007	**0.837**	-0.018	0.088	-0.088	**0.800**
11. nepotism (favouring family members)	-0.155	**0.778**	0.223	-0.105	0.296	**0.739**
12. 'human' approach to the client	**0.830**	-0.123	0.128	**0.824**	0.152	-0.015
13. high quality products, workmanship	**0.865**	-0.025	0.212	**0.828**	0.182	0.036
14. good for the local community	**0.765**	-0.109	0.269	**0.689**	0.408	-0.025
% of cumulative variance, after rotation	37.66	53.49	65.69	33.47	49.79	65.50
KMO			0.873			0.896
Bartlett's test of sphericity	Approx. Chi-Square		909.358			3506.794
	df		91			91
			0.000			0.000

Source: own study.

Similarly to prior findings, even the unaware buyers in Poland reacted positively to FBs; according to the Edelman Trust Barometer (2017), only 51% of consumers know which firms they buy from are FBs, although the level of trust for them is high among the interviewees. Regarding aforementioned FB's longevity, workmanship, and tradition appreciated by buyers, Becut (2011) argues that consumers seek offers sealed with quality marks with strong identity, highlighted either by emphasised valorisation of well-known products or by the revitalisation of traditional products. Concluding from Table 3, buyers associated three outstanding positive attributes with FB: product quality, approach to buyers, and reliability. The same attributes were indicated by both segments

and can create the basis for distinguishing FB from other firms. Therefore, this research contributes to prior studies in which consumer perceptions of the FB are positive (*e.g.* Orth & Green, 2009; Binz *et al.*, 2013; Rosina, 2018; Sageder *et al.*, 2018). The local origin of products also played a vital role here.

The buyers were also asked about the extent to which they agree or disagree with statements regarding FBs in Poland (Table 4). For this purpose, six opening sentences were formulated. The calculation scheme was the same as in the previous question. The Cronbach's alpha coefficient of reliability for aware consumers was 0.74 and for unaware consumers – 0.72. While considering these results, a particular attention should be paid to statements 4 and 5, which directly refer to sending a message to the audience and agree with the signalling theory (Wolf, 2018; Schellong *et al.*, 2018).

Table 4. Rotated factor matrix and indicators determining the suitability of the data to detect the structure of the consumers' statements

Statements	Aware consumers n=124		Unaware consumers n=511	
	1	2	1	2
1. We need to support FBs, because they are Polish capital; FBs pay taxes in Poland	**0.894**	0.082	**0.812**	0.080
2. Poles are unaware of supporting Polish capital	0.155	**0.696**	**0.563**	0.013
3. FBs support each other and strongly cooperate with each other	**0.510**	0.354	0.514	**0.537**
4. FBs should promote the fact that they are family-owned	**0.849**	0.121	**0.825**	-0.015
5. When shopping, it is worth knowing that a product comes from a FB	**0.909**	0.075	**0.790**	0.206
6. The products offered by FBs are bought by older consumers	0.033	**0.836**	-0.068	**0.926**
% of cumulative variance, after rotation	43.85	66.12	42.49	62.42
KMO		0.757		0.771
Bartlett's test of sphericity	Approx. Chi-Square	252.822		726.509
	df	15		15
	Sig.	0.000		0.000

Source: own study.

The dominant statements (over 80% of volatility resources) of aware consumers were the need for knowledge that a purchased product came from a FB, the duty of supporting Polish FBs, and expectations of FB status promotion. Factor 2 was dominated by the fact that the products offered by FBs were mainly bought by older people. For unaware consumers, the most important statements were supporting Polish FBs, FBs' promotion, and the origin of products. These reports confirm the high potential for FB in the area of communication with this segment. The unaware consumers unquestionably believed that products offered by FBs were bought by elderly people (86.30% of volatility resources). Both segments demonstrated a high level of consumer patriotism, cherishing domestic products by displaying support for Polish FBs and the explicit promotion of FB origin. What is valuable for the entire logic of this study, when compared to buyers from other post-socialist countries, is that Poles are much more ethnocentric

than Slovenians, Hungarians, Czechs, or Bulgarians, but less than Russians (Han & Won, 2018). This aspect is worth further investigation.

In general, both segments showed their positive perceptions of FBs, which confirmed the **H1:** "Positive perceptions of FBs prevailed in both segments."

The Endorsed FB Identity in the Context
of Trust-Building Accompanied with Purchase

The purpose of this study was to detect if a direct message of being a FB addressed to consumers may have the potential to trigger *trust-building accompanied with purchase intentions. To respond to this challenge, the consumers were asked about the potential of a clear brand, apparent on FBs' products and activities. It refers to the FB identity endorsed by the collective certification trademark (CCT), a legal construct we presented above.*

In the current research, the perceptions of the potential influence of FB brands were ambiguous. In the whole sample of 1 091 buyers, 46.10% of them, notwithstanding demographic variables, declared that FB brands would not have had an influence on their purchase decision (on a five-point verbal intent scale). However, it would have definitely encouraged 15.49% of buyers and would probably encourage 38.41% of them, so positive answers prevailed (53.90%). Such answers agree with Becut's (2011) findings: FB brands could provide a meaning to identity- and value-seekers. This opinion corresponds with Beltramini and Stafford's (1993) conclusion that a brand can be a crucial factor in evaluating a product. Similarly, Morhart *et al.* (2015) posit that consumer perceptions are based on real evidence judged by provable information, such as labels of origin.

Moreover, tables 5 and 6 present a declared willingness to buy products from Polish FBs, with distinct age and gender groups. Unexpectedly, in the case of unaware buyers, the *CCT* might attract their attention (41%). Correspondingly, Woodside and Summers (2012) claim that awareness may not be the essential part of consumer decision-making processes. The familiarity with Polish FBs was stronger among the older buyers, as presented in the above section. However, in the whole sample of 1 091 buyers, 20.67% who 'definitely' approved of FB brands were those aged 31-40. That group was also the most enthusiastic about the brand among unaware buyers. It proves that communicating the FB status may be effective in this segment. Moreover, there may be a chance for the aware buyers to become opinion leaders, as word-of-mouth forms the basis of interpersonal influence and determines the relevance of information (Grewal *et al.*, 2003). It still belongs to the major trustworthy sources of consumer information (Sicilia *et al.*, 2016) having a central role in the formation of consumer attitudes (Herold *et al.*, 2016). Thus, **H2** – "The potential influence of an endorsed FB identity on purchase intention is stronger among aware than unaware consumers" – cannot be confirmed as the potential influence of an endorsed FB's identity on purchase is similar in both segments.

Thus, this study contributes to previous research (Beck & Kenning, 2015; Binz *et al.* 2013, Craig *et al.*, 2008, Zanon *et al.* 2019) by suggesting not only that a message of FB origin can be a stimulus for purchase but also presenting a legal construct for the means of such communication. Such a logic was confirmed by Schwass and Glemser (2016) who value the material symbols that express a FB identity.

Prior research robustly proved the positive relation between consumer trust and purchase intention (e.g. Ghai & Sharma, 2019; Ricci *et al.*, 2018; Issock Issock, 2018; Oliveira *et al.*, 2017). Consequently, in this study, by declaring willingness to purchase and choosing

FB attributes that constituted trust, the buyers indirectly showed that the endorsed identity had a potential in trust-building. These results are consistent with the deduction that the FB status might appeal to buyers highly involved in the purchasing process, for whom such a brand could lead to enhanced customer trust (Binz & Botero; 2018).

Table 5. The CCT influence on women's declared purchase decisions

Purchase		Age					
		16-19	20-25	26-30	31-40	41-50	51-60
Aware consumers	Definitely yes	0.36%	0.18%	0.18%	0.72%	0.54%	0.72%
	Rather yes	0.18%	0.36%	0.00%	0.72%	1.61%	1.25%
	Rather no	0.00%	0.00%	0.18%	0.00%	0.18%	0.00%
Unaware consumers	Definitely yes	0.54%	0.36%	0.54%	1.79%	1.43%	0.54%
	Rather yes	1.43%	3.05%	2.33%	2.15%	3.05%	2.51%
	Rather no	0.18%	0.54%	0.18%	0.90%	0.54%	0.18%
	Definitely no	0.00%	0.00%	0.36%	0.18%	0.00%	0.18%

Source: own study.

Table 6. The CCT influence on men's declared purchase decisions

Purchase		Age					
		16-19	20-25	26-30	31-40	41-50	51-60
Aware consumers	Definitely yes	0,94%	0,56%	0,19%	0,94%	0,75%	1,69%
	Rather yes	0,75%	0,38%	0,56%	0,38%	1,13%	1,31%
	Rather no	0,56%	0,38%	0,38%	0,56%	0,56%	0,56%
Unaware consumers	Definitely yes	0.38%	0.75%	0.19%	1.69%	0.38%	0.19%
	Rather yes	2.25%	2.63%	1.69%	4.32%	4.13%	1.69%
	Rather no	0.38%	0.38%	0.38%	0.19%	0.56%	0.75%
	Definitely no	0.00%	0.19%	0.19%	0.38%	0.38%	0.19%

Source: own study.

However, the perceived credibility of a brand issuer constituted a significant factor in deciding whether the brand would be used in decision-making (Kamins & Marks, 1991; Norberg, 2000). Despite noteworthy studies on third-party certification related to consumer willingness to purchase (Darnall *et al.*, 2018), the crucial issue that surfaced in our research was the choice of a certifier: an organisation conferring a brand and whether the entity would be approved by buyers. Grabber and Lai claim (2011) that the choice of certifier needs bottom-top approach, instead of GOV initiatives and the idea that the effectiveness of endorsed identity depends on relevant marketing and buyer education. Such a solution corresponds to the Polish consumers' mindset.

CONCLUSIONS

As we indicated in the above empirical study, Polish FBs can benefit from attributes that have a strong potential in trust-building accompanied with purchase intentions. Thus, the findings provide important insights that deepen the understanding of buyers' purchasing behaviour towards a FBs' offer from a post-socialist market perspective.

Contrary to prior studies on FBs, we presented a new approach that considers the concept of an endorsed identity, and we investigated the endorsed identity's potential. All this contributes to the literature, dividing buyers into aware and unaware segments and presenting their perceptions of FBs separately. Unpredictably, both groups equally supported explicit signalling of FBs' origin and ascribed positive attributes to FBs, particularly those associated with trust. Although such perceptions prevailed, a low level of the buyers' knowledge of FBs reveals a serious challenge in educating the audience. Occasionally, buyers are misguided, as some Polish non-FBs try to take advantage of these virtues, purporting to be kin-owned enterprises. Furthermore, our findings demonstrate consumers' patriotism, proving that the FB identity may additionally benefit from a clear signal of Polish origin. In this context, Poles are closer to Russian buyers but distant to the less ethnocentric Slovenian or Hungarian buyers. In most of these states bottom-top initiatives are better perceived than GOV ones. Thus, this fact should be taken into consideration when choosing a certifier of the CCT. Although the potential influence of the CCT was ambiguous for some sub-segments presented in this study, the CCT might trigger purchase decisions. In that respect the choice of a proper certifier becomes of highest importance.

Concerning limitations of this study, the current findings are based on declarative answers. Instead, future research may use a market experiment conducted in natural purchase setting with products labelled with the examined trademark. Nonetheless, a large sample survey was the most relevant in the exploration of a new field. However, more advanced econometrics could be applied to verify additional hypotheses. It is worth further examination what criteria should be fulfilled by a prospective certifier responsible for conferring the brand. Moreover, extended and detailed studies on the most promising subgroups from profiled segments would help to shape proper communication activities. When focusing on promotional activities, one particular area that future research could examine is how certifications can lead to affinity marketing. Third-party endorsement – in this case the use of third-party certification – is a major distinguishing feature of affinity marketing. It can leverage group affiliation to capitalize on a pre-established relationship that may add persuasiveness and credibility to the sales message. Consumer affinity is positively associated with product trust, which in turn promotes consumer intention to buy products from the group to which the affinity is directed (Guo *et al.*, 2018). Therefore, this study may open new avenues for research on various factors that create a relationship between FBs and buyers, thus influencing purchase decisions.

REFERENCES

Anninou, I., & Foxall, G.R. (2017). Consumer decision-making for functional foods: Insights from a qualitative study. *Journal of Consumer Marketing, 34*(7), 552-565.

Bartlett, M.S. (1937). Properties of Sufficiency and Statistical Tests. *Proceedings of the Royal Society of London. Series A, Mathematical and Physical Sciences*, *160*(901), 268-282. https://doi.org/10.1098/rspa.1937.0109

Beck, S., & Kenning, P. (2015). The influence of retailers' family firm image on new product acceptance: an empirical investigation in the German FMCG market. *International Journal of Retail & Distribution Management*, *43*(12), 1126-1143. https://doi.org/10.1108/IJRDM-06-2014-0079

Beck, S. (2016). Brand management research in family firms. *Journal of Family Business Management, 6*(3), 225-250. https://doi.org/10.1108/JFBM-02-2016-0002

Beck, S., & Prügl, R. (2018). Family firm reputation and humanization: Consumers and the trust advantage of family firms under different conditions of brand familiarity. *Family Business Review, 31*(4), 460-482. https://doi.org/10.1177/0894486518792692

Becut, A. (2011). Apples, Quality Marks and Trademarks for Local Products. *International Review of Social Research, 1*(2), 65-83. https://doi.org/10.1515/irsr-2011-0011

Bednarz, J., Bieliński, T., Nikodemska-Wołowik, A.M., & Otukoya, A. (2017). Sources of the competitive advantage of family enterprises: An international approach focusing on China, Nigeria and Poland. *Entrepreneurial Business and Economics Review, 5*(2), 123-142. https://doi.org/10.15678/EBER.2017.050207

Beltramini, R.F., & Stafford, E.R. (1993). Comprehension and Perceived Believability of Seals of Approval Information in Advertising. *Journal of Advertising, 22*(3), 3-13. https://doi.org/10.1080/00913367.1993.10673407

Bhati, S.S. (2015). Relation Between Trust Theory and Agency Theory. In S. Natarajan, M. Ganesh Babu, B. Nagarjuna, & R. Rajkumar (Eds.), *Commerce and Management – A Modern Perspective* (p. 451-460). India: Archers and Elevators Publishing House.

Bilan Y., Mishchuk H., Pylypchuk R. (2017). Towards sustainable economic development via social entrepreneurship. *Journal of Security & Sustainability Issues*, *6*(4), 691-702. http://doi.org/10.9770/jssi.2017.6.4(13)

Bilan, Y., Mishchuk, H., Samoliuk, N., & Grishnova, O. (2019). ICT and Economic Growth: Links and Possibilities of Engaging. *Intellectual Economics*, *13*(1). https://doi.org/10.13165/IE-19-13-1-07

Binz Astrachan, C., Patel, V.K., & Wanzenried, G. (2014). A comparative study of CB-SEM and PLS-SEM for theory development in family firm research. *Journal of Family Business Strategy, 5*(1), 116-128. https://doi.org/10.1016/j.jfbs.2013.12.002

Binz Astrachan, C., & Botero, I.C. (2018). We are a family firm: An exploration of the motives for communicating the family business brand. *Journal of Family Business Management*, *8*(1), 2-21. https://doi.org/10.1108/JFBM-01-2017-0002

Binz, C., Hair, J.F., Pieper, T.M., & Baldauf, A. (2013). Exploring the effect of distinct family firm reputation on consumers' preferences. *Journal of Family Business Strategy, 4*(1), 3-11. https://doi.org/10.1016/j.jfbs.2012.12.004

Blombäck, A., & Ramírez-Pasillas, M. (2012). Exploring the logics of corporate brand identity formation. *Corporate Communications: An International Journal*, *17*(1), 7-28. https://doi.org/10.1108/13563281211196335

Bogdan, W., Boniecki, D., Labaye, E., Marciniak T., & Nowacki, M. (2015). *Poland 2025: Europe's new growth engine*. Warsaw: Mc Kinsey & Company.

Botero, I.C., Thomas, J., Graves, C., & Fediuk, T.A. (2013). Understanding multiple family firm identities: An exploration of the communicated identity in official websites. *Journal of Family Business Strategy, 4*(1), 12-21. https://doi.org/10.1016/j.jfbs.2012.11.004

Botero I.C., Spitzley D., Lude M., & Prügl R. (2019). Exploring the Role of Family Firm Identity and Market Focus on the Heterogeneity of Family Business Branding Strategies. In E. Memili, C. Dibrell (Eds.), *The Palgrave Handbook of Heterogeneity among Family Firms (*pp. 909-932). Cham: Palgrave Macmillan.

Botos, S., Szilágyi, R., Felföldi, J., & Tóth, M. (2020). Readiness for ICT based B2C information flow - case study of the hungarian food sector. *Agris on-Line Papers in Economics and Informatics, 12*(2), 41-51. https://doi.org/10.7160/aol.2020.120204

Bozic, B. (2017). Consumer trust repair: A critical literature review. *European Management Journal, 35*(4), 538-547. https://doi.org/10.1016/j.emj.2017.02.007

Brunner, C.B., Ullrich, S., & De Oliveira, M.J. (2019). The most optimal way to deal with negative consumer review: Can positive brand and customer responses rebuild product purchase intentions?. *Internet Research*, *29(*1), 104-122. https://doi.org/10.1108/IntR-08-2017-0307

Brunet-Tornton, R. (2017). Foreword to the special edition, the return to Europe: a generation of re-inventing national identities. *Baltic Journal of Management*, *12*(1), 2-5. https://doi.org/10.1108/BJM-10-2016-0239

Burrell, K. (Ed.). (2016). *Polish Migration to the UK in the 'New' European Union: After 2004.* London, New York: Routledge.

Carrigan, M., & Buckley, J. (2008). What's so special about family business? An exploratory study of UK and Irish consumer experiences of family businesses. *International Journal of Consumer Studies, 32*(6), 656-666. https://doi.org/10.1111/j.1470-6431.2008.00696.x

Castelfranchi, C., & Falcone, R. (2010). *Trust Theory*. *A Socio-Cognitive and Computational Model.* West Sussex, UK: John Wiley & Sons.

Christidis, N., Tsoulfa, G., Varagunam, M., & Babatzimopoulou, M. (2011). A cross sectional study of consumer awareness of functional foods in Thessaloniki, Greece. *Nutrition & Food Science*, *41*(3), 165-174. https://doi.org/10.1108/00346651111132439

Craig, J.B., Dibrell, C., & Davis, P.S. (2008). Leveraging family-based brand identity to enhance firm competitiveness and performance in family businesses. *Journal of Small Business Management*, *46*(3), 351-371. https://doi.org/10.1111/j.1540-627X.2008.00248.x

Cruz, C.C., Gomez-Mejia, L.R., & Becerra, M. (2010). Perceptions of benevolence and the design of agency contracts: CEO-TMT relationships in family firms. *Academy of Management Journal*, *53*(1), 69-89. https://doi.org/10.5465/amj.2010.48036975

Dąbrowska A. (2011). Consumer behaviour in the market of catering services in selected countries of Central-Eastern Europe. *British Food Journal*, *113*(1), 96-108. https://doi.org/10.1108/00070701111097367

Darnall, N., Hyunjung J., & Vazquez-Brust, D. (2018). Third-Party Certification, Sponsorship, and Consumers' Ecolabel Use. *Journal of Business Ethics*, *150*, 953-969. https://doi.org/10.1007/s10551-016-3138-2

de Wenden, C.W. (2016). The Impact of the Economic Crisis on Migration Flows: Polish Immigrants in the UK and Ireland. In: D. Leal, N. Rodríguez (Eds.), *Migration in an Era of Restriction and Recession. Immigrants and Minorities, Politics and Policy (pp.* 291-304). Cham: Springer. https://doi.org/10.1007/978-3-319-24445-7_15

Dutta, S., & Pullig, C. (2011). Effectiveness of corporate responses to brand crisis: the role of crisis type and response strategies. *Journal of Business Research*, *64*(12), 1281-1287. https://doi.org/10.1016/j.jbusres.2011.01.013

Eddleston, K.A., Chrisman, J.J., Steier, L.P., & Chua, J.H. (2010). Governance and Trust in Family Firms: An Introduction. *Entrepreneurship Theory and Practice 34*(6), 1043-1056. https://doi.org/10.1111/j.1540-6520.2010.00412.x

Edelman Trust Barometer (2017). *Special Report: Family Business*. Retrieved from https://www.edelman.com/research/family-business-trust on November 22, 2018.

European Commission (2009). *Final report of the expert group overview of family-enterprise-relevant issues: Research, networks, policy measures and existing studies*. Brussels: Directorate-General for Enterprise and Industry.

Ghai, S., & Sharma, A. (2019). Effect of Perceived Health Benefits and Trust on Customer's Satisfaction & Willingness to Pay for Organic Foods. *Indian Journal of Community Health*, *31*(1), 123-126.

Grewal, R., Cline, T., & Davies, A. (2003). Early-entrant advantage, word-of-mouth communication, brand similarity, and the consumer decision-making process. *Journal of Consumer Psychology*, *13*(3), 187-197. https://doi.org/10.1207/S15327663JCP1303_01

Guo, G., Tu, H., & Cheng, B. (2018). Interactive effect of consumer affinity and consumer ethnocentrism on product trust and willingness-to-buy: a moderated-mediation model. *Journal of Consumer Marketing*, *35*(7), 688-697. https://doi.org/10.1108/JCM-06-2017-2239

Hall, C., & Astrachan, J. (2015). Study: Customers Really Do Trust Family Businesses More. *Harvard Business Review Digital Articles, April 27*. Retrieved from https://hbr.org/2015/04/study-customers-really-do-trust-family-businesses-more on January 3, 2019.

Han, C.M., & Won, S.B. (2018). Cross-country differences in consumer cosmopolitanism and ethnocentrism: A multilevel analysis with 21 countries. *Journal of Consumer Behaviour, 17*(1), e52-e66. https://doi.org/10.1002/cb.1675

Hartnett, N., Romaniuk, J., & Kennedy, R. (2016). Comparing direct and indirect branding in advertising. *Australasian Marketing Journal*, *24(*1), 20-28. https://doi.org/10.1016/j.ausmj.2015.12.002

Harris, L., O'Malley, L., & Patterson, M. (2003). Professional interaction: exploring the concept of attraction. *Marketing Theory, 3*(1), 9-36. https://doi.org/10.1177/1470593103003001002

Herold, K., Tarkiainen, A., & Sundqvist, S. (2016). How the source of word-of-mouth influences information processing in the formation of brand attitudes. *Journal of Marketing for Higher Education*, *26*(1), 64-85. https://doi.org/10.1080/08841241.2016.1146387

Hill, C.A., & O'Hara, E.A. (2006). A Cognitive Theory of Trust. *Washington University Law Review, 84*(7), 1723-1724.

Hobbs, J.E., & Goddard, E. (2015). Consumers and Trust. *Food Policy, 52*(C), 71-74. https://doi.org/10.1016/j.foodpol.2014.10.017

Hosmer, L.T. (1995). Trust: the connecting link between organizational theory and philosophical ethics. *The Academy of Management Review, 20*(2), 379-403. https://doi.org/10.2307/258851

Issock Issock, P.B., Mpinganjira, M., & Roberts-Lombard, M. (2018). Drivers of consumer attention to mandatory energy-efficiency labels affixed to home appliances: An emerging market perspective. *Journal of Cleaner Production, 204,* 672-684. https://doi.org/10.1016/j.jclepro.2018.08.299

Jakubowska, D., & Radzymińska, M. (2019). Health and environmental attitudes and values in food choices: a comparative study for Poland and Czech Republic. *Oeconomia Copernicana*, *10*(3), 433-452. https://doi.org/10.24136/oc.2019.021.

Janšto, E., Polakovič, P., Hennyeyová, K., & Slováková, I. (2019). Analysis of the current support of E-marketing activities in selected enterprises of the wine sector in slovakia. *Agris on-Line Papers in Economics and Informatics, 11*(4), 31-34. https://doi.org/10.7160/aol.2019.110403

Kaiser, H.F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, 20, 141-151. https://doi.org/10.1177/001316446002000116

Kamins, M.A., & Marks, L.J. (1991). The perception of kosher as a third party certification claim in advertising for familiar and unfamiliar brands. *Journal of the Academy of Marketing Science, 19*(3), 177-185. https://doi.org/10.1007/BF02726494

Kargol-Wasiluk, A., & Wildowicz-Giegiel, A. (2018). The quality of public finance in the light of fiscal governance concept: implications for the European Union countries. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, *13*(3), 411-426. https://doi.org/10.24136/eq.2018.020

Kim, R.B., & Chao, Y. (2019). Effects of brand experience, brand image and brand trust on brand building process: The case of Chinese millennial generation consumers. *Journal of International Studies, 12*(3), 9-21. https://doi.org/10.14254/2071- 8330.2019/12-3/1

Košičiarová, I., Kádeková, Z., Holotová, M., Kubicová, L., & Predanocyová, K. (2020). Consumer preferences in the content of loyalty to the yoghurt brand. *Agris on-Line Papers in Economics and Informatics, 12*(1), 37-48. https://doi.org/10.7160/aol.2020.120104

Lude, M., & Prügl, R. (2018). Why the family business brand matters: Brand authenticity and the family firm trust inference. *Journal of Business Research, 89*, 121-134. https://doi.org/10.1016/j.jbusres.2018.03.040

Lušňáková, Z., Juríčková, Z., Šajbidorová, M., & Lenčéšová, S. (2019). Succession as a sustainability factor of family business in Slovakia. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, *14*(3), 503-520. https://doi.org/10.24136/eq.2019.024

Ma, J., & Orgun, M.A. (2006). Trust Management and Trust Theory Revision. *IEEE Transactions On Systems, Man, And Cybernetics – Part A: Systems And Humans, 36*(3), 451. https://doi.org/10.1109/TSMCA.2006.871628

Mariampolski, H. (2001). *Qualitative market research: A comprehensive guide.* Thousand Oaks – London – New Delhi: Sage Publications.

Mayo, E., & Fielder, A. (2006). I will if you will. *Consumer Policy Review, 16*(4), 148-155.

Micelotta, E.R., & Raynard, M. (2011). Concealing or revealing the family? Corporate brand identity strategies in family firms. *Family Business Review, 24*(3), 197-216. https://doi.org/10.1177/0894486511407321

Morhart, F., Malar, L., Guevremont, A., Girardin, F., & Grohmanmn B. (2014). Brand authenticity: An integrative framework and measurement scale. *Journal of Consumer Psychology*, *25*(2), 200-218. https://doi.org/10.1016/j.jcps.2014.11.006

Neesham, C., & Tache, I. (2010). Is there an East-European social model?. *International Journal of Social Economics*, *37*(5), 344-360. https://doi.org/10.1108/03068291011038936

Ners, D. (2017), Coalitional Games, Excessive Competition and a Lack of Trust: An Experimental Approach. *Economics and Sociology, 10*(2), 227-238. https://doi.org/10.14254/2071-789X.2017/10-2/17

Nikodemska-Wolowik, A.M. (2006). Family enterprises – a chance to create a strong Polish business identity. *The Marketing Review, 6*(4), 301-316.

Norberg, H.M. (2000). Use of Collective Trademarks in Consumers' Choice of Foods – Preliminary Results. *Økonomisk Fiskeriforskning, 10*(2). Retrieved from https://nofima.no/filearchive/Use%20of%20collective%20trademarks%20in%20Consumers%20Choice%20of%20Foods%20-%20Preliminary%20results.pdf on November 15, 2018.

Oliveira, T., Alhinho, M., Rita P., & Dhillon, G. (2017). Modelling and testing consumer trust dimensions in e-commerce. *Computers in Human Behavior*, *71*(6), 153-164. https://doi.org/10.1016/j.chb.2017.01.050

Orth, U.R., & Green, M.T. (2009). Consumer loyalty to family versus non-family business: The roles of store image, trust and satisfaction. *Journal of Retailing and Consumer Services, 16*, 248-259. https://doi.org/10.1016/j.jretconser.2008.12.002

Regulation (EU) 2017/1001 of the European Parliament and of the Council of 14 June 2017 on the European Union Trade Mark. Retrieved from https//: eur-lex.europa.eu/legal-content/EN/TXT/?qid=1506417891296&uri=CELEX:32017R1001 on November 6, 2018.

Ricci, E.C., Banterle, A., & Stranieri, S. (2018). Trust to Go Green: An Exploration of Consumer Intentions for Eco-friendly Convenience Food. *Ecological Economics*, *148*(6), 54-65. https://doi.org/10.1016/j.ecolecon.2018.02.010

Rosina, M. (2018). *The Power of Communicating the family Firm Status. The Positive Effect of Family Firms as a Brand on Consumer Buying Behavior and Consumer Happiness.* Wiesbaden: Springer Fachmedien.

Roudposhti, V.M., Nilashi, M., Mardani, A., Streimikiene, D., Samad, S., & Ibrahim, O. (2018). A new model for customer purchase intention in e-commerce recommendation agents. *Journal of International Studies, 11*(4), 237-253. https://doi.org/10.14254/2071-8330.2018/11-4/17

Saldana, J., & Omasta, M. (2018). *Qualitative research: Analyzing life*. Thousand Oaks – London – New Delhi: Sage Publications.

Sageder, M., Mitter, C., & Feldbauer-Durstmüller, B. (2018). Image and reputation of family firms: A systematic literature review of the state of research. *Review of Managerial Science, 12*, 335-377. https://doi.org/10.1007/s11846-016-0216-x

Schellong, M., Kraiczy, N.D., Malär, L., & Hack, A. (2019). Family Firm Brands, Perceptions of Doing Good, and Consumer Happiness. *Entrepreneurship: Theory and Practice, 43*(5), 921-946. https://doi.org/10.1177/1042258717754202

Schwass, J., & Glemser, A.C. (2016). Toolbox—A Process for Moving from Family Identity to Family Business Brand. In: *Wise Family Business*. London: Palgrave Macmillan.

Sicilia, M., Delgado-Ballester, E., & Palazon, M. (2016). The need to belong and self-disclosure in positive word-of-mouth behaviours: The moderating effect of self–brand connection. *Journal of Consumer Behaviour*, *15*, 60-71. https://doi.org/10.1002/cb.1533

Skvarciany, V., Jurevičienė, D., Iljins, J., & Gaile-Sarkane, E. (2018). Factors influencing a bank's competitive ability: the case of Lithuania and Latvia. *Oeconomia Copernicana*, *9*(1), 7-28. https://doi.org/10.24136/oc.2018.001.

Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, *87*(3), 355-374. https://doi.org/10.2307/1882010

Trends in consumers' behaviour in Poland. (2017). In A. Warzybok (Ed.) *Polish Society for Market and Opinion Research*. Warsaw: AMPS Agencja Marketingowa.

Urbancová, H., & Hudáková, H. (2017). Benefits of Employer Brand and the Supporting Trends*. Economics and Sociology*, *10*(4), 41-50. https//doi.org/10.14254/2071- 789X.2017/10-4/4

Vassilikopoulou, A., Lepetsos, A., & Siomkos, G. (2018). Crises through the consumer lens: the role of trust, blame and risk. *Journal of Consumer Marketing, 35*(5), 502-511. https://doi.org/10.1108/JCM-02-2016-1721

Wang, S.-C., Soesilo, P.K., & Zhang, D. (2015). Impact of Luxury Brand Retailer Co-Branding Strategy on Potential Customers: A Cross-Cultural Study. *Journal of International Consumer Marketing*, *27*(3), 237-252. https://doi.org/10.1080/08961530.2014.970320

Wolf, S. (2018). *Signaling Family Firm Identity: Family Firm Identification and its Effects on Job Seekers' Perceptions about a Potential Employer*. Wiesbaden: Springer Gabler.

Woodside, F.M., & Summers, J. (2012). The Impact of Sponsorship Awareness in Low Involvement Settings. *Contemporary Management Research*, *8*(3), 205-228. https://doi.org/10.7903/cmr.11154

Zanon, J., Scholl-Grissemann, U., Kallmuenzer, A., Kleinhansl, N., & Peters, M. (2019). How promoting a family firm image affects customer perception in the age of social media. *Journal of Family Business Strategy 10*(1), 28-37. https://doi.org/10.1016/j.jfbs.2019.01.007

Zupan, N., Dziewanowska, K., & Pearce, A. (2017). Wanting it all: the challenges of managing young talent in transition economies. *Baltic Journal of Management, 12*(1), 63-85. https://doi.org/10.1108/BJM-02-2016-0054

Authors

The contribution share of authors is the following: Anna M. Nikodemska-Wołowik 35%, Joanna
Bednarz 25%, Dagmara Wach 20%, Joseph P. Little 10%, Mark A. Kubik 10%.

Anna M. Nikodemska-Wołowik

Associate Professor at the Faculty of Economics, University of Gdansk; focuses on consumer be-
haviour, qualitative marketing research, intellectual property protection, family enterprises, cor-
porate identity; expert in numerous research projects; authored and co-authored about 100 pub-
lications in Poland and abroad.
Correspondence to: University of Gdansk, Faculty of Economics, Armii Krajowej 119/121, 81-824
Sopot, Poland, e-mail: anna.nikodemska-wolowik@ug.edu.pl
ORCID http://orcid.org/0000-0003-3650-5214

Joanna Bednarz

Associate Professor at the Faculty of Economics, University of Gdansk; head of the Department
of International Business; research work focuses on the competitiveness and internationalization
of business entities, new trends in consumption, the behaviour of young consumers, brand and
product management; the author of several books and scientific articles.
Correspondence to: University of Gdansk, Faculty of Economics, Department of International
Business, Armii Krajowej 119/121, 81-824 Sopot, Poland, e-mail: joanna.bednarz@ug.edu.pl
ORCID http://orcid.org/0000-0003-4695-0258

Dagmara Wach

Assistant Professor at the Faculty of Economics at the University of Gdansk, the Division of Elec-
tronic Economy; the author of publications on business economics, behavioural economics,
transport economics, and information systems.
Correspondence to: University of Gdansk, Faculty of Economics, ul. Armii Krajowej 119/121, So-
pot, Poland, e-mail:dagmara.wach@ug.edu.pl
ORCID http://orcid.org/0000-0001-6419-9870

Joseph P. Little

Associate Professor of Marketing in the Seidman College of Business at Grand Valley State Uni-
versity; research interests include cross-cultural consumer behaviour, sports marketing, interna-
tional marketing strategy, and e-commerce; select publications include *Journal of Global Market-
ing*, *Journal of Marketing Theory and Practice*, *Marketing Management Journal*, and in the book
Proliferation of the Internet Economy.
Correspondence to: Seidman College of Business, Grand Valley State University, 3106 L. William
Seidman Center 50 Front Avenue SW Grand Rapids, MI 49504-6424, USA, e-mail: littlej@gvsu.edu
ORCID http://orcid.org/0000-0001-7315-8931

Mark A. Kubik

A Clinical Professor of Marketing at Grand Valley State University, teaching sales and sales management; the faculty advisor to the student Professional Sales Association and sits on the Seidman College of Business Core Curriculum Review and Revision Task Force; prior to his academic career, he worked as a senior finance executive experienced in corporate strategy design, personal production, and portfolio management.

Correspondence to: Seidman College of Business, Grand Valley State University, 3106 L. William Seidman Center 50 Front Avenue SW Grand Rapids, MI 49504-6424, USA, e-mail: kubikma@gvsu.edu

ORCID ⓘ http://orcid.org/0000-0003-0804-7295

Acknowledgements and Financial Disclosure

Copyright and License

Published by Cracow University of Economics – Krakow, Poland

Impact of labour market liberalisation on minimum wage effects: The case of the construction sector in a small open economy

Luzius Stricker, Moreno Baruffini

A B S T R A C T
Objective: The objective of this article is to estimate the impact of the application of the bilateral agreement of Free Movement of Persons between Switzerland and the EU-15 countries on the labour market outcomes in the Swiss main construction sector. The analysis happens in the context of increasing minimum wage levels in the industry.
Research Design & Methods: The included treatment variable, the minimum wage bite, is compared to the growth of sectoral employment. We conduct two specifications of a Difference-in-Difference model, controlling for different characteristics and spatial spillover effects.
Findings: The results show that the introduction of the Free Movement of Persons reduced the growth rate of employment in the construction sector compared to the growing minimum wage bites, considering the cantons as a box. The results for the specification, including spillover effects, suggest that the employment variation in construction is guided in large part by the local and interregional economic trends.
Implications & Recommendations: While in open market construction firms do not dispose of instruments to cover higher wages, a country sealing off its markets from an interconnected economic space could pay minimum wages above the marginal productivity of its workers.
Contribution & Value Added: Making use of an exogenous institutional change, we contribute to the evolving international literature that examines minimum wage effects on labour market outcomes.

INTRODUCTION

The Swiss main construction sector is highly regulated compared to the remainder of the economy. A collective labour agreement (CLA) – Landesmantelvertrag (LMV) – ensures minimum wages and employment conditions for all construction employees. Moreover, the construction sector recruits a significant part of its low-skilled workforce abroad.

The objective of the article is to estimate the effects of the opening of the Swiss labour markets towards the European Union (EU) and the relative impact on the growth of the labour market outcomes (employment) compared to the variation of the minimum wage bite in the context of rising minimum wages over time. The bilateral application of the Free Movement of Persons Agreement (FZA) by the EU and the Swiss Confederation and the consequently higher worker mobility changed the way in which minimum wage floors affect the functioning of the Swiss construction labour market.

The treatment in this research will be measured regarding the effect that the minimum wage bite has on employment. The minimum wage bite is the quota of workers in this period earning below the minimum wage of the upcoming year. The source of the changes in the treatment variable derives from the rise of the minimum wage level for unskilled employees in the main construction sector. The external shock we want to analyse is the application of the FZA agreement, which impacts the relationship of the minimum wage bite and employment effects. The spatial unit of the study is the cantonal level (NUTS – 3). Furthermore, cantons are used to control for spatial heterogeneity.

Our findings show that because of the application of the FZA in June 2002, the growth rate of employment was lower than the minimum wage bite growth. Considering employment effects, the impact of changed minimum wage bites were different, depending on the chosen specification. The analysis is conducted using a base model and six variations of the model, including different controls and spillover effects of the economically interconnected cantons, defined as economic neighbours. The first four models control for different variables – economic structure, firm size, and wage dispersion – and all these variables are included in the last model. The last two models control for potential spillover effects of neighbouring cantons, including more or fewer control variables.

This paper makes two contributions to the literature. First, using both a panel data approach and an approach that includes neighbouring effects, we contribute to the evolving international literature that examines minimum wage effects on labour market outcomes. Second, we focus on the Swiss context, enriching the ongoing research on European cohesion policy. The studied labour market liberalisation focuses specifically on the construction industry, employing both low-wage and high-wage earners and a significant share of the foreign workforce.

We use nationally representative data from the Swiss Labour Force Survey (SLFS),[1] conducted every year by the Swiss Federal Office of Statistics (FSO). This survey provides data on workers' characteristics, such as working hours, earned wages, working places, and sectors of activity. In addition to this database, information on annually valid minimum wage levels for unskilled employees in the construction sector was extracted from the LMV

---

[1] Swiss Labour Force Survey (SLSF) 1999-2016, source: BFS: Schweizerische Arbeitskräfteerhebung (SAKE).

databases. These are published every year on a cantonal basis by the Swiss constructors' association (Baumeisterverband SBV).

Our analysis of the impacts of the FZA in the Swiss main construction sector is structured as follows. Section 2 reviews the literature concerning minimum wages and economic liberalisation. Section 3 introduces the institutional setting, describes the data, and our measures of minimum wages in Switzerland. Finally, it formalises the model and the variations. The results are discussed in Section 4, while Section 5 presents concluding remarks.

LITERATURE REVIEW AND THEORY DEVELOPMENT

This paper contributes to the recent literature, combining two different streams of research in a joint Difference-in-Difference (DiD) model. From the methodological viewpoint, we try to contribute to the broad DiD literature. We follow the approaches widely discussed by Abadie (2005) and Author (2003), but also the important application by Card (1992), which helps to refine the research strategy of the present work. Finally, we refer to the contribution of Bertrand *et al.* (2004) with important implications on the detailed empirical strategy. As a novelty, we analyse the impact of the labour market liberalisation in a classic minimum wage and employment effects model. For this aim, the following part tries to reappraise the existing literature in the two fields and to highlight the relevant parts for the analysis.

Minimum Wage Bite and Wage Effects

A broader literature refers to the impacts of minimum wages on the labour market, which has been extensively researched during the last decades. A review of the literature on this topic is in detail explained in the book of Cahuc *et al.* (2014).

From a theoretical viewpoint, minimum wages can have an effect in two ways: on the one hand, the introduction of minimum wages can lead to transitional labour market flows (Mortensen & Pissarides, 1994) and job matches under a certain productivity level are destroyed. Moreover, the introduction of minimum wages may change the optimal combination of firm and worker characteristics.

On the other hand, the introduction of minimum wages may have an effect on equilibrium outcomes. If a minimum wage is above the reservation wage before its introduction, it simply deletes jobs. Moreover, if the minimum wage implies a lower level of salaries, it leads to a lower level of direct job-to-job transitions (van den Berg & Ridder, 1998). Finally, the effect depends on the elasticities of job search and vacancy creation. Therefore, the final effect is not clear *ex ante*, hence there are several empirical approaches.

Vom Berge and Frings (2019) model the effects of a minimum wage introduction in the several districts of the German economy. Their benefits are to include spatial spillover effects and use the minimum wage bite as treatment variable; our model considers both factors in a similar way.

Recent literature, for example for Canada (Brochu & Green, 2013), Portugal (Portugal & Cardoso, 2006), the United States of America (Dube *et al.*, 2010), and Germany (Bachman *et al.*, 2012), generally states that the employment effects of minimum wages are probably small or inexistent for total employment. Only the weaker part of

workers could be affected, justifying the focus on bite in research (Kampelmann, Garnero, & Rycx, 2013). Consequently, the minimum wage bite – the bite calculated on the next year's minimum wage – is an adequate measure because it best captures the marginal employees that are at highest risk of unemployment.

In their analysis of the impact of minimum wages on employment and inequality, Dolton *et al.* (2012) rely on the minimum wage bite as a variable of analysis: they illustrate their reasoning and justification for the adoption of the minimum wage bite in the analysis. Their explanations, using a structural econometric model, consist of two equations already previously suggested by Card (1992) and Stewart (2002). The first of the two equations assumes the concept of labour demand. It describes the move of the employment rate (ΔE_j) along the labour curve with a set wage level. In other words, employment is defined as a function of wage. In the second equation, a form of identity – the wage variation – is a function of the proportion of low-paid workers (P_j). Substituting the second equation in the labour demand equation, the equation changes as follows (Dolton, 2012):

$$\Delta E_j = \gamma_0 + \eta\alpha_1 + \beta P_j + \varepsilon_j \qquad (1)$$

in which $\beta = \eta\lambda$, and λ is assumed to be positive, implying that β has the same sign as η, and according to economic theory, both are negative. In other words, the higher proportion of low-paid workers, in our case contributing to a higher bite, would result in a negative variation of employment (Dolton, 2012).

Steward (2002) sets the precondition for identification of this model as the proportion of low-paid workers (P_j) being a predetermined instrument for the endogenous wage change. In the next section we discuss this precondition, which implies that an endogenous variation of the bite through variation of the workforce composition can be neglected. In our research, the bite is consequently defined to be affected by changing minimum wage policy and economic conditions, but not through more than proportional growth of low-wage workforce.

Effects of Labour Market Liberalisation

Favre (2011) follows the approach of analysing the competition among workers along the entire wage distribution, as proposed by Dustmann *et al.* (2013), and shows that the competition between natives and immigrants is at the two tails of the wage distribution. This approach is in contrast to the earlier literature in the field that presents the correlation of the mean wage variation in response to the market liberalisation across spatial units. Data from years preceding 2011 provide evidence about the changes in the education level of immigrants in Switzerland. Due to the labour market liberalisation between Switzerland and the European Union, highly skilled workers also started to be attracted. This trend is also emerging in the wage distribution, in which immigrants have been recently overrepresented in the low and high wage classes (Favre, 2011).

Our analysis, focusing on the correlation between average wages and employment with the minimum wage bite growth, follows the standard literature.

Nevertheless, the insights gained from the work of Favre (2011) are useful for the understanding and interpretation of the results. A further distortion is that not each region is similarly attractive to immigrants, but they tend to allocate in areas with an already high presence of other immigrants of their nationality. This might attract more immigrants from countries with languages different from the Swiss national languages. Moreover, a second

issue is the inter-regional mobility of workers, which can cause employees to move from one place to another with less competition in earnings.

A work published by Gilpin *et al.* (2006) focuses on the effects of the European free movement of workers agreement on the UK labour market. The policy was implemented in a time of rising unemployment in 2005, and therefore, this was dealt with as one of the contributors to unemployment. The research finds no statistical evidence that the agreement was a contributor to the higher unemployment.

Focusing on the wage effects, the research takes into consideration the growth rate of the Average Earnings Index. For this comparison, there is low evidence of a fall in nominal wage growth in reaction to market liberalisation. No discontinuity in the wage growth rate was observed, and even for the missing counterfactual, it was not possible to find a significant effect of immigration on wages (Gilpin, Henty, Lemos, Portes, & Bullen, 2006).

Our hypothesis is that – as a consequence of the liberalisation of the Swiss labour market – the median wage of the common space falls with respect to the minimum wages of construction. According to previous studies discussed by Neumark and Wascher (2008), this would lead to stronger minimum wage effects and put pressure on employment in this industry.

MATERIAL AND METHODS

The Swiss Construction Sector

According to the most recent data from 2016, the construction sector achieved a net product of 33.71 billion (bn) CHF overall. Compared to the nominal Swiss gross domestic product (GDP) of 650.11 bn CHF, this corresponds to 5.15% of the GDP. Regarding achieved revenues in 2016, civil engineering with 10.17 bn CHF slightly exceeded structural engineering, which reached revenues of 9.80 bn CHF. The entire construction sector employed 80 700 workers in September 2016, of which 65 400 were workers on the construction side, 10 800 technical and service employees and 4 600 trainees. The labour force was composed of 56% of foreigners (45 300 employees), compared to 35 400 native workers. The average wage achieved across the entire construction sector amounted to 5 765 CHF per month across all wage classes (Baumeisterverband, 2016).

Concerning the percentage of GDP, the expenses for construction decreased over the years, reaching a minimum in 2008 as a consequence of the financial crisis, and registered a smooth increase since then. In contrast, the net nominal product of the sector increased overall, except for an expected slight reduction for the last year considered in the data to be 2016 (Baumeisterverband, 2016).

It is essential to understand how the share of expenses on construction change in Switzerland. One point to focus on is undoubtedly workforce productivity. Increasing productivity means that the output costs can be reduced, workers' wages can be increased, or the firm's profits can grow. In a competitive sector such as main construction, the first two alternatives are the most plausible. According to historical data (Figure 1), (real) labour productivity in the construction sector was increasing in the 1980s, and then, starting in the 1990s, no significant increments were registered.

Keeping in mind the three alternative effects of increasing productivity, we should focus on the growing productivity of the workforce as the primary driver of wage growth.

The trend over the past couple of years shows that the wages of employees in construction industry continuously grew over time. They also grew in real terms, compared to the inflation index, as shown in Figure 2 below. Since 2008, the wages of construction site employees – covered by the national collective wage agreement Landesmantelvertrag (LMV) – which will be the focus of this work, grew in real terms by 8.5% on average. Only supervisors' real wages grew more than that (Baumeisterverband, 2016).
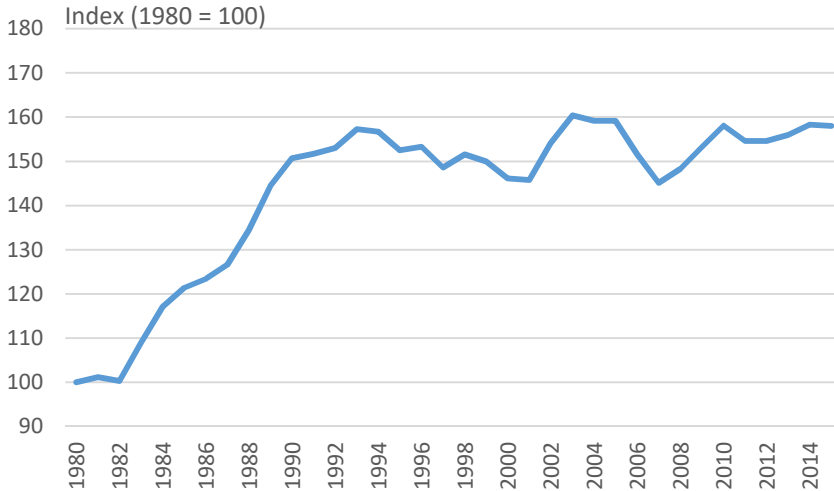

Figure 1. Labour productivity (real in full-time equivalents) in the Swiss construction sector
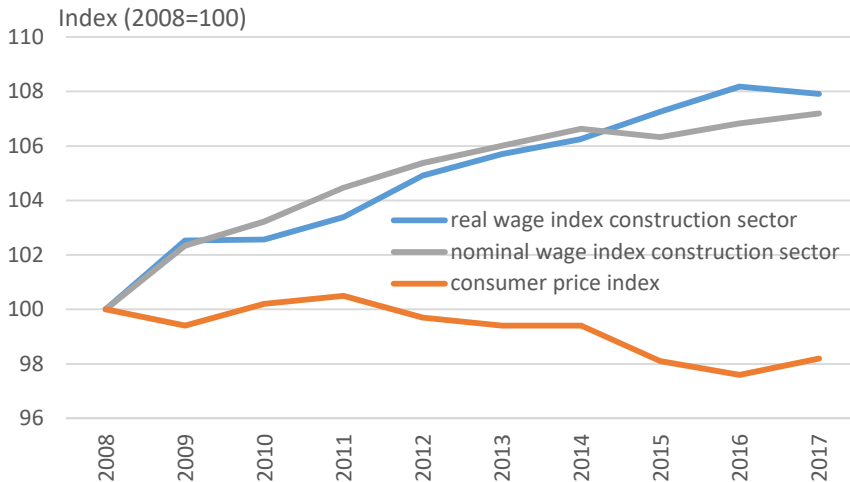Source: data from BAK Basel: labour productivity in construction.

Figure 2. Wages in the main construction sector and inflation
Source: Swiss Federal Office of Statistics (SFO): real and nominal wages
in construction and consumer price index.

A further possibility for a firm facing higher labour costs is to forward the additional expenses directly to the consumer market. Giupponi and Machin (2018) checked for this possibility in their study on minimum wages in the care home industry. Figure 3 compares the indexed growth of the prices of the construction industry and the indexed growth of the minimum wages in the sector. We can divide the period into two parts. The first covers the years preceding 2008 and presents a significant relative growth of minimum wages, which is linked to growing construction prices. In the second period of the most recent years, construction prices stagnated on a stable level and, therefore, entailed a limited capacity to absorb higher wage costs, which were passed on to consumers. The evidence from this data comparison suggests a partial absorption of the wage effect on employment and a lower employment effect than would occur in the absence of this absorption.
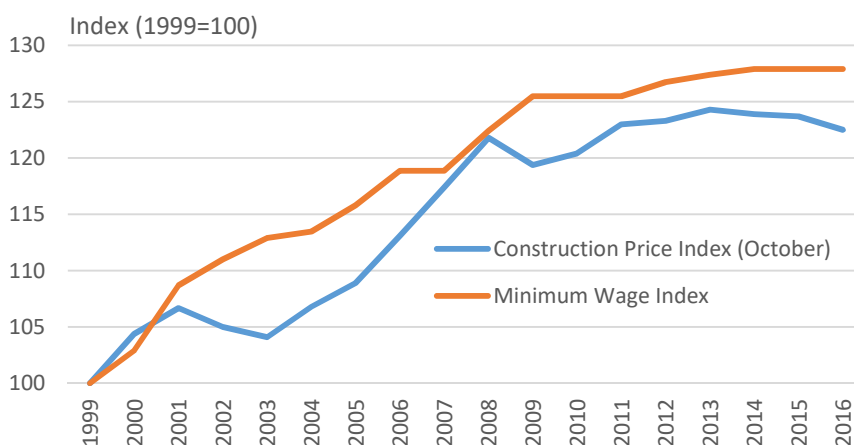
**Figure 3. Minimum wage index in the construction sector
and construction price index (month of October)**
Source: Data from the Swiss Federal Office of Statistics (SFO): construction price index and minimum wage data from the collective labour agreements of the Swiss constructors' association (Baumeisterverband).

Again considering the labour market outcomes, the hypothetically higher productivity of the workforce could be translated into a reduced requirement for the workforce to produce the same amount of output. Hence, the next focus is on the number of employees in construction over time. Figure 4 below highlights the variability of the workforce in the Swiss main construction sector. The sector registered a drop in employment as a consequence of the real-estate bubble in the 1990s and grew afterwards until 2014. In the last few years, employment fell again. Most of the growth was registered in the finishing construction segment, a part of the sector that does not apply minimum wages as proposed in the LMV. The main construction sector grew by less (Baumeisterverband, 2016).

The main focus of this study is on the minimum wage variation as a result of higher pressure on the labour market. We need to limit the effect of a heterogeneous growth of the workforce in the sector that could endogenously affect the variation of the minimum wage bite. Therefore, we choose to analyse the growth of the low-wage and high-wage workforce compared to the total growth of the workforce in the construction sector in each of the Swiss greater regions (NUTS-2). Figure 5 shows these trends for Switzerland at

the national level. Over the observed years, total employment in the construction sector grew. Moreover, the data highlight that this growth was mainly due to the evolution in the high-earning share of the workforce, while the number of low-wage employees remained stable in the same period. This trend is valid for each of the greater regions of Switzerland. We can exclude from this viewpoint a rising minimum wage bite as a consequence of a more than proportional growth of employment in the lower part of the wage distribution. In this case, variations in the minimum wage bite must result from the exogenous variation of minimum wage level and the changing economic environment and conditions.
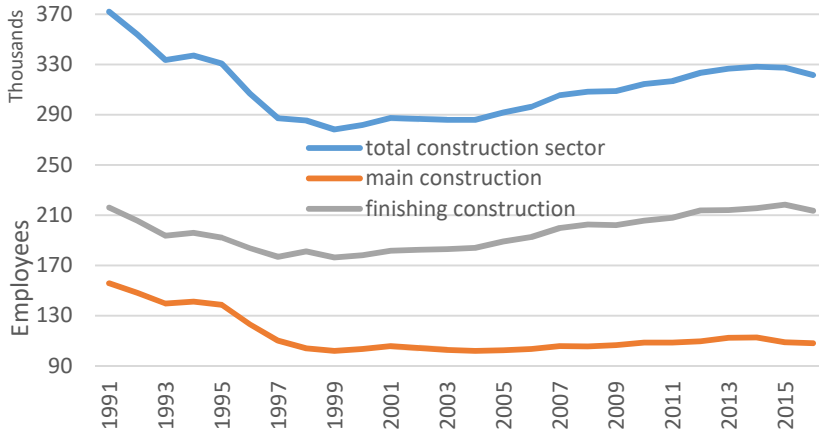

**Figure 4. Employment (full-time equivalents) in the construction sector
in the third quarter of the year**
Source: Data from Swiss Federal Office of Statistics (SFO): Job Statistics.
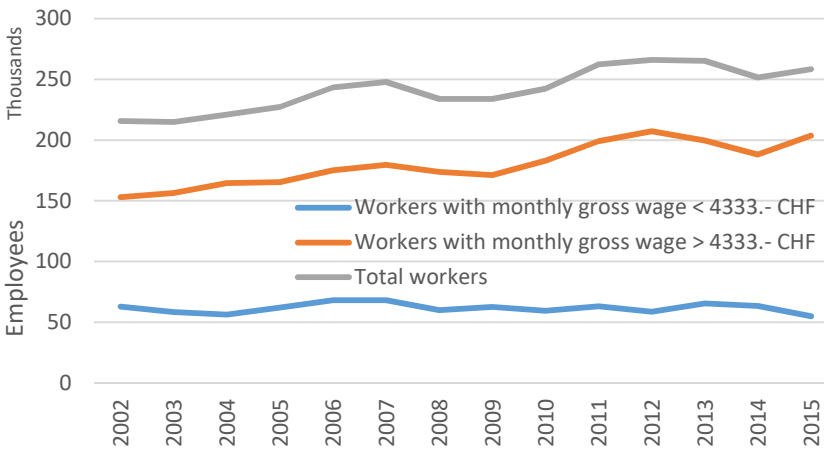

Figure 5. Employment in the construction sector in Switzerland, by wage classes
Source: Data from Swiss Federal Office of Statistics (SFO): Swiss Labour Force Survey (SLFS).

A crucial last factor is the educational level of employees in the main construction sector because the lowest possible minimum wage applied to unskilled workers is the point of reference for this study. Therefore, unskilled workers are potentially most affected by varying minimum wages, particularly if the focus is on the lowest wage group. The increasing number of skilled workers in the labour force is due to the increasing complexity of construction sites. Many tasks require specialised skills to keep up with technological progress.

Moreover, in general, the quota of unskilled workers on the Swiss labour market is decreasing. Only the share of supervisors is nearly unchanged over the years. The exclusion of supervisors in the general trend towards higher-skilled workers is mainly because they execute jobs that are different from those of the two other groups of workers (office work rather than jobs on the construction site) (Baumeisterverband, 2016).

Free Movement of Persons Agreement (FZA) Switzerland – EU

In 1999, Switzerland signed bilateral agreements with the European authorities and countries, and the population approved them in May 2000. According to the bilateral agreement on the Free Movement of Persons (FZA), all citizens of European countries have the right to freely choose their location of residence within the zone of all contractual partners. Additional components of the agreement were the coordination of national social security systems and the mutual recognition of foreign professional diplomas.

The agreement was adopted gradually during a transition phase, and instruments such as priority to natives and contingency systems could still be applied unilaterally. These measures were also known as "valve clauses" to ensure a gradual and controlled merger of labour markets. For the original 15 EU nations, Malta and Cyprus, the agreement was to begin on the 1st of June, 2002, and entered in full force in 2007, after which it was no longer possible to apply "valve clauses" (EDA, 2017).

In 2007, the border zones of Switzerland were abolished, and through this, a further limitation to labour mobility was removed (Verein-Grenzgänger, 2013). Afterwards, even citizens from non-neighbouring countries could work in Switzerland with a cross-border commuter permit. This further policy change caused a second wave (after 2001/2002) of strong relative growth in the number of cross-border commuters in Switzerland.

To reduce violations against Swiss wage and labour conditions, supporting measures were applied in 2004. These measures made it possible to ensure that employers meet the conditions foreseen in CLAs and that Foreign Service providers maintain guidelines contained in the employee secondment law. Tripartite commissions are in charge of controlling and checking the application of these measures. The commissions are composed of representatives from public authorities, employers, and labour unions. Their main task is to check for compliance with regular and CLA norms. The employment secondment law has been adapted continuously to meet the requirements of a changing environment and the growing zone of application of the Free Movement of Persons Agreement. Hence, the most recent refinements were taken in the inclusion phase when Romania and Bulgaria entered the agreement (EDA, 2017).

Dataset

This study is based on data from the Swiss Labour Force Survey (SLFS), along with supplementary and specific data about minimum wage levels for main construction workers in Switzerland; in addition, data from the Swiss Federal Office of Statistics (SFO) were used to define spatial parameters and regional peculiarities.

The first of the two primary data sources, the SLFS, is annually conducted by the SFO and has interviewed up to 105 000 subjects since 1991. The questionnaires include several features around the topics of employment, unemployment, and the educational and professional background of interviewees. Further questions cover geographic and sociodemographic issues. Social security, education, and migration topics complete the survey. For this research, the variables that identify the sector and industry of activity of an employee, but also the identification of the geographical unit – Switzerland's 26 cantons – are of particular interest. The core element for the aim of this research is the wages associated with the share of workers employed in the main construction sector. However, those wages are not revealed uniquely and therefore need to be standardised to guarantee comparability. All wages are counted as annual net wages to compare employees with salaries on an hourly basis and part-time employees with full-time wage earners.

The process of wage standardisation follows three principles, concerning the working hours per worker, the contributions of unemployment insurance (ALV) and the pension fund contributions. This SLFS microdata in the end was then aggregated into a cantonal panel data set, including both wage and employment indicators divided by year and cantons.

Moreover, taking into consideration the minimum wage for the main construction sector in accordance with the collective wage agreement (LMV), it is possible to draw a local minimum wage that formulates the reference independently of qualifications. The first national agreement was accorded during 1998 and officially enacted on the 1st of January, 1999; for this reason, construction minimum wages exist since then. These wages are divided into three different categories that take into account spatial heterogeneity. For cantons split up in two different wage categories (Bern, Schwyz, St. Gallen, Solothurn) – following a precautionary principle – the lower of the two included levels was considered as a reference. The provided minimum wages are standardised according to the personal characteristics on an annual net level, following the same principles described above and according to individual characteristics, determined in this case by the spatial association with the canton of activity.

Finally, the merging of the two databases, including observations from years 1999-2016, allows for the construction of the final panel dataset that includes the determinants of all 26 Swiss cantons over a period of 17 years. The main variables for this panel define the economic structure, the importance of the construction sector in a particular region, and the workplace distribution among different economic sectors. The primary independent variable includes a reflection of the wage structure prevailing in the main construction sector. We focus on the effects of changing wage policies in the labour market, which are changing levels of employment in the sector. This issue is discussed with a particular focus on the theoretical part of this work. The variables consider the main construction sector's changing wage structure and the employment effect, formalised concerning a relative change in employment on a logarithmic scale. The second of these two variables, including

all others except the main construction sector, is constructed similarly and then included as a further independent variable in the model.

When choosing the measure to analyse the effects of a given wage floor, researchers frequently have to deal with the minimum wage bite. This section is devoted to the explanations that favour the choice of this measure to evaluate the impacts of defined wage policies.

As explained in detail by Kampelmann, Garnero, and Rycx (2013), the Kaitz index – the relation of minimum wages to the overall wage distribution – is not the right measure for all issues, especially not for studying the impact of minimum wage policies. The minimum wage bite is the better choice for this aim. It focuses on a particular part of the wage distribution, namely the employees earning wages at and below the minimum wage threshold. An interesting application of the bite consists of focusing on the effects of an increased minimum wage in a defined sector. Following the neoclassical models for the labour market, this would imply that workers in the minimum wage bite would lose their job if they were not able to increase their marginal productivity above the new wage. According to this framework, the variation of the bite is a measure that helps understand the reaction of firms. They still have the possibility to pass the higher production costs to the customer or to reduce their actual profits. Alternatively, as previously mentioned, the productivity of employees can improve, e.g. by taking additional courses or reviewing the organisational structure of firms (Kampelmann, Garnero, & Rycx, 2013).

On average, across all observed years, 10% of employees are employed on a marginal wage basis: this means that they earn salaries that would be below the minimum wage the upcoming year (the minimum wage bite). This distribution is not homogeneous across the 26 cantons and is not persistent over time.

Each of the 26 cantons is grouped in one of the three "regions" that define the level of wages that apply to all employees of the sector (Figure 6). The highest levels are applied in the two cantons of Geneva and Vaud in the western part, but also the two cantons of Basel-Stadt and Basel-Landschaft. The lowest levels are applied among the cantons situated in the south-eastern part of Switzerland, Schaffhausen and Bern.

The evolution of the minimum wage levels in absolute terms for the three above-mentioned regions is presented below in Figure 7 for the entire period of analysis. The colours of lines in Figure 7 correspond to the three regions on the map in Figure 6, with the darkest line applying the highest minimum wage level and the lightest one applying the lowest possible level in the region.

The average annual net wage of employees in the main construction sector in Switzerland is 72 086 CHF, and it is 95 560 CHF for the other sectors in 2010. The share of employees in the main construction sector represents, on average, 3.5% of total employment. These values also change across cantons.

A factor that might influence the wage differentials across cantons is the different relative importance of the construction sector in the regions. The higher concentration of construction sector can be explained in the less densely populated regions, as there is a relatively high requirement for civil engineering to maintain traffic and public infrastructure. Furthermore, regions with a low presence of workplaces in other industries and regions without any large centre offering services show a higher share of construction sector in the regional economy.
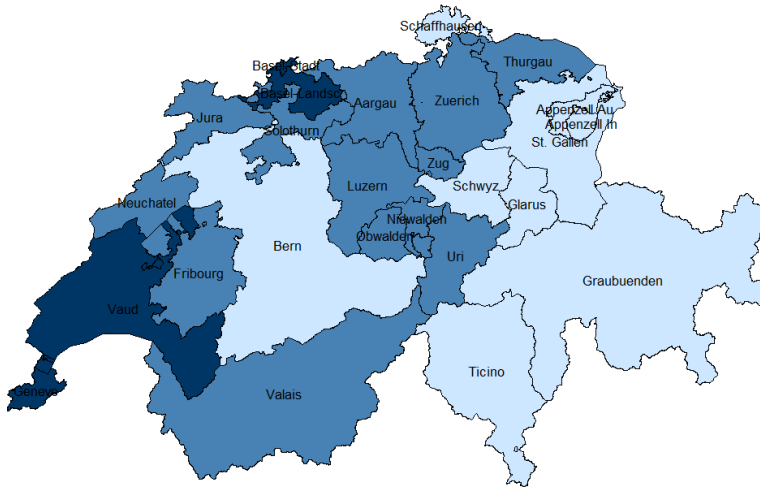
**Figure 6. Regions with different minimum wage levels
according to the collective labour agreement**
Source: own illustration based on minimum wage data from the collective labour agreements
of the Swiss constructors' association (Baumeisterverband).

* in 2007 no binding minimum wage was defined as there was no valid CLA.
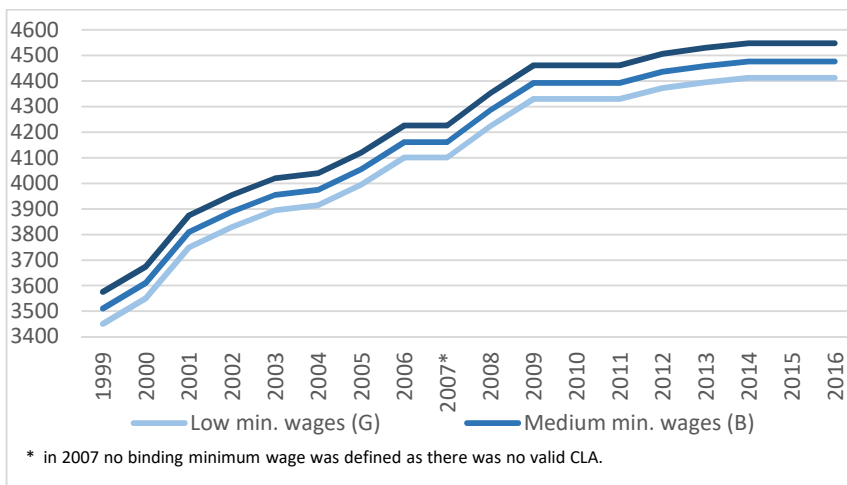
**Figure 7. Monthly gross minimum wages for unskilled workers in the construction sector
in 1999-2016, for each of the three regional minimum wage levels**
Source: own elaboration based on minimum wage data from the collective labour agreements of the Swiss con-
structors' association (Baumeisterverband).

Method and Empirical Strategy

The basis for the construction of our model is the approach proposed by vom Berge and
Frings (2019), who focus on the introduction of a minimum wage in Germany and its ef-
fects on the labour markets, distinctly for Western and Eastern Germany. They combine

the panel approach of Neumark and Wascher (1992) with the approach of applying minimum wage bites, as in Card (1992). According to vom Berge and Frings (2019), the post-treatment effects are different from the effects in the period preceding the exogenous shock. In their paper, they use the introduction of the minimum wage in 1997 in Germany. The cut-off for the present study is the application of the Free Movement of Persons Agreement in Switzerland in 2002 with the original 15 EU countries. Differential trends of the minimum wage effects are captured analogously in the pre-treatment period following Dolton, Bondibene, and Wadsworth's (2010) study in the UK.

For the first estimation, we followed vom Berge and Frings (2019) but varied and adapted the specifications to explain the various effects of the policy adaptation on the labour market outcome. We further included a continuous time trend instead of time fixed effects, according to the research focus and because the impact of policy application happens across a more extended period after the policy introduction and concerns a smooth application of the labour market liberalisation, rather than a particular impact in time. This choice is based on the assumption that the effect we estimate is adopted smoothly and not as a shock in a specific year.

The difference between the two models applied is that the first one considers the local economy in a box, while the second analysis includes spatial spillover effects from interconnected cantons. Both models have been tested for consistency, leaving out some of the included control variables.

The first part considers control variables – specific to each canton – without taking into account the interconnectedness of regional labour markets within the same country. The model in specification 5 in the results table includes y_{it+1}, which describes the employment growth in region i (in our case: cantons) in the time from t to $t + 1$, while d is the indicator for the post-treatment effect; in this case, the introduction of the minimum wage. Similar to vom Berge and Frings (2019) we chose to use the growth of employment as dependent variable instead of levels since we are interested in signs of employment variation and not in describing what actually defines the stock of employees. β^D captures the treatment effect on the minimum wage. Instead, x_{it} would be the mean employment or wage growth in other industries, except for all construction sectors. μ_i represents canton fixed effects, while λt – a continuous time trend. Furthermore, the variable q_{it} represents the ratio of secondary sector workplaces compared to third sector workplaces, and the variable s_{it} is constructed as the number of firms with 50 or more employees divided by the number of firms with less than 50 employees for every canton in every year. Finally, control variable r_{it} is constructed as the coefficient of the 25% quantile divided by the 75% quantile of wage distribution in year t and canton i. We should remember that this control variable is calculated for the analysed year t, differently from the computation of the minimum wage bite, which we calculate based on the wage distribution of the upcoming year $t + 1$ and, therefore, it does not describe the same data. This last control measures the wage dispersion in the construction industry. We choose to include those variables in order to capture the peculiarities and to describe the structure of the local economies in individual cantons.

$$\Delta \ln y_{it+1} = b_{it} \alpha^D + (d \times b_{it}) \beta^D + \Delta \ln x_{it} \gamma^D + q_{it} \delta + s_{it} \psi + r_{it} \phi + \mu_i + \\ + \lambda t + \epsilon_{it} \tag{2}$$

In our study, the focus is on the employment effects of labour market liberalisation and not on wage redistribution, as in vom Berge and Frings (2019). The formulation foc-

uses on employment effects and the reduction of workplaces in response to higher minimum wages, again using the pre-FZA period for calibration and the post-treatment period to focus on this problem.

In addition to this model, four variations (specifications (1)-(4)) – each considering only some of the variables and controls – are applied to check for the consistency of results in specification (5), considering the cantons as single, closed entities.

The second model design, unlike the first one, includes the possibility that variations in interconnected local labour markets affect neighbouring cantons. Borders among cantons are open and depend on the geographic position; mobility is rather high among some of them. It could therefore be a problem to analyse the effects keeping the cantons as separate units without taking into account the trends of their neighbours. In addition to the already included variables, this specification includes average values of independent variables from the surrounding cantons. We distinguish direct effects (D) – or the variable characterising the trend and situation in the analysed canton – and indirect effects (I) that capture the impact of the average of variables of all cantons as economically interconnected with the analysed one. The two variables b_{it} and x_{it} are averaged for all the neighbouring cantons (N) as a weighted average and included in the regression. Weights f_{ji} are constructed as the share of all inbound commuters towards canton i who reside in canton j; these data come from MZMV 2015[2] and remain fixed across the analysed period. We chose to include this kind of spillover effects for the present case rather than spatial econometrics since Switzerland has a particular topography and the constructed matrix of commuter streams is more suitable to account for the relative interdependence of local labour markets among the cantons. In this definition, every canton is a neighbour of all the other cantons, and the larger the commuter stream is the "closer" these regions are by definition, independent of their geographical position. Adapting this as the baseline model, the following regression – specification 7 in the results table – can be written as follows:

$$\Delta \ln y_{it+1} = b_{it}\alpha^D + (d \times b_{it})\beta^D + \Delta \ln x_{it}\gamma^D + \overline{b_{it}}^N \alpha^I + \left(d \times \overline{b_{it}}^N\right)\beta^I$$
$$+ \Delta \ln \overline{x_{it}}^N \gamma^I + q_{it}\delta + s_{it}\psi + r_{it}\phi + \mu_i + \lambda t + \epsilon_{it} \tag{3}$$

$$in \; which \qquad \overline{b_{it}}^N = \sum_{j=1}^{26} f_{ji} * b_{jt} \quad and \quad \Delta \ln \overline{x_{it}}^N = \sum_{j=1}^{26} f_{ji} * \Delta \ln x_{jt} \tag{4}$$

Similar to the baseline model, a variation of this model is set up – specification (6) in the results table – again by excluding additional control variables to test specification (7) results.

RESULTS AND DISCUSSION

In Table 1, we report the results for the seven conducted scenarios formally introduced in the preceding section. We further include a continuous time variable (λt) to control for time-specific trends. A continuous time variable is the best choice for our problem set, because we are not interested in a significant event with a specific shock in one year but aim to control for the trend of the time component itself.

The results suggest a positive relationship across specifications (1) to (5) for the minimum wage bite (α^D) and the next year's growth of employment. No significant coefficients were obtained for models (6) and (7). Therefore, if we observe a growing minimum wage

---

[2] Mobility and Transport Microcensus (MZMV) 2015, source: BFS/ARE: Mikrozensus Mobilität und Verkehr.

bite – in other words, a larger share of employees being paid a wage lower than the next year's minimum wage – we will still observe growing employment. With the introduction of the FZA agreement, we include a second time the minimum wage variable as a post-treatment variable (β^D). What we observe across specifications (1) to (5) is a negative sign of the treatment effect. This means that with a growing minimum wage bite in the period following the introduction of the FZA agreement, employment does not grow further. Considering the following variables, we notice that the construction industry follows this trend in employment growth but less intensely than the remainder of the economy (γ^D). This is true for all specifications, and the results are significant at the 1% level. For specifications (2), (5), and (7), we include a variable controlling for the economic structure (δ). The coefficients imply a negative impact on employment growth in construction. The more extensive share of secondary sector workplaces concerns the ones in the service sector. In specifications (3), (5), and (7), we include a variable ψ indicating the quotient of large firms (50 or more employees) and small firms (less than 50 employees) in the construction industry. The results suggest a positive effect on employment growth if the share of large firms increases. These results are significant at the 1% level for specification (7) and at the 10% level for (5) but are not statistically significant for specification (3).

The last of the included variables, wage dispersion (ϕ), does not provide results at a significance level of 10% or lower. The sign of coefficient suggests that a lower dispersion of wages would be connected to higher growth of employment. Therefore, less inequality of wages in construction would promote employment growth. The remainder of variables are the weighted averages of previously mentioned controls for neighbouring cantons. Considering coefficients α^I and β^I – neither result is significant at a level lower than 10% – for the trends in neighbouring cantons, the sign is identical to the direct effect. Growing minimum wage bites in the pre-treatment period in the neighbouring cantons are connected to higher growth in employment in the considered cantons; similarly, the direct effect diminishes when applying the post-treatment variable for the neighbouring cantons as well (results not significant). In the end, γ^I establish a positive relationship between the growth of employment in the neighbours' economy – excluding the construction industry – and employment growth in construction industry of the considered canton.

Summarising these results, we can observe some important points. For the first five specifications (1) to (5), the minimum wage bite variation significantly contributes to the variation of employment in the construction sector. This is not true for specifications (6) and (7), in which we do not look at single cantons as a box but include spillover effects. Apparently, in those specifications, the variation of employment in construction is guided by the variation of non-construction employment in the canton of analysis and the neighbouring cantons, while in specification (7) the variation is additionally guided by coefficients (δ) and (ψ). Therefore, we can say that the trends of employment variation in the remainder of domestic economy and in interconnected cantons absorb the employment effect of minimum wage bite variation. To conclude, we should keep in mind that the mechanisms change in the two different analyses. First, we identify a significant effect of minimum wage bite variation on construction employment and a significant treatment effect of policy change when looking at single cantons. Outside the box, both before and after the labour market liberalisation, employment effects are closely related to economic trends and structural indicators of the local economy and the corresponding spillovers from all interconnected cantons.

Table 1. Effects of the FZA on employment in the main construction sector

Specification number		(1)	(2)	(3)	(4)	**(5)**	(6)	**(7)**
VARIABLES		Base-line Model	Baseline Model with Econ. Structure var.	Baseline Model with Firm Size Index	Baseline Model with Wage Dispersion	**Baseline Model with all Controls**	Neigh-bour Can-tons only	**Neigh-bour Cantons and all Controls**
Minimum wage bite	α^D	1.38**	1.38***	1.41**	1.38**	**1.47*****	0.69	**0.82**
		[0.53]	[0.49]	[0.54]	[0.53]	**[0.48]**	[0.57]	**[0.51]**
TE Minimum wage bite	β^D	-1.43**	-1.37***	-1.49**	-1.43***	**-1.50*****	-0.57	**-0.73**
		[0.51]	[0.47]	[0.54]	[0.51]	**[0.48]**	[0.55]	**[0.51]**
Non-construction em-ployment differential	γ^D	0.46***	0.41***	0.46***	0.46***	**0.41*****	0.37***	**0.34*****
		[0.08]	[0.08]	[0.08]	[0.07]	**[0.08]**	[0.07]	**[0.07]**
Share of secondary sector workplaces	δ		-0.82***			**-1.04*****		**-1.01*****
			[0.27]			**[0.27]**		**[0.27]**
Firm size index	ψ			0.18		**0.46***		**0.64*****
				[0.25]		**[0.23]**		**[0.20]**
Wage dispersion in-dex	ϕ				-0.82	**-0.25**		**0.42**
					[0.89]	**[0.84]**		**[0.77]**
Neighbour's min. wage bite	α^I						0.85	**0.78**
							[0.83]	**[0.83]**
Neighbour's TE min. wage bite	β^I						-0.46	**-0.34**
							[0.76]	**[0.77]**
Neighbour's non-con-str. employment diff.	γ^I						0.74***	**0.76*****
							[0.18]	**[0.18]**
YEAR	λt	-0.01***	-0.02***	-0.01***	-0.01***	**-0.02*****	-0.00	**-0.01*****
		[0.00]	[0.00]	[0.00]	[0.00]	**[0.00]**	[0.00]	**[0.00]**
Constant		25.68***	33.38***	27.22***	28.79***	**40.32*****	5.70	**19.18*****
		[7.34]	[6.79]	[6.74]	[7.97]	**[6.69]**	[6.81]	**[6.37]**
Observations		409	409	409	409	**409**	409	**409**
R-squared		0.178	0.196	0.180	0.181	**0.205**	0.295	**0.323**
Number of Cantons		26	26	26	26	**26**	26	**26**
Canton FE		YES	YES	YES	YES	**YES**	YES	**YES**
Neighbour Cantons		NO	NO	NO	NO	**NO**	YES	**YES**

Note: Minimum Wage Effects in Main Construction: Effect on Employment
Robust standard errors in brackets; *** p<0.01, ** p<0.05, * p<0.1
Source: own elaboration of wage and employment data from the Swiss Labour Force Survey (SLFS) and minimum wage data from the collective labour agreements of the Swiss constructors' association (Baumeisterverband).

In part with the obtained results we can accept for the Swiss case the original hypothesis formulated by Gilpin *et al.* (2006), who failed to prove the negative effect of labour market liberalisation in UK on employment. Furthermore, we can confirm the evidence from the collection of several works in the minimum wage literature, resumed by Neumark and Wascher (2008). Our results check the key results from the main empirical works in their collection, stating that high minimum wages close to the median wage have a negative impact on employment.

CONCLUSIONS

The liberalisation of the Swiss labour market with the adoption of the FZA agreement changed the employment effects of rising minimum wages in the construction industry. In the time preceding the introduction of the bilateral agreement in situations of rising minimum wage bites, employment continued to grow. As labour productivity remained constant, the data suggest that the higher labour costs were forwarded to consumers, implying higher construction prices, as long as the markets remained closed. The construction market allowed for larger margins and the absorption of higher wage costs by enterprises. After the application of the bilateral agreements between Switzerland and the European Union, the dynamics in the industry changed. A higher minimum wage bite reduced the growth of employment in construction. Moreover, the descriptive statistics show stagnating construction prices. This means that in a liberalised labour market and in a more open market construction firms do not dispose of instruments to cover higher wages for workers actually employed below the next year's minimum wage. Assuming that the actual wage of a worker would respect his marginal productivity, then a new minimum wage at a higher level would no longer justify the work relationship, and the firm would replace the employee. The observed results confirm that the liberalised labour market and, in general, open markets affect the employment decisions of involved firms through higher competition. Therefore, in years with growing minimum wage bites, employment growth slows down.

In the opposite case, following the obtained results, a country that seals off its markets and labour markets from an interconnected economic space could pay minimum wages above the marginal productivity of its workers, imposing higher margins. In this case, the considered firms would forward costs to the output, making the final consumer pay, and would therefore be able to maintain a larger workforce through the gained market power. Future applications of our method could in this way study the specific context of the Brexit case, whether the conclusions from this work could apply to the opposite case, and if the corresponding results would confirm a reversibility of effects when disintegrating labour markets.

A further extension of this research could be the application of our methodology to an industry with a relatively low minimum wage. According to Neumark and Wascher (2008), the effect of minimum wage on labour market outcome depends on the distance of the minimum and median wage. Since the construction industry has a high minimum wage compared to the median, it could be interesting to extend this study into an industry with relatively low minimum wages. Moreover, many Central and Eastern European countries have national statutory minimum wage systems, which could be similarly analysed.

A limitation of this research certainly lies in the fact that it takes several assumptions on economic conditions during the analysed period. The effect was analysed in a

box, without taking into account other shocks that occur in the meantime and might affect each of the cantons in a heterogeneous manner. Secondly, the construction industry – offering standardised rules and data for all of Switzerland – constitutes only a small part of the entire economy, making it difficult to generalise conclusions for the remainder of the economic sectors.

Therefore, a deep analysis of the different effects of minimum wages constitutes scope for future research, as soon as larger and more complete data sets on this topic become available.

REFERENCES

Abadie, A. (2005). Semiparametric Difference-in-Differences Estimators. *The Review of Economic Studies, 72*(1), 1-19.

Author, D.H. (2003). Outsourcing at Will: The Contribution of Unjust Dismissal Doctrine to the Growth of Employment Outsourcing Semiparametric Difference-in-Differences Estimators. *Journal of Labor Economics, 21*(1), 1-42.

Bachmann, R., Konig, M., & Schaffner, S. (2012). Lost in transition? Minimum wage effects on German construction workers. *Ruhr Economic Papers*, *358*.

Baumeisterverband (2016). Website Schweizerischer Baumeisterverband SBV -2016 – Zahlen und Fakten. Retrieved from http://www.baumeister.ch/de/politik-wirtschaft/publikationen/zahlen-und-fakten on September 15, 2017.

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should be trust Difference-in-Difference estimates. *The Quarterly Journal of Economics, 119*(1), 249-275.

Brochu, P., & Green, D. (2013). The impact of minimum wages on labour market transitions. *Economic Journal, 123*(12)*,* 1203-1235.

Cahuc, P., Carcillo, S., & Zylberberg, A. (2014). *Labor Economics* (second edition). Cambridge, MA: MIT Press.

Card, D. (1992). Using Regional Variation in Wages to Measure the Effects of the Federal Minimum Wage*. Industrial Labor Relation Review, 46,* 22-37.

Dolton, P., Bondibene, CR., & Wadsworth, J. (2010). The UK National Minimum Wage in Retrospect. *Fiscal Studies, 31*, 509-534.

Dolton, P., Bondibene, CR., & Wadsworth, J. (2012). Employment, Inequality and the UK National Minimum Wage over the Medium-Term. *Oxford Bulletin of Economics and Statistics, 74*, 78-106. http://doi.org/10.1111/j.1468-0084.2011.00653.x

Dube, A., Lester, TW., & Reich, M. (2010). Minimum Wage Effects across State Borders: estimates using contiguous countries. *The Review of Economics and Statistics*, *92*(4), 945-964.

Dustmann, C., Frattini, T., & Preston, I. (2013). The Effect of Immigration along the Distribution of Wages. *Review of Economic Studies, 80*, 145-173. http://doi.org/10.1093/restud/rds019

EDA (2017). Personenfreizügigkeit – Bilateral Abkommen I 1999. Retrieved from https://www.eda.admin.ch/content/dam/dea/de/documents/fs/04-FS-Personenfreizuegigkeit_de.pdf on June 3, 2017.

Favre, S. (2011). The Impact of Immigration on the Wage Distribution in Switzerland. Retrieved from http://www.econ.uzh.ch/static/wp/econwp022.pdf on July 2, 2017.

Gilpin, N., Henty, M., Lemos, S., Portes, J., & Bullen, C. (2006). The Impact of free Movement of Workers from Central and Eastern Europe on the UK labour market. Retrieved from http://cream-migration.org/files/Working_paper_291.pdf on July 5, 2017.

Giupponi, G., & Machin, S. (2018). Changing the Structure of Minimum Wages: Firm Adjustment and Wage Spillovers. *IZA DP*, *11474*. Retrieved from http://ftp.iza.org/dp11474.pdf on September 7, 2018.

Kampelmann, S., Garnero, A., & Rycx, F. (2013). Minimum wages in Europe: does the diversity of systems lead to a diversity of outcomes? (Report 128). Etui. Retrieved from https://www.etui.org/content/download/11381/96227/file/13+R+128+Minimum+wages+Web+version.pdf on August 18, 2018.

Mortensen, D., & Pissarides, C. (1994). Job Creation and Job Destruction in the Theory of Unemployment. *The Review of Economic Studies, 61*(3), 397-415.

Neumark, D., & Wascher, W. (1999). Employment effects of minimum and subminimum wages: panel data on state minimum wage laws. *Industrial Labor Relation Review, 46*, 55-81.

Neumark, D., & Wascher, W.L. (2008). *Minimum wages*. Cambridge, MA: MIT Press.

Portugal, P., & Cardoso, A.R. (2006). Disentangling the minimum wage puzzle: an analysis of worker accessions and separations. *Journal of the European Economic Association*, *4*(5), 988-101.

Steward, M. (2002). Estimating the impact of the minimum wage using geographical wage variation. *Oxford Bulletin of. Economics and Statistics*, *64*, 583-605.

Verein-Grenzgänger: Bilaterale Verträge. Retrieved from http://www.grenzgaenger.de/bilaterale_vertraege.htm (2013) on March 1, 2013.

Van den Berg, G., & Ridder, G. (1998). An Empirical Equilibrium Search Model of the Labor Market. *Econometrica, 66*(5), 1183-1221. http://doi:10.2307/2999634

vom Berge, P., & Frings, H. (2019). High-Impact minimum wages and heterogeneous regions. *Empirical Economics*. https://doi.org/10.1007/s00181-019-01661-0

Authors

The contribution of co-authors is equal and can be expressed as 50% for each of the authors: Luzius Stricker (LS) contributed to the literature review, worked on the preparation of the dataset. Moreno Baruffini (MB) contributed to the literature review. Both LS and MB reviewed the specific methods literature, conducted the analysis, and interpreted the obtained results.

Luzius Stricker

Luzius Stricker is a PhD student in Economics. He received his Bachelor's and Master's degrees in Economics at the Università della Svizzera italiana USI, and since 2014, he has been a collaborator of the Observatory for Economic Dynamics (O-De). His research focuses on wage policies and labour market reforms. His interests regional economic attractiveness, spatial planning, minimum wage effects and the impact of new labour market policies.
Correspondence to: Mr. Luzius Stricker, PhD Candidate, Istituto di ricerche economiche IRE – Università della Svizzera italiana USI, Via Maderno 24 – CP, 4361, CH-6904 Lugano, Switzerland, e-mail: luzius.stricker@usi.ch
ORCID http://orcid.org/0000-0003-1007-8605

Moreno Baruffini

Moreno Baruffini is an economist and environmental engineer. He works in the fields of regional sciences and statistics. He obtained his PhD degree from the Faculty of Economics, Università della Svizzera italiana (USI). He is currently the head of the Observatory for Economic Dynamics (O-De), Institute for Economic Research (IRE), Università della Svizzera Italiana (USI). He graduated with honours from the Politecnico di Milano (Italy). He worked at the METID Centre (Metodi e Tecnologie Innovative per la Didattica) at the Politecnico di Milano and at the Institute of Earth Sciences of the University of Applied Sciences of Southern Switzerland SUPSI.
Correspondence to: Dr. Moreno Baruffini, Post-Doc Researcher, Istituto di ricerche economiche IRE – Università della Svizzera italiana USI, Via Maderno 24 – CP, 4361, CH-6904 Lugano, Switzerland, e-mail: moreno.baruffini@usi.ch
ORCID http://orcid.org/0000-0002-2347-6082

International entrepreneurship of universities: Process-oriented and capabilities perspectives

Łukasz Sułkowski, Zofia Patora-Wysocka

A B S T R A C T
Objective: The objective of the article is to propose a model of process-oriented dimension and capabilities perspective on the basis of existing literature and the concept of university-based international entrepreneurship.
Research Design & Methods: The article is conceptual and based on scientific literature from online databases. The method used in the research was the critical and reflective analysis of published research results in the area of process-oriented dimension and capabilities perspective for the international entrepreneurship of universities.
Findings: An entrepreneurial university is mainly supported by incremental changes flowing from organisational identity and culture. Leadership is strongly concentrated on sense-making. The creative processes in HEI's are of entrepreneurial and social nature. Process-oriented and capabilities perspectives consist of a useful cognitive base for explaining entrepreneurial activities of universities.
Implications & Recommendations: Dominant functionalistic approach to the entrepreneurship of universities does not fully explain the social nature of activities of HEI's. To develop entrepreneurial orientation in HEI, leaders should concentrate on sense-making and sense-giving.
Contribution & Value Added: Process-oriented dimension and capabilities perspective for the international entrepreneurship of universities is a new approach in management theory. Cognitive value lies in the novel approach to entrepreneurial universities as benefiting from the interpretative paradigm and incrementalism.

Article type:	conceptual article
Keywords:	international entrepreneurship; higher education; entrepreneurial university; entrepreneurship in higher education
JEL codes:	L26, I23, O19

Received: 27 March 2020	Revised: 16 July 2020	Accepted: 16 July 2020

INTRODUCTION

Over the last years, academic entrepreneurship drew considerable attention in the litera- ture (Wright, Lockett, Clarysse, & Binks, 2006; Evers, Cunningham, & Hoholm, 2016). En- trepreneurial performance of a university was explored mainly through the lens of knowledge creation, *i.e.* spin-off enterprises, incubator firms and networks, the commer- cialisation of intellectual property, technology transfer, but also commercial teaching prac- tice or non-state research grants (Etemad, 2016). That kind of research orientation is partly a consequence of social identity of universities, based upon achieving research excellence. However, in practice, it may collide with the traditional ethos of an academic institution manifested in scientific autonomy and resistance to managerial expertise (Jarzabkowski, 2005). On top of the above, there is the issue of global disruptive developments, *i.e.* rapid economic growth, value creation, technology and knowledge development, and interna- tionalisation (Etemad, 2016). As a result, the commercial activity of universities has re- cently received relatively strong attention as part of efforts to contribute to the growing body of research on international entrepreneurship. Therefore, an academic spin-off, as "a new firm created to exploit commercially some knowledge, technology, or research re- sults developed within a university" (Evers *et al.*, 2016, p. 287) coincides with a plethora of theoretical approaches in international entrepreneurship agenda.

The objective of the article is to propose the concept of process-oriented dimension and capabilities perspective for international entrepreneurship of universities on the basis of existing literature. The topic is important because the vast majority of literature about entrepreneurial university utilises functional paradigm, and there is a theoretical and methodological gap in the interpretative understanding of the entrepreneurship of higher education institution (HEI; Dzimińska *et al.*, 2020). Process-oriented and capabilities ap- proach represents a new and fruitful theoretical and methodological ground for the re- search of post-Humboldtian university (Sułkowski, 2016a).

Hence, the research question of the article is: how to describe entrepreneurial univer- sity using process-oriented dimension and capabilities perspective?

The article starts with the description of the method selected to perform the study, followed by the presentation of literature review results, including the study of such con- cepts as entrepreneurial university and international entrepreneurship. The main part of the article is the outline of the proposed model: developing a process-oriented and capa- bilities perspective of university-based international entrepreneurship framework. The ar- ticle closes with conclusions and recommendations for further research.

MATERIAL AND METHODS

The article is based on scientific literature taken out from online databases. It is a theory development article, which relies on the literature review and desk research. The method used in the research was a critical and reflective analysis of the published research results in the area of process-oriented dimension and capabilities perspective in the international entrepreneurship of universities. The selection of articles included in the analysis was a two-stage process. The critical and reflective screening of the phrases "entrepreneurial university," "process-oriented dimension and capabilities perspective," and "international

entrepreneurship of universities" was performed in the Scopus and Google Scholar databases. The widest screening led to more than 27 900 articles. By limiting the search by joining the search phrases "entrepreneurial university" and "international entrepreneurship of universities" we narrowed it down to 1 604 articles. The choice of cited articles from this pool formed the main body of analysis based on 51 texts. A joint query for "process-oriented" or "capabilities perspective" with "entrepreneurial university" and "international entrepreneurship of universities" gives no results. The lack or very limited number of articles on this subject suggest that there may be a research gap.

Our article is a conceptual text based on building a new approach to entrepreneurship of HEI's. Literature review and desk research offer a new perspective that should be developed in further qualitative and quantitative research programs. Scientific approach applied in this article is qualitative and includes the following methods: secondary qualitative data analysis, predictive synthesis, induction, and description.

LITERATURE REVIEW AND THEORY DEVELOPMENT

Entrepreneurial University

Numerous researchers indicate the diverse directions of contemporary universities development. There prevails a view on the transformation of universities into business market organisations that will pursue concepts of new public management (de Boer, Enders, & Schimank 2007; Hood 1995). Higher education institutions become the "producers" of educational services available at the competitive market, which simultaneously constitutes the implementation of economic and commercial approaches. This equally concerns teaching students and research conducted by employed teachers. The final shape of the new model has not been determined yet but, according to Ronald Barnett (2000), it will allow for resurrecting the organisation referred to as the university.

Sporn (2006) indicates three general approaches to the management of higher education institutions, *i.e.* new public management, entrepreneurialism, and academic capitalism. According to Sporn (2006), as far as higher education institutions in the EU are concerned, new public management has focused on establishing and reinforcing educational quality management systems based on Total Quality Management (TQM). This is the example of both the United Kingdom and Scandinavian countries. Other methods of management used in higher education institutions and motivated by new public management include project management, contract management, assessment, audit and accreditation, institutional autonomy, and accounting.

Entrepreneurial university is a concept developed and popularised by Clark (1998). After a study of five universities and their ability to react to challenges posed by the environment, he distinguishes five variables. The entrepreneurial university is characterised by Clark (1998) as having:

− a strong managerial and leadership core,
− an integrated entrepreneurial culture,
− a diverse origin of higher education institution funds,
− developing and expansive peripheral areas,
− a stimulating heart of academic activities.

The strong managerial and leadership core means a high level of organisational autonomy accompanied by differentiation between professional managers/administrators and the academic structure. Entrepreneurial culture is the source of identification for university employees which combines individual and institutional autonomy. Diverse higher education institution financing leads to the reinforcement of autonomy, independence, and economic security. Entrepreneurial universities are increasingly investing in new technologies, start-ups, and spin-offs. All of these aspects of the entrepreneurial university develop on a high-quality basis in the form of educational and research activities (Sporn, 2006).

Higher education is increasingly becoming a business activity, in which competitiveness plays the key role. These changes reinforce actions taken by the executive committee composed of leaders of respective units. There also emerges a group of professional managers and administrators in educational activities (Sporn, 2006).

Moreover, there is a significant connection between higher education and entrepreneurship. The Total Entrepreneurship Activity index measures the correlation between starting a business activity and the level of education. The level of entrepreneurship measured with the help of this index significantly correlates with education (Bloom, Hartley, & Rosovsky, 2007). The results of the study conducted in 17 countries confirm this relation.

Progressive changes in the contemporary management of higher education institutions may be described with the help of three tendencies: shared management; corporate and entrepreneurial approach; flexible and learning architecture (Sporn, 2006).

There also appear distinctive features of entrepreneurial university include strategy, structure, and system entrepreneurial culture, which constitutes a radical change of academic culture. Shattock defines academic entrepreneurship as the "aspiration for the identification and maintenance of the clear institutional agenda determined by the very institution but not constituting the product of the state financing formula" (Shattock & Temple, 2006, pp. 1–2). Entrepreneurial universities are described on the basis of such concepts as entrepreneurship, proactivity, adaptability, and learning organisation (Sporn, 1999a; Sporn, 1999b; Sporn, 2001).

In the literature, there appears a list of features of the liberal (traditional, Humboldtian) and entrepreneurial university – based on Clark's concept – which includes six criteria: the role of the controlling centre, the higher education institution's organisational structure, relationship of the higher education institution with the environment, financing operations, a stimulating academic centre, entrepreneurial culture and academic values. It seems that these six criteria can be complemented with additional four, namely university mission, an approach to organisational changes, higher education institution bureaucratisation, and management model (Sułkowski, 2016b).

International Entrepreneurship

Recent efforts to disentangle the increasingly complex conceptual approach to international entrepreneurship (IE) have focused on finding common intersections of research areas, namely entrepreneurship, international business, strategy, operations management, and networks (Etemad, 2017). The very basic demarcation line between international business and entrepreneurship became hardly recognisable since internationalisation is no more a privilege of multinational corporations (MNCs). Instead, it is the domain of small and medium-sized businesses and new venture creations, as one of key business activities in contemporary world (McDougall & Oviatt, 2000). Therefore, there is the need

to understand IE as a fusion of theoretical categories from various fields of study as long as entrepreneurship is a generic phenomenon for entrepreneurial actions and agency (Eckhardt & Shane, 2003; Jones & Coviello, 2005), innovation, serendipity, and individual opportunism issues (Schumpeter, 1934; Kirzner, 1997; Shane & Venkataraman, 2000), creativity (Autio, 2005), organisational change and strategic management (Shane, 2003). Due to the abundant literature and research issues, there lingers the lack of unified theoretical and methodological lens. Moreover, there is a fundamental discourse on whether IE is a field of research at all (Servantie, Matthieu, Gilles, & Boissin, 2016). Given the above, the challenge is to differentiate between analytically diverse aspects of observing IE phenomena. The dualistic thinking of process-oriented versus capabilities perspective aspects of IE may contribute to this debate. The process-oriented perspective tackles the issue of entrepreneurial actions in terms of their inner dynamics. It is of twofold character: recursive and simultaneously mutable. Then, capabilities orientation traces back to the work of Nelson and Winter (1982). The analysis shows that there appear routines (not their inner structure) that are perceived as basic units of analysis (Tsoukas, 2017). These theoretical lens may provide a conceptual foundation for developing a comprehensive framework for a university-based IE perspective.

IE has been a vivid research subject from the late 1980s (McDougall, 1989; Oviatt & McDougall, 1994). The very first definitions put emphasis on the incremental path of internationalisation. Since the IE was described as: the development of international new venture or start-ups that – from their inception – engage in international business, thus viewing their operating domain as international from the initial stages (McDougall, 1989, p. 387) appears as the 'trace' of evolutionary logic in the model by Johanson and Vahlne (1977). Simultaneously, emphasis is also put on entrepreneurial activities such as venturing, engaging, and operating, which a clearly turns towards issues of entrepreneurial agency. Further elaboration of IE happened in the 1990s and 2000s, by exploring resource-based and network orientations (Young, Dimitratos, & Dana, 2003), along with performative aspects of human activity (Styles & Seymour, 2006). However, in the area of entrepreneurial actions, there seems to remain a cognitive gap in the realm of adopting the activity-based view of strategy as practice in IE issues (Jarzabkowski, 2005; Johnson, Langley, Melin, & Whittington, 2007; Becker, 2010; Hernes, 2014). Thus, introducing process-oriented and capabilities perspectives into the context of IE should allow us to observe entrepreneurial activity from two complementary viewpoints.

International Entrepreneurship: Process-Oriented Dimension

The notion of a process in the very basic understanding of the term means the continuous making and moving of forms (Cooper, 2015, p. 585). Process may be seen as actions, events, and physical and mental acts of doing something that is located in time and space. In entrepreneurial reality, a process refers to the plan, performance, and realisation of intentions and opportunities. A human agent is the key factor of constituting reality, however, there is a plethora of interactions among humans, artefacts, technology and the natural, and the social world. Since the business and entrepreneurial reality is 'on the constant move,' we can infer that the process is the continuous coming-to-presence of the forms and objects of everyday life rather than their taken-for-granted, ready-made presences (Cooper, 2015, p. 585). The very premises of process thinking may appear as a starting point of defining the process orientation in IE's field.

Tracing back the process-oriented concept of IE, we may begin with the definition by McDougall (1989, p. 293), who recognises IE as new and innovative activities that have the goal of value creation and growth in business organisations across national borders. The definition is dominated by performative phrases such as "innovative activities" and "value creation." There is a clear departure from age or size issues that initially limited the observation of internationalisation to MNEs. Later, McDougall and Oviatt revisited old definitions to emphasise such categories as proactive and risk-seeking behaviour (2000, p. 903) or the discovery, enactment, evaluation, and exploitation of opportunities (Oviatt & McDougall, 2005; Keupp & Gassmann, 2009), while others foregrounded learning advantages of newness (Zahra, Zheng, & Yu, 2018). Therefore, the entrepreneurship process is a never-completed act of creating and redefining activity and gaining practical knowledge on a daily basis. At the same time, the entrepreneurship process is of purposive, projective, and reflexive character, aimed at growing and opportunity-seeking. Practical and evaluative aspects of problem solving are context-dependent, and they form participatory acts under construction (Cooper, 2015). Thus, in the IE literature, there is a plethora of works exploring the problem of uncertainty and risk (Liesch, Welch, & Buckley, 2011). However, when evaluating the situation-specific issue of uncertainty and risk, individual perception may differ from other organisational members' interpretation. The processual generic problem of interlinked activities is the potential source of ideas for exploring that issue (Simpson & Lorino, 2016). Another key aspect of process orientation in IE is the problem of timing. Referring to the very first characteristics of INVs (Oviatt & McDougall, 1994; Knight & Cavusgil, 1996), one may infer a strong link between temporality, entrepreneurial activities, and opportunism. Patterns of internationalisation in entrepreneurial organisations may be fundamentally different from the model of strategically planned stages. The timing dimension refers to activities to be internationalised from their inception, as a result of seeking to derive much of revenues from sales abroad (Aspelund & Moen, 2005) or establishing a start-up operating abroad (Knight & Cavusgil, 2004). Another timing issue seems to highlight fragmented characteristics of internationalisation processes and the possibility of withdrawal or disappearance of an internationalisation practice (Welsh & Loustarinen, 1993). Thus, internationalisation activity is only a generative mechanism that – under context-specific circumstances – can result in a tendency to reproduce given activity patterns or a decision to cease them completely. In this light, time is a resource used by entrepreneurs to create temporal advantages (Hernes, 2014). As Cooper (2015) indicates, the notion of process etymologically bears the meaning of the production and disappearance of forms. Therefore, process means approach and withdrawal (2014, p. 585). Thus, IE can be placed under the premises of processual practice theories that analyse the linkage between activities, agency, and structure (Golsorkhi, Rouleau, Seidl, & Vaara, 2010).

Styles and Seymour (2006) establish an analytical framework of emerging fields of interest in IE. In fact, there are several gaps in the literature that could be categorised as follows: opportunity, human action and behaviour, learning, creativity and innovation, exchange aspects of internationalisation, performance (Styles and Seymour, 2006, pp. 137–139). Summing up, at the core of the process-oriented dimension there are such constitutive categories as entrepreneurial activities, processual emergence, interactions, and opportunism, along with context-related issues like uncertainty, risk, and temporality. Process thinking in IE seeks activity flow, internationalisation patterns formation, movement

in networks, interactions, and time-oriented issues. It may contribute to our understanding of internationalisation processes by clarifying mechanisms of their constant change.

International Entrepreneurship: Dynamic Capabilities

A capabilities perspective in IE emerged in order to find explanatory factors that not only facilitate internationalisation activities but also sustain their long-term competitive advantages. At first sight, the capabilities perspective may seem to stand in a complete opposition to a process-based orientation in IE in as far as the latter is aiming at exploring performative nature of IE. However, to paraphrase Hernes (2014), a world on the move invites dispositions for organisations that – in order to keep performance indicators high – need to respond to the continuous flow of challenges, opportunities, people, goods, technology, and time. Teece (2009) identifies a dynamic capabilities conception that overlaps the resource-based theory of the firm and the evolutionary economics perspective by Nelson and Winter (1982). According to Al-Ali and Teece (2014, p. 105), entrepreneurship is one of the constitutive aspects of dynamic capabilities that stand as "higher-order capabilities in the sense that they govern how the organisation's ordinary capabilities are developed, augmented, winnowed, and combined." These are the key categories that unfold processes possibly impeded by the inertial use of ordinary resources. These categories are the linkage between organisational tendency to maintain daily routines, learn in practice, and adapt to changes. The concept of dynamic capabilities provides a promising approach to IE. Since entrepreneurial activities may introduce a new activity scheme abroad, there are efforts to successfully accomplish these activities on a daily basis. The process of activity patterns replication begins. Teece (1976) assumes that this kind of reproducing activities is very often costly in markets abroad. The learning processes are crucial as far as different spatial and situational contexts are concerned. Thus, strong dynamic capabilities are needed (Al-Aali & Teece, 2014, p. 109). The timing problem arises when opportunities of market mode entry collide with the need to transfer capabilities from a domestic market. Moreover, even if organisational resources are unique, it is not unreasonable to search for new capabilities or try to renew the old ones. In a competitive environment, the competitive advantage is not a long-lived category. There are adaptations needed along with the capability to redeploy crucial management skills, routines, and values (Teece, 2007). Pentland *et al.* (2012) put that kind of challenging processes in "sociomaterial" brackets of information and communication technology. The application of trackable routines proves to work under ICT modular services that allow replication on the one hand, and flexible reconfiguration on the other hand (2012). In the context of international entrepreneurship, the flexibility aspect of interactions between entrepreneurs and technology is of great importance. Zahra *et al.* (2018) show that learning is not an imperative. Instead, the point is to learn how to learn (2018, p. 31). IE implies a dedication to observing, expressing, catching, and assimilating what is worth learning.

The Proposed Model: Developing a Process-Oriented and Capabilities Perspective of University-Based International Entrepreneurship Framework

Process-oriented and capabilities perspectives introduce a complementary view of IE. While the premises of process thinking conceptualise the entrepreneurship issues in the realms of activity-based domain, the capabilities view contributes to explaining these performative as-

pects of activities originating from capabilities of individuals and collectives. Our article harnesses the process and capabilities agenda to fill the gap in university-based IE.

The aim of this part of the article is to build aspects of process- and capabilities-orientation into the university IE framework.

The first and foremost mission of the university is developing and communicating the state of knowledge. Thus, university-based R&D generate much of intellectual good and property. Commercialisation is a different and absorbing area of activity. Etemad (2016) pinpoints that besides the small number of scientists-turned-entrepreneurs who can pursue business activities, scientific and managerial lives stand in clear opposition (2016, p. 279). As Slaughter and Leslie (1999) show, many academics perceive teaching and income-generating activities – and thus research and teaching – as activities of divergent characteristics. Analogically, the same pattern may be present in commercial and research activities: managerial values seem to oppose scientific values. Therefore, if these are the very roots of tension, we may agree that the university is an organisation of fragmented professional workforce and multiple contradictory activities that create tensions between professional and managerial interests (Jarzabkowski, 2005, p. 73).

There are several aspects insufficiently explained in theoretical and empirical terms in process-oriented IE. The everyday practice of creating and commercialisation of knowledge may form a strategic challenge for universities and spin-offs. Summing up, there are several criteria that guide the exploration of university-based IE issues in process-based frames of reference:

1. When pursuing practice as the main object of analysis, it could be possible to observe challenging issues in terms of day-to-day reproduced schemas of action. The university as an organisation of highly autonomous professional workforce is not a place susceptible to top-down management (Jarzabkowski, 2005). If we take into account the premise that activities are situated in the social context (Howard- Grenville, 2005), then understanding the university as having the primacy of external power over the individuals, or the other way round, is a false thesis. Practice 'omits' structures and people as causes of phenomena and, instead, seeks to observe activities.

2. Entrepreneurial processes (activities) may be of emergent, recursive, and temporal character. Performative aspects of daily activities may be transferred onto the issue of (de)internationalisation issues and change management.

3. The traditional view of practice and everyday activities is rooted in pragmatism and the interpretative paradigm (Dewey, 1938; Weick, 1995). In terms of the university context, there remains the importance of interactions between agents: divergent and emerging goals, decision-making process, sense-making, and shared-understanding issues. Evers *et al.* (2016) pursue the problem of non-academic actors in university- based IE context. We may add that the university deals with the problem of agency because there are not only individuals involved in performance abroad. There are networks, routine schemas, values, technologies, and artefacts that create a complex context.

4. Last but not least, opportunities as the key factor of founding entrepreneurship theory play an important role in university-based IE. Entrepreneurs take advantage of unplanned situations as much as scientists use opportunities to develop scientific ideas. In the entrepreneurship reality, the generated knowledge becomes a product. It opens up a wide lens on the process dimension of university-based IE.

In a very broad sense, an entrepreneurial university as a capability-oriented category emphasises sustaining competitive advantages. Teece (2009, p. 168) conceptualises dynamic capabilities in MNEs in terms of five crucial categories: 1) learning and innovation, 2) competences in 'designing' business, 3) heuristic decision-making on investment allocation, 4) the orchestration of assets with competence in bargaining, 5) efficient governance. These five characteristics provide a valuable context for research into university-based IE in realms of long-term performance. A university-based venture consists of mixed and – very often – divergent experience of venture capitalists and scientists (Mikhailova & Olsen, 2016), which may be an obstacle in the very early phase of internationalisation; however, it may also provide the basis for a superior spin-off's performance and development in the long run. According to Mikhailova and Olsen (2016), these are the business and scientific networks that form the background for moving ventures onto next levels. In that sense, Evers *et al.* (2016) recognise the particular role of learning and resourcing. These aspects are accompanied by the time dimension, the liabilities of newness, foreign entourage, and overarching unpredictability (Evers *et al.*, 2016, p. 290). Putting such capabilities view into a practice-based orientation, we may cover at least three aspects of learning as the processual category of experience and knowledge creation:

1. the concept of 'knowing-in-practice' that is grounded in the practical involvement of actors in operations (Gherardi, 2012),
2. the notion of 'practice-in-use' and 'technology-in-use' (Orlikowski, 1996) that contributes to observing capacities of merging material objects and technology and activities, and
3. reflexivity (Beck, Giddens, & Scott, 2009) that is the basis of practice-learning and stimulates the ordinary capabilities of their augmentation, development, and improvement.

CONCLUSIONS

The prevailing trend of contemporary HEI's transformation is the deepening development of 'entrepreneurial university' models, accompanied by the growing wave of criticism and resistance from the academic environment. The development of entrepreneurial tendencies in university culture manifests itself through, *e.g.*:

- the focus on generating revenues from scientific and educational activities,
- the pursuit of market mission and the establishment of competitive strategies,
- the orientation on creating and implementing innovations coming from scientific activities together with industry,
- the adoption of quasi-business and quasi-corporate organisational solutions within strategic and structural spheres,
- the introduction of accountability methods and governance controlling methods,
- the shift in the process of decision-making from the collegial model oriented on academics towards the managerial model conferring power upon management boards, administrators, and governing bodies.

In conclusion, we may propose characteristics of entrepreneurship of HEI's based on process-oriented and capabilities perspectives. Answering the research question, we could describe an entrepreneurial university as mainly based on incremental changes flowing from organisational identity and culture. Moreover, the type of leadership is strongly concentrated on sense-making and building the consensus around stakeholders' actions.

Universities are knowledge-creating organisations. The creative process is entrepreneurial and social. Process-oriented and capabilities perspectives constitute a useful cognitive basis for explaining entrepreneurial activities of universities.

The implications of above conclusions for policymakers and leaders of HEI's are important. The dominant functionalistic approach to the entrepreneurship of universities does not explain the social nature of university actions (Sułkowski, 2012). To develop the entrepreneurial orientation in HEI leaders should concentrate on sense-making and sense-giving that promote the value of creative, open, and flexible actions of organisational actors (Sułkowski, 2017).

The limitation of our research is the speculative character of theoretical construction. There is a need to build a research program based on primary data that goes deeper into the process-oriented and capabilities perspectives of HEI's.

The perspective for future research is to use the grounded theory approach to build and test models of process-oriented and capabilities perspectives for entrepreneurship in universities. What could be important is the difference between entrepreneurial actions of different types of HEI's such as public and private universities.

REFERENCES

Al-Aali, A., & Teece, D.J. (2014). International Entrepreneurship and the Theory of the (Long-Lived) International Firm: A Capabilities Perspective. *Entrepreneurship Theory and Practice*, *38*(1), 95-116.

Aspelund, A., & Moen, Ø. (2005). Small international firms: Typology, performance and implications. *Management International Review*, *1*(1), 37-57.

Autio, E. (2005). Creative tension: The significance of Ben Oviatt's and Patricia McDougall's article towards a theory of international new ventures. *Journal of International Business Studies*, *36*(1), 9-19.

Barnett, R. (2000). Thinking the University, Again. *Educational Philosophy and Theory*, *32*(3), 319-326.

Beck, U., Giddens, A., & Scott, L. (2009). *Modernizacja refleksyjna: Polityka, tradycja i estetyka w porządku społecznym nowoczesności*. Warszawa: PWN.

Becker, M. (Ed.). (2010). *Handbook of organizational routines*. Cheltenham: Edward Elgar Publishing Limited.

Bloom, D.E., Hartley, M., & Rosovsky, H. (2007). Beyond Private Gain: The Public Benefits of Higher Education. In J.J.F. Forest, & P.G. Altbach (Eds.), *International Handbook of Higher Education.* Springer International Handbooks of Education (vol 18). Dordrecht: Springer.

Cooper, R. (2015). Process and Reality. In J. Helin, T. Hernes, D. Hjorth, & R. Holt (Eds.), *Process Philosophy and Organization Studies* (pp. 585-605). Oxford: Oxford University Press.

de Boer, H., Enders, J., & Schimank, U. (2007) On the Way towards New Public Management? The Governance of University Systems in England, the Netherlands, Austria, and Germany. In D. Jansen (Eds.), *New Forms of Governance in Research Organizations*. Dordrecht: Springer.

Dewey, J. (1938). *Experience and Education*. New York: Kappa Delta Pi.

Dzimińska, M., Fijałkowska, J., & Sułkowski, Ł. (2020). A Conceptual Model Proposal: Universities as Culture Change Agents for Sustainable Development. *Sustainability*, *12*(11), 4635.

Eckhardt, J.T., & Shane, S.A. (2003). Opportunities and entrepreneurship. *Journal of Management*, *29*(3), 333-349.

Etemad, H. (2016). Special Thematic Issue on: International Interactions and Activities of University-Based Technology Entrepreneurship. *Journal of International Entrepreneurship*, *14*, 277-284.

Etemad, H. (2017). The emergence of online global market place and the multilayered view of international entrepreneurship. *Journal of International Entrepreneurship*, *15*, 353-365.

Evers, N., Cunningham, J.A., & Hoholm, T. (2016). International entrepreneurship in universities: Context, emergence and actors. *Journal of International Entrepreneurship*, *14*, 285-295.

Gherardi, S. (2012). *How to conduct a practice-based study*. Northampton: Edward Elgar.

Golsorkhi, D., Rouleau, L., Seidl, D., & Vaara, E. (2010). *Cambridge Handbook of Strategy as Practice*. Cambridge: Cambridge University Press.

Hernes, T. (2014). *A Process Theory of Organization*. Oxford: Oxford University Press.

Hood, C. (1995). Contemporary public management: A New Global Paradigm?. *Public Policy and Administration, 10*(2), 98-105.

Howard-Grenville, J., (2005). The Persistence of Flexible Organizational Routines: The Role of Agency and Organizational Context. *Organization Science, 16*(6), 618-36.

Jarzabkowski, P. (2005). *Strategy as practice. An activity based approach.* London: Sage Strategy Series, Sage Publications.

Johanson, J., & Vahlne, J.E. (1977). The Internationalization Process of the Firm – A Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies*, *8*(1), 23-32.

Johnson, G., Langley, A., & Melin, L., Whittington, R. (2007). *Strategy as practice. Research Dimensions and Resources.* Cambridge: Cambridge University Press.

Jones, M.V., & Coviello, N.E. (2005). Internationalization: conceptualizing an entrepreneurial process of behavior in time. *Journal of International Business Studies*, *36*(3), 284-303.

Keupp, M.M., & Gassmann, O. (2009). The Past and the Future of International Entrepreneurship: A Review and Suggestions for Developing the Field. *Journal of Management*, *35*(3), 600-633.

Kirzner, I.M. (1997). Entrepreneurial discovery and the competitive market process: an Austrian approach. *Journal of Economic Literature*, *35*, 60-85.

Knight, G.A., & Cavusgil, S.T. (1996). The born global firm: a challenge to traditional internationalization theory. *Advances in International Marketing*, *8*, 11-26.

Knight, G.A., & Cavusgil, S.T. (2004). Innovation, organizational capabilities and the born-global firm. *Journal of International Business Studies*, *35*(2), 124-141.

Liesch, P.W., Welch, L.S., & Buckley, P.J. (2011). Risk and Uncertainty in Internationalisation and International Entrepreneurship Studies Review and Conceptual Development. *Management International Review*, *51*, 851-873.

McDougall, P.P. (1989). International vs domestic entrepreneurship: a comparison of new venture behavior and industry structure in the computer and communications industries. *Journal of Business Venturing*, *4*, 387-400.

McDougall, P.P., & Oviatt, B.M. (2000). International entrepreneurship: The intersection of two research paths. *Academy of Management Journal*, *43*, 902-908.

Mikhailova, O., & Olsen, P.I. (2016). Internationalization of an academic invention through successive science-business networks: The case of TAVI. *Journal of International* Entrepreneurship, *14*(3), 441-471.

Nelson, R., & Winter, S. (1982). *An Evolutionary Theory of Economic Change*. Cambridge: Harvard University Press.

Orlikowski, W. (1996). Improvising Organizational Transformation Over Time: A Situated Change

Perspective. *Information Systems Research*, *7*(1), 63-92.

Oviatt, B.M., & McDougall, P.P. (1994). Towards a theory of international new ventures. *Journal of International Business Studies*, *25*(1), 45-64.

Oviatt, B.M., & McDougall, P.P. (2005). The internationalization of entrepreneurship. *Journal of International Business Studies*, *36*(1), 2-8.

Pentland, B.T., Feldman, M.S., Becker, M.C., & Liu, P. (2012). Dynamics of Organizational Routines: A Generative Model. *Journal of Management Studies, 49*(8), 1484-1508.

Schumpeter, J.A. (1934). *Change and the Entrepreneur*. Cambridge, MA: Harvard University Press.

Servantie, V., Matthieu, C., Gilles, G., & Boissin, J.P. (2016). Is international entrepreneurship a field? A bibliometric analysis of the literature (1989–2015*). Journal of International Entrepreneurship*, *14*, 168-212.

Shane, S., & Venkataraman, S. (2000). Promise of entrepreneurship as a field of research. *Academy of Management Review*, *25*(1), 217-226.

Shane, S. (2003). *A General Theory of Entrepreneurship: The Individual-Opportunity Nexus*. Cheltenham: Edward Elgar.

Shattock M., & Temple P. (2006). *Entrepreneurialism and the Knowledge Society: some conclusions from cross national studies* (paper presented at the EAIR Forum, Rome).

Simpson, B., & Lorino, P. (2016). Re-Viewing Routines through a Pragmatist Lens. In J. Howard-Grenville, C. Rerup, A. Langley, & H. Tsoukas (Eds.), *Organizational Routines: How They are Created, Maintained, and Changed* (pp. 47-70). Oxford: Oxford University Press.

Slaughter, S., & Leslie, L. (1999). *Academic Capitalism, Politics, Policies, and the Entrepreneurial University*. Baltimore, MD: Johns Hopkins University Press.

Sporn, B. (2006). Governance and Administration: Organizational and Structural Trends. In: J.J.F. Forest, Ph.G. Altbach (Eds.), *International Handbook of Higher Education*. Dordrecht: Springer.

Sporn, B. (1999a). Towards More Adaptive Universities: Trends of Institutional Reform in Europe. *Higher Education in Europe, 24*(1), 23-33.

Sporn, B. (1999b). *Adaptive University Structures. An Analysis of Adaptations to Socioeconomic Environments of US and European Universities*. London: Jessica Kingsley.

Sporn, B. (2001). Building Adaptive Universities: Emerging Organisational Forms Based on Experiences of European and US Universities. *Tertiary Education and Management, 7*, 121-134.

Styles, C., & Seymour, R. (2006). Opportunities for marketing researchers in international entrepreneurship. *International Marketing Review*, *23*(2), 126-145.

Sułkowski, Ł. (2016a). Accountability of university: Transition of public higher education. *Entrepreneurial Business and Economics Review*, *4*(1), 9-21.

Sułkowski, Ł. (2016b). *Kultura akademicka: koniec utopii?*. Warszawa: Wydawnictwo Naukowe PWN.

Sułkowski, Ł. (2012). Meta-paradigmatic cognitive perspective in management studies. *Argumenta Oeconomica*, *2*(29), 33-51.

Sułkowski, Ł. (2017). The culture of control in the contemporary university. In M. Izak, M. Kostera, & M. Zawadzki (Eds.), *The future of university education* (pp. 85–108). Palgrave Macmillan.

Teece, D.J. (1976). *The multinational corporation and the resource cost of international technology transfer*. Cambridge, MA: Ballinger Publishing.

Teece, D.J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350.

Teece, D.J. (2009). *Dynamic capabilities and strategic management*. Oxford: Oxford University Press.

Welsh, L.S., & Loustarinen, R. K. (1993). Inward and outward connections in internationalization. *Journal of International Marketing*, *1*, 46-58.

Tsoukas, H. (2017). Don't Simplify, Complexify: From Disjunctive to Conjunctive Theorizing in Organization and Management Studies. *Journal of Management Studies, 54*(2), 132-153.

Weick, K. (1995). *Sensemaking in Organizations*. Thousand Oaks, CA: Sage.

Wright, M., Lockett, A., Clarysse, B., & Binks, M. (2006). University spin-out companies and venture capital. *Res Policy*, *35*(4), 481-501.

Young, S., Dimitratos, P., & Dana, L.P. (2003). International entrepreneurship research: what scope for international business theories. *Journal of International Entrepreneurship*, *1*, 31-42.

Zahra, S.A., Zheng, C., & Yu, J. (2018). Learning advantages of newness: A reconceptualization and contingent framework. *Journal of International Entrepreneurship*, *16*, 12-37.

Authors

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

Łukasz Sułkowski

Full professor at Jagiellonian University in Krakow (Poland) and full professor at the University of Social Sciences in Łódź (Poland). His research interests include management in higher education institutions, the economics of higher education, family firms, the methodology of management.
Correspondence to: Prof. Łukasz Sułkowski, PhD, University of Social Sciences in Łódź, Departament of Management, ul. Sienkiewicza 9, 90-113 Łódź, Poland, e-mail: lsulkowski@san.edu.pl
ORCID http://orcid.org/0000-0002-1248-2743

Zofia Patora-Wysocka

Vice-rector and professor of the University of Social Sciences in Łódź (Poland). PhD in Management (Politechnika Częstochowska). Her research interests include organisational change management, international entrepreneurship, organisation and management theory, organisational behaviour.
Correspondence to: Dr Zofia Patora-Wysocka, University of Social Sciences in Łódź, Departament of Management, ul. Sienkiewicza 9, 90-113 Łódź, Poland, e-mail: zpatora-wysocka@san.edu.pl
ORCID http://orcid.org/0000-0002-0429-0207

Acknowledgements and Financial Disclosure

Copyright and License

Gender discrimination and its links with compensations and benefits practices in enterprises

Yuriy Bilan, Halyna Mishchuk, Natalia Samoliuk, Viktoriia Mishchuk

A B S T R A C T
Objective: The objective of the article is to determine links of gender discrimination with compensation and benefits practices, the main features of assurance of equal rights and their impact on employees' motives that can shift economic results of the enterprises.
Research Design & Methods: For macro level analysis, we use graph and mapping method. Features of gender discrimination and its links with compensation and benefits are revealed in sociological review.
Findings: Ensuring gender equality is a difficult task for even the most developed countries of the world, as none of them has achieved full equality of sex, including in respect of labour rights. As our study shows, significant progress has been made in this area in Ukraine, as in general, gender gap and the economic equality of women keep within the EU-specific range of values. Gender discrimination is accompanied by age: 57.1% out of the 71.4% of discriminated women are aged under 35; the higher the age and gender discrimination, the smaller the wage gap. In enterprises with gender discrimination, the potential level of turnover is 71%, which is significantly higher comparing to enterprises with equal rights.
Implications & Recommendations: The obtained results should be used by trade unions and public policy makers in socio-labour agreements to reduce inequality in compensation and benefits practices.
Contribution & Value Added: We suggest the developed approach to define gender discrimination in order to determine its features in compensation and benefits policy, but also to influence business results via assurance of equal rights of employees.
Article type: research article
Keywords: compensation and benefits; discrimination; enterprises; gender; labour rights
JEL codes: D63, J32, J53, J71, M52
Received: 11 May 2020   Revised: 16 June2020   Accepted: 30 June 2020

INTRODUCTION

Increasing inequalities – in particular income inequality and wealth or gender inequality – are currently regarded as one of the major economic and social problems in the world (Kokocinska & Puziak, 2018). Gender discrimination remains a significant problem for countries with both developed and immature economies. Gender inequality receives constant attention on the global level because its eradication is near to impossible. Thus, reducing gender inequality is the fifth of the seventeen Sustainable Development Goals, simultaneously very closely linked to Goal 8 of "Decent work and economic growth" (UNDP).

The importance of gender inequality issues requires constant attention from scientists and analysts. One of the studies showed that its macroeconomic impact can be very significant if sufficient progress is made in securing equal rights and related fields: education, more equal distribution of unpaid care work between women and men, improvement in labour market activity rates of women, increase in women's wages. Under these conditions, GDP per capita is projected to increase by nearly 10% by 2050 at the EU level, and there could be an additional 10.5 million jobs in the EU (70% of which filled by women; EIGE, 2017, p. 53).

While trends and causes of gender inequality are constantly monitored at different levels, the economic impact of women's inequality in the workplace is rarely assessed. At the same time, experts from the International Labour Organization and PwC analysts found that GDP losses from gender inequalities in countries with different levels of development vary between 2.0% and 4.8% (ILO, 2017), and can even reach 10.8% in OECD countries (PwC, 2017).

According to the most recent data published by the European Commission in the Gender Equality Strategy 2020-2024, today there is a 15.7% gender pay gap in the EU, while employment rate difference is 11.6% (European Commission, 2020).

In this regard, gender inequality and the factors behind its formation deserve constant attention and monitoring. One of the main areas in which such inequality manifests is the work. With significant differences in exercising the right to work, women suffer from inequalities not only at the stage of hiring and competing for jobs with men but also during the employment process. The well-known facts are inequalities in pay, career advancement, and work-life balance, especially given the unequal distribution of household responsibilities, which is also recognised to be one of the pressing problems at the EU level in the Gender Equality Strategy 2020-2024 (European Commission, 2020).

In such circumstances, gender economic inequality at the enterprise level could be smoothed out with an advanced system of social dialogue, compensation, and benefits practices. Although the issues of gender inequality – but also effective compensation and benefits planning – are well-known and well-researched, the study of their relationship makes it possible to obtain original scientific results. In particular, the *novelty* of our research is to develop a methodological toolkit for analysing the links between gender discrimination and the availability of compensation and rewards, along with the assessment of gender discrimination effects on companies in the form of redundancy motives.

Therefore, the objective of the article is to evaluate the current state of gender discrimination in enterprises in relation to the practice of compensation and benefits, and to analyse the links between gender discrimination and staff turnover (existing and potential release), which can have a significant impact on the results of economic activities.

In order to achieve this goal, we address the following research questions: (1) to compare the general situation of gender discrimination in economic opportunities in Ukraine against the background of EU countries, taking into account the country's European integration intentions; (2) to evaluate the link between gender discrimination and other features of discrimination, including age; (3) to analyse the manifestations of discrimination in the availability of compensation and benefits in enterprises with different types regarding discrimination policies in order to identify the potential impact on the economic success of enterprises.

The article is organised as follows: the Literature Review section provides an overview of current scientific advances in gender discrimination, compensation, and benefits practices forms the basis of the research; the Methodology section describes hypotheses and appropriate tools for testing them; the main results of macro-level comparisons and our research into the manifestations and consequences of gender inequality in compensation and benefits practices are summarised in Results; the main research findings and possible directions for solving the problem, including in further research, are formulated in Conclusions.

LITERATURE REVIEW

One of the most useful techniques for monitoring gender equality is the methodology of the World Economic Forum, with annual studies of gender inequality. It claims that one of the main components of a significant gender gap is inequality in the direction of World Economic Forum WEF Economic 2020 Participation and Opportunity. At the macroeconomic level, this methodology (monitoring results or conceptual frameworks) is most often used to compare equity in respect of equality between men and women in various fields, including labour (Beham *et al.*, 2019; Blackburn *et al.*, 2016; Mishchuk *et al.*, 2019).

The formation of inequalities in labor rights has the most pronounced features at the enterprise level, on which gender discrimination is still possible at the hiring stage. Very often, especially in transition economies, gender inequality is exacerbated by age, leading to the "widening [of] the gender gap in the employment structure to the benefit of older age groups" (Novikova & Shamileva, 2020, p. 1; Šabić-Lipovača *et al.*, 2016). In our study, we do not deny any age group the right to work; on the contrary, we proceed from the idea of guaranteeing the right to decent work and fair competition in the labour market for all population groups without any discrimination on the basis of sex, age, and similar.

At the same time, empirical studies in many countries prove that discrimination against women's labour rights is widespread today. It may be based on various factors, such as unequal educational opportunities (Dhar *et al.*, 2018; He & Wu, 2017; Klasen & Minasyan, 2017), cultural norms and values (Davis & Williamson, 2019), and discrimination on multiple grounds, such as educational attainment and marital status, as married women are much less likely to succeed than men (Gradín & Tarp, 2019). Gender discrimination often depends on firms' characteristics, such as ownership, market orientation, and top manager's gender (Hoang & Huynh, 2020) and its effects; besides inequality in employment, these elements also frequently impact the formation of pay (Plăiaș *et al.*, 2011; Bilan *et al.*, 2017; Espi *et al.*, 2019).

As a result, violations of labour rights based on sex discrimination can significantly impede further motivation of women's professional development and – at the economic level of the country – hamper economic development and threaten women social well-being. Considering that EU countries have made much progress today in ensuring the

equality of human rights and the country under scrutiny (Ukraine) seeks to integrate with the EU, the first hypothesis we intend to test in the study is:

H1: Gender discrimination in economic opportunities in Ukraine does not differ from the level acceptable in the EU, and there is progress in this direction thanks to the growing importance of European values.

Given that the foundations of inequality in economic opportunities are formed at the enterprise level, a deeper analysis of its causes and manifestations requires a study of the situation with inequality in the availability of economic incentives for employment.

Let us note that – besides the main incentive for employment in the form of remuneration whose inequality is a proven fact and does not require the collection of primary data – enterprises also use other motivation tools whose application can be accompanied with discrimination.

Such incentives, which determine the sense of justice and satisfaction with the job, are both compensation and benefits. It is difficult and inexpedient to fully list them, as they can significantly vary from country to country – what forms an added benefit for some is the norm for others – and be relevant to different types of businesses. For example, one study of job satisfaction in the academia (Mabaso & Dlamini, 2017; Sułkowski *et al.*, 2019) empirically demonstrated that the subjective assessment of job satisfaction was more dependent on compensation, but there appeared no significant effect between benefits and job satisfaction.

However, in order to choose between compensation and benefits, whose accessibility may be impeded by gender discrimination, we should identify the key components important to employees. Dependencies may differ for other activities. When compensation mainly comprises salary and traditional cash rewards (Fu & Zhu, 2017; Maloa & Bussin, 2016; Zeb *et al.*, 2018), researchers in this topic focus on the fact that it is necessary today to place greater emphasis on nonpecuniary, tangible, and intangible rewards and recognition initiatives. In turn, such levers must be consistent with universal psychological needs (Thibault Landry *et al.*, 2017). A common feature of all research in this field is understanding that total pay includes a fixed component or basic pay and other elements, such as benefits and performance bonuses or incentives, each of which can have a significant impact on staff motivation and performance. In some of them, compensation and benefits are not individually allocated and even vice versa, as benefits are included in compensation, understood as "all the extrinsic rewards that employees receive in exchange for their work," such as wages, bonuses, and benefits (Byars & Rue, 2006, p. 249; Patiar & Wang, 2020).

At the enterprise level, traditional components for empirical analysis of the availability of incentives for employment are the following components with greater or lesser detailing: mobility, training programs, other educational tools, sport reimbursement, benefits for employees' children, events, the ability to use corporate transportation, medical insurance, mobile communication payment, and corporate reputation (Akimov *et al.*, 2020; Al-Tkhayneh *et al.*, 2019; Jaworski *et al.*, 2018; Knies *et al.*, 2020; Stewart & Brown, 2019; Babikova & Bucek, 2019).

In the preparatory stage of our own research, we specified the components of compensation and benefits typical for human resources management in business, with owners of Ukrainian enterprises as prospective participants of the survey. Thus, our research summarised existing approaches to the analysis of components of compensation and benefits and

identified those used in the practice of Ukrainian enterprises. On this basis, we aim to test the following hypothesis:

H2: Gender discrimination is manifested not only in wages but also in typical components of compensation and benefits for small and medium-sized businesses, such as providing employees with tuition fees, housing, food, transport costs, and granting soft loans.

In terms of analysing gender equality in the accessibility to compensation and benefits, it is important that other researchers argued that the conditions, under which benefits are strongly perceived as fair, are constraints on accessing and utilising benefits and the transparency of employee benefits (Laundon *et al.*, 2019); whereas macroeconomic manifestations of injustice in the form of substantial differentiation of household incomes negatively impact macroeconomic indicators of well-being (Bilan *et al.*, 2020).

The sense of fairness in the distribution of compensation and benefits created through participation in activities of an enterprise has a confirmed impact on organizational performance (Plăiaș *et al.*, 2011; Al-Tkhayneh *et al.*, 2019; Barrick *et al.*, 2015; Chaikovska *et al.*, 2017; Patiar & Wang, 2020; Rasool *et al.*, 2019; Turner, 2020).

Insufficient fairness in the accessibility to compensation and benefits is a prerequisite for reducing the economic performance of an organization in terms of job dissatisfaction and, consequently, employee turnover (Al Mamun & Hasan, 2017; Blackburn *et al.*, 2016; Stacho *et al.*, 2019; Yu *et al.*, 2019).

Due to dissatisfaction with working conditions, including compensation and benefits practices, we combine confirmed links of personnel layoffs with the importance of ensuring equal rights in their availability. So we put forward another hypothesis to be tested in our study:

H3: Gender discrimination significantly impacts the intentions of dismissing staff; these intentions are higher in enterprises that have not achieved gender equality.

MATERIAL AND METHODS

For H1 verification, we use the EU and Ukrainian statistics available from the WEF (2018, 2020). At the same time, to analyse the dynamics of gender equality – including the equality of economic opportunities – we use a graphical method that best illustrates the dynamics of gender gap index. We use the mapping tools of the Knoema Global Database (KNOEMA, 2019) to estimate changes in belonging to a particular group of countries by the differences in women's economic opportunities, but also changes in this index. MS Excel functions were used for relevant graph-analytical studies.

Hypotheses H2 and H3 were tested on the basis of data collected by us in the course of a sociological survey of representatives of small and medium-sized businesses in one of the regional centers of Ukraine.

The sample included 526 respondents, including 170 business owners and 356 employees. The survey was conducted from June to September 2018. Standard sampling error does not exceed 3.5% for small and medium-sized enterprises owners and 2.6% for employees, with a 95.4% confidence level.

Manifestations of gender discrimination are identified by the general subjective assessment of its existence in enterprises – according to employee estimates – but also in the assessments of inequality of access to the components of compensation and benefits identified earlier in the Literature Review.

The study of gender discrimination impact on the formation of motives for dismissal, according to employees, was conducted in groups of enterprises formed for the following characteristics: enterprises with gender and age discrimination; enterprises with no discrimination. Age discrimination was further explored in the light of respondents' assessment that it often complements gender discrimination.

The data processed by graph-analytical method allowed us to identify main features of gender discrimination, analyse the links between discrimination and the availability of individual components of compensation and benefits, but also the differentiation of wages according to gender and age equality in enterprises.

RESULTS AND DISCUSSION

To test the H1 hypothesis, we use the Global Gender Gap Index, which assesses gender gaps in terms of health and longevity, educational attainment, political rights and opportunities, career growth, and economic life.

At present, no country overcame gender inequality. In 2019, the global gender gap is at 68.6%, which means that there is still 31.4% needed to achieve the full equality of women and men. However, there are five countries that show a gender gap of less than 20%: Iceland, Norway, Finland, Sweden, and Nicaragua. Three more EU countries – Ireland, Spain, Germany – rank among the ten countries with the smallest gender gap. At the same time, Ukraine ranks 59th out of 153 countries, improving its position compared to the previous year by six points, and increasing the gender parity indicator from 0.708 to 0.721 (Figure 1). Hence, to achieve 100% gender equality, Ukraine lacks 27.9%, while the world leader (Iceland) – 12.3% and the EU leader (Finland) – 16.8%.

Thus, the above partially confirms our hypothesis that gender equality in Ukraine – at least according to monitoring data – shows a level close to European values. No one value about Ukraine is worse when compared to those obtained in European countries.

However, the dimension in which the gender gap globally has the largest spread is the one measured by the Economic Participation and Opportunity subindex. Here, only 58% of the gap has been closed so far, and it slightly widened since last year. The dispersion between the best performing countries and those at the bottom of the ranking is substantial. While the top 10 countries have closed at least 80% of the gap, the bottom 10 countries have only closed 40% of the gap between men and women in the workplace (WEF, 2020, p.10).

In 2018, among the 10 best performers in this subindex, there appeared only two from the EU: Sweden and Latvia, and in 2019 only Latvia (Figure 2). The largest gender gap for Economic Participation and Opportunity subindex among EU countries is observed in Italy, although it diminished by 0.3% in one year. In Ukraine the gender gap is much smaller than the Global Gender Gap Index overall, and the 2018 ranking is much better than in Italy: 28th place against 118th. However, the dynamics in Ukraine is followed by a negative trend: in one year the gap increased by 1 % and the country lost 11 points in the rating.
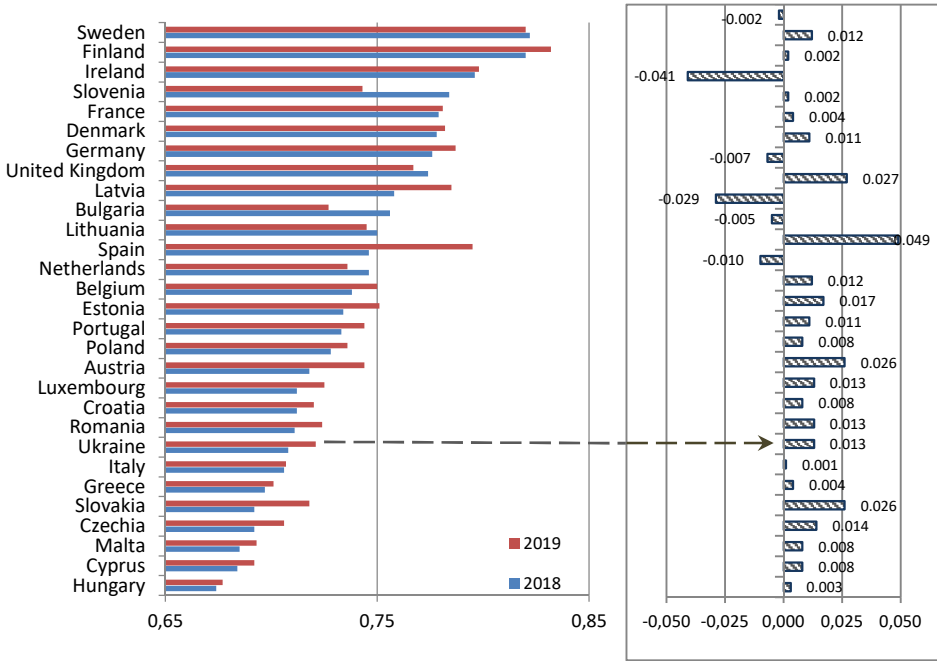
Sweden
Finland
Ireland
Slovenia
France
Denmark
Germany
United Kingdom
Latvia
Bulgaria
Lithuania
Spain
Netherlands
Belgium
Estonia
Portugal
Poland
Austria
Luxembourg
Croatia
Romania
Ukraine
Italy
Greece
Slovakia
Czechia
Malta
Cyprus
Hungary

■ 2019
■ 2018

0,65   0,75   0,85

-0.050 -0.025 0,000 0,025 0,050

-0.002
0.012
0.002
-0.041
0.002
0.004
0.011
-0.007
0.027
-0.029
-0.005
0.049
-0.010
0.012
0.017
0.011
0.008
0.026
0.013
0.008
0.013
0.013
0.001
0.004
0.026
0.014
0.008
0.008
0.003

**Figure 1. Global Gender Gap Index, 2018-2019 (including changes
of index value in 2019 compare to 2018)**
Source: own elaboration based on WEF (2018, 2020).

Thus, the above comparisons reveal that gender discrimination in Ukraine – which shares European values and has repeatedly confirmed its European integration intentions – lies within the EU's typical borders. At the same time, Ukraine has significant reserves compared to EU leaders in minimising the gender gap, including equal economic opportunities of women.

EU leaders' identification and involvement in combating discrimination is as an important area not only at the level of the state monitoring of human rights respect. More and more companies use gender equality assessments in their own corporate policies. For example, one of the world-wide examples of micro-level gender equality assessments is the Bloomberg Gender Equality Index. In particular, in 2019 this index was calculated according to the data of 230 international companies. 60% of these companies conduct regular internal reviews on gender-based pay issues; 91% of companies that identified any wage gap made efforts to correct this injustice (Bloomberg, 2019). Hence, the results of these reviews are used to make adjustments to corporate policies so as to achieve gender equality.

As for Ukraine, in 2019, the Ukrainian Marketing Group conducted an online survey of Ukrainian companies' staff (1000 respondents) to identify the most pressing gender issues that Ukrainian private sector employees may face. The survey found that 70% of the interviewees did not have any prejudice against their professional colleagues because of their gender. Among those who mentioned such cases, they were most often confronted with lower wages (10%), doubts about professional skills (10%), rejections

of applications for employment (8%), and offensive and unacceptable statements and sexual jokes (8%). Career denials, reluctance to give serious/important assignments, psychological pressure, and even unacceptable sexual acts were also reported (UNFPA Ukraine, 2019). As we can see, such results generally confirm the previously revealed level of gender discrimination in economic opportunities: estimates of gender inequality actually coincide with those shown in Figure 2.
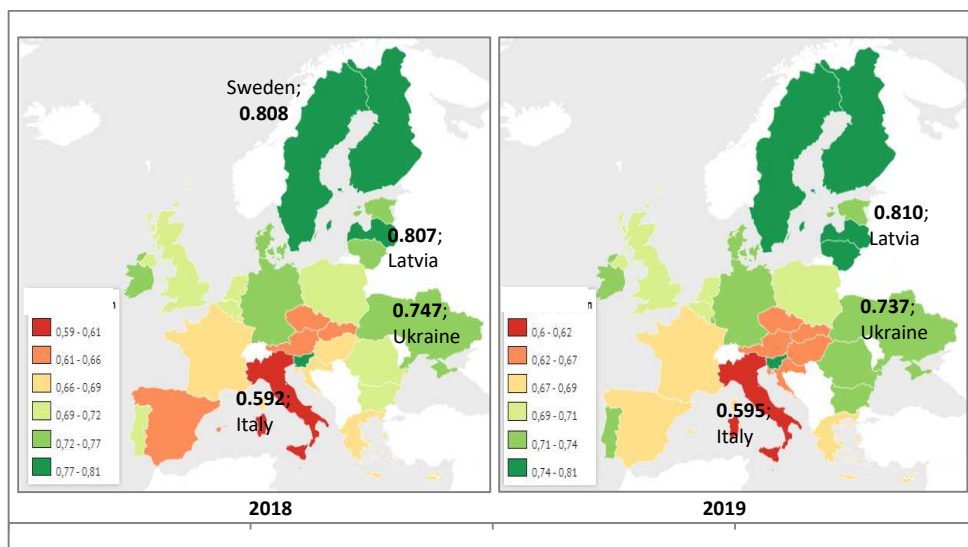

Figure 2. Economic Participation and Opportunity index, 2018-2019
Source: own elaboration based on WEF (2018; 2020) and KNOEMA (2019).

The H2 hypothesis was tested using the data from own survey of owners and employees of small and medium-sized enterprises in Ukraine. The structure of respondents was as follows: 64% women, 36% men; 54% under 35-years-old, 37% 35-50-years-old; 51% of workers, 42% professionals/employees, and only 7% managers.

The survey revealed that gender discrimination is most often accompanied by age discrimination. 15% of respondents said that they faced discrimination on the basis of gender and age in their work activities. At the same time, women most often face gender discrimination under the age of 35 (57%) when working in specialist positions at enterprises with 50-250 employees. At the same time, manifestations of age discrimination were revealed mainly by workers and specialists under the age of 35 (65.9%) who work at enterprises employing 11-50 people. A detailed breakdown of respondents by discrimination is given in Table 1.

An analysis of respondents' answers showed that the discrimination they faced was reflected in the level of wages (34%), career opportunities (27%), and working conditions, including working hours (29%). Noteworthy, the issue of gender differentiation in wages is also relevant for EU countries, where the wage gap between women and men averages 16.1% (Eurostat, 2019). However, our survey showed that the capacities for employees of small and medium-sized enterprises in Ukraine are much higher.

Table 1. Discrimination within different categories of staff in small and medium-sized enterprises

Type of discrim-ination	Sex	%	Age (in %)			Staff category (in %)			Number of employees (in %)			
			<35	35-50	>50	worker	specialist	manager	<5	6-10	11-50	51-250
Gender	women	71.4	57.1	7.1	7.1	28.6	35.7	7.1	7.1	7.1	14.3	42.9
	men	28.6	28.6	0.0	0.0	21.4	0.0	7.1	0.0	7.1	14.3	7.1
	all	100.0	85.7	7.1	7.1	50.0	35.7	14.3	7.1	14.3	28.6	50.0
Age	women	56.1	39.0	14.6	2.4	29.3	22.0	4.9	9.8	9.8	22.0	12.2
	men	43.9	26.8	17.1	0.0	24.4	12.2	7.3	0.0	12.2	22.0	9.8
	all	100.0	65.9	31.7	2.4	53.7	34.1	12.2	9.8	22.0	43.9	22.0
No dis-crimina-tion	women	64.7	38.3	20.0	6.4	31.5	29.5	3.7	20.7	9.2	15.9	18.0
	men	35.3	15.3	17.3	2.7	20.0	12.2	3.1	3.7	8.8	8.1	14.2
	all	100.0	53.6	37.3	9.2	51.5	41.7	6.8	24.4	18.0	24.1	32.2

Source: own study.

In the course of the study, we also found links between discrimination and wage differentiation in enterprises: the higher the age and gender discrimination, the smaller the wage gap (Figure 3). This indicates that in enterprises with gender and age discrimination the chances for employees to assume higher-level positions with higher wages are much lower than in non-discrimination enterprises. Successful businesses with lower levels of age and gender discrimination experience a much larger wage gap, but this is offset by the real ability of each employee to have a successful career, accompanied by higher wages.
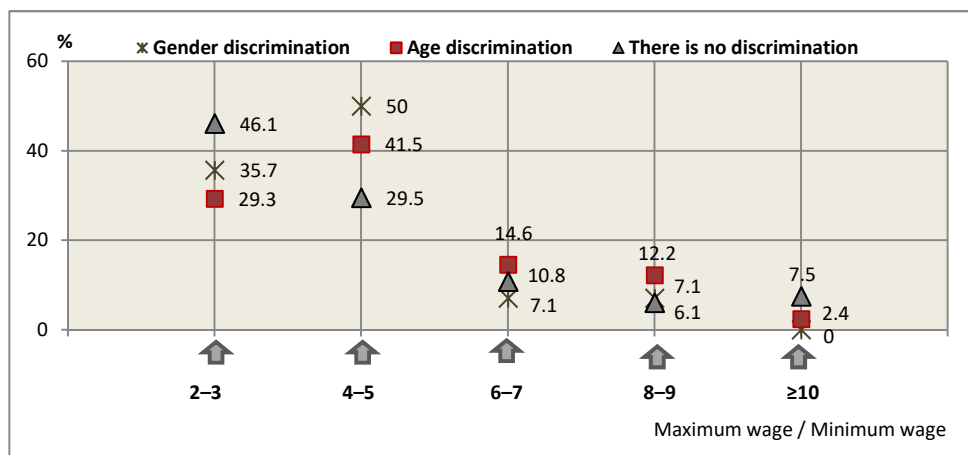
Figure 3. The allocation of employees by differentiation of wages in enterprises with different discrimination policies
Source: own elaboration.

However, given that wages are only one of the components of enterprise compensation policy, we examined gender discrimination and other components of compensation and benefits typical of HR practices in Ukrainian businesses.

The results of the study indicated that compensation and benefits are generally distributed in enterprises where there is no discrimination. This is most relevant for such components as "providing full meals" and "paying for long-term tuition" (Figure 4). At the same time, other compensations and benefits are present in all enterprises, although they are most prevalent where there is no discrimination.
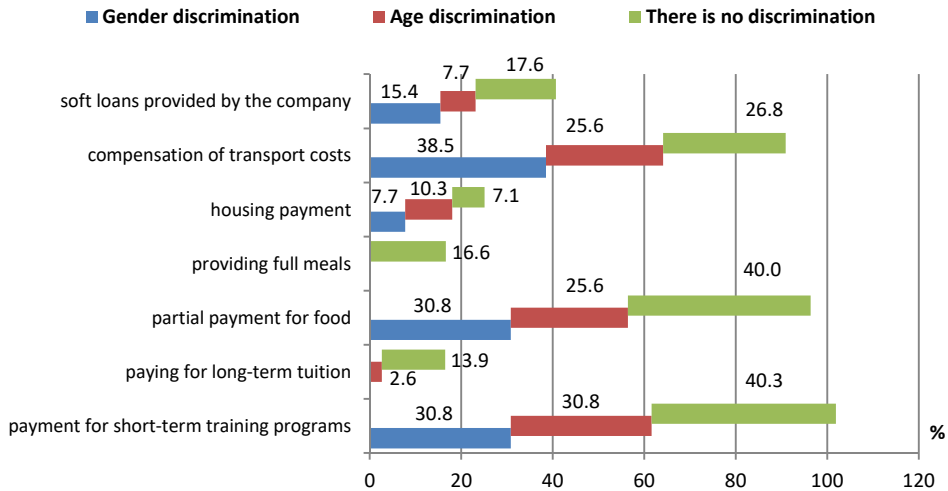

**Figure 4. The availability of components of compensation and benefits
in enterprises with different discrimination policies**
Source: own elaboration.

Therefore, testing the H2 hypothesis allowed us to confirm the assumption that, in companies with gender equality, the components of compensation policy are more accessible and include both compensation and additional benefits for employees. On the other hand, according to a number of compensation payments (compensation for transport costs, payment for meals and short-term training programs), the estimates of the availability of such programs are either close to those expressed in enterprises with no discrimination, or even higher (transport costs). Such results, together with the manifestations of discrimination against women at these enterprises, are attributed to the fact that these compensations are more accessible to men.

As part of the test of H3 hypothesis, we can confirm that insufficient protection of equality of rights at enterprises becomes the basis for the formation of negative motives for employees. Thus, in enterprises with gender discrimination, the potential level of turnover is 71%, which is twice as much as the analogous indicator of enterprises with equal rights (29%), as well as enterprises with age discrimination (39%).

Thus, even with the possible subjective exaggeration of dissatisfaction in respondents' estimates, the risk of significant economic losses to employers as a result of redundancies due to violation of labour rights is obvious. At the same time, as shown in Table 2, business owners are not even aware of the depth of the problem, including the impact that discrimination may have on the stability of their activity and economic success.

Therefore, enterprises face the need to modify their personnel policies, taking into account measures to ensure gender equality.

Table 2. Current and potential indicators of staff turnover in enterprises with different discrimination policies

Presence of discrimination in enterprises	Actual staff turnover, % (estimate of business owner)	Potential staff turnover, % (estimate of employees)
Gender discrimination	35	71
Age discrimination	27	39
There is no discrimination	25	29

Source: own study.

CONCLUSIONS

Ensuring gender equality is a difficult task for even the most developed countries of the world, as none of them has achieved full equality of sex, including in respect of labour rights. As our study shows, significant progress has been made in this area in Ukraine, as in general, gender gap and the economic equality of women keep within the EU-specific range of values.

However, by examining two other hypotheses at the level of small and medium-sized enterprises in which labour rights violations are less monitored, we find that discrimination against women is still high enough in such enterprises, comprising at least 15%, which mostly agrees with the WEF Global Report for Ukraine. Nevertheless, in some age groups the discrimination situation is very tense: mostly for young women under the age of 35, who do not belong to a managerial level.

The most important manifestations of discrimination are inequality in pay, working hours, and career advancement. In terms of the availability of compensation and benefits, it is higher in non-gender-sensitive enterprises, as expected. Instead, in companies with explicit gender discrimination, men are more likely to benefit from compensation such as transportation costs, meals, and short-term training programs. Combining this with the previously identified signs of discrimination against non-managerial female workers and professionals, we can establish interdependence of gender discrimination and the use of job opportunities. In such a way, managerial employees are provided with greater accessibility to compensation and benefits packages.

By testing the hypothesis of a link between gender discrimination and potential fluidity, we confirm that the insufficient assurance of equal rights in enterprises becomes the basis for the formation of negative employee motivation. Thus, dissatisfaction with the existing level of gender rights emerges from the fact that in enterprises characterised by discrimination, the potential staff turnover surpasses 70% and in fact exceeds twice the same indicator for enterprises with no discrimination. Such results threaten not only social but also economic losses for businesses. Indeed, as one international study found, the implementation of the principle of gender equality and non-discrimination leads to increased productivity and efficiency of organizational and managerial processes, hence the profitability of companies. For example, a report by Diversity Matters (McKinsey, 2015) found that gender diversity companies are 15 % more likely to have financial returns above their respective national industry medians.

Thus, gender issues and gender non-discrimination standards should attract the attention of Ukrainian companies, as compliance with relevant development norms and priorities can deliver tangible economic results. Gender benchmarks for socially responsible companies are defined by a number of different international and national commitments that Ukraine has undertaken. At the same time, we clearly see the need for the development of social responsibility of business owners, along with the activation of trade union movement. First and foremost, the development of social dialogue must concern the consolidation of equal treatment norms in the work process, the formulation of compensation and benefits policies, and the definition of non-discriminatory principles for their implementation. Enshrined in the form of social and employment agreements at various levels, such arrangements will allow these elements to be used as a tool for monitoring and regulating stakeholder relations.

At the same time, the scientific and practical principles of social dialogue development, the search and implementation of effective mechanisms for its activation in Ukraine, and most importantly, compliance with the commitments, count among the topics for future scientific research.

REFERENCES

Akimov, O., Karpa, M., Parkhomenko-Kutsevil, O., Kupriichuk, V., & Omarov, A. (2020). Entrepreneurship education of the formation of the e-commerce managers professional qualities. *Journal of Entrepreneurship Education*, *23*(S1).

Al Mamun, C.A., & Hasan, M.N. (2017). Factors affecting employee turnover and sound retention strategies in business organization: a conceptual view. *Problems and Perspectives in Management*, *15*(1), 63-71.

Al-Tkhayneh, K., Kot, S., & Shestak, V. (2019). Motivation and demotivation factors affecting productivity in public sector. *Administratie si Management Public*, *33*, 77-102.

Babikova, K., & Bucek, J. (2019). A Model Replication with an Extension of Students' Perception of Prospective Employer Attractiveness. *Journal of Competitiveness*, *11*(2), 5-21.

Barrick, M.R., Thurgood, G.R., Smith, T.A., & Courtright, S.H. (2015). Collective organizational engagement: Linking motivational antecedents, strategic implementation, and firm performance. *Academy of Management Journal*, *58*(1), 111-135.

Beham, B., Drobnič, S., Präg, P., Baierl, A., & Eckner, J. (2019). Part-time work and gender inequality in Europe: a comparative analysis of satisfaction with work-life balance. *European Societies*, *21*(3), 378-402.

Bilan, Y., Mishchuk, H., & Dzhyhar, T. (2017). Human capital factors and remuneration: analysis of relations, modelling of influence. *Business: Theory and Practice*, *18*, 208-214. https://doi.org/10.3846/btp.2017.022

Bilan, Y., Mishchuk, H., Samoliuk, N., & Yurchyk, H. (2020). Impact of Income Distribution on Social and Economic Well-Being of the State. *Sustainability*, *12(1)*, 429. https://doi.org/10.3390/su12010429

Blackburn, R.M., Jarman, J., & Racko, G. (2016). Understanding gender inequality in employment and retirement. *Contemporary Social Science*, *11*(2-3), 238-252.

Bloomberg (2019). Bloomberg Gender-Equality Index Doubles in Size, Recognizing 230 Companies Committed to Advancing Women in the Workplace. Retrieved from https://www.blooberg.com/company/press/2019-bloomberg-gender-equality-index/ on May 2, 2020.

Byars, L.L., & Rue, L.W. (2006). *Human resource management* (8th ed.). Boston: McGrawHill Irwin.

Chaikovska, I., Fasolko, T., Vaganova, L., & Barabash, O. (2017). Economic-mathematical tools for building up a project team in the system of company's knowledge management. *Eastern-European Journal of Enterprise Technologies*, *3*(3-87), 29-37. https://doi.org/10.15587/1729-4061.2017.103185

Davis, L.S., & Williamson, C.R. (2019). Does individualism promote gender equality? *World Development*, *123*, 104627.

Dhar, R., Prakash, V., & Singh, B. (2018). Gender Inequality: A Comparison of India and USA. In *Reflecting on India's Development* (pp. 251-269). Singapore: Springer.

EIGE. (European Institute for Gender Equality). 2017. *Economic Benefits of Gender Equality in the European Union* (Report on the Empirical Application of the Model). Luxembourg: Publications Office of the European Union, 152.

Espi, G., Francis, D., & Valodia, I. (2019). Gender inequality in the South African labour market: Insights from the Employment Equity Act data. *Agenda*, 1-18.

European Commission (2020). A Union of Equality: Gender Equality Strategy 2020-2025. Brussels, 5.3.2020.

Eurostat (2019). Statistics Explained, Employment statistics. Retrieved from https://ec.europa.eu/eurostat/ on May 3, 2020.

Fu, R., & Zhu, M. (2017). Study on the Human Resource Management System in Innovative Enterprises *(2nd International Conference on Politics, Economics and Law (ICPEL 2017)*. Atlantis Press.

Gradín, C., & Tarp, F. (2019). Gender inequality in employment in Mozambique. *South African Journal of Economics*, *87*(2), 180-199.

He, G., & Wu, X. (2017). Marketization, occupational segregation, and gender earnings inequality in urban China. *Social Science Research*, *65*, 96-111.

Hoang, H.T., & Huynh, L.T. (2020). Impact of Firm's Characteristics on Gender Discrimination: Evidence from Vietnamese Firm-level Data. *Montenegrin Journal of Economics*, *16*(1), 21-35.

ILO (2017). International Labour Organization: Economic impacts of reducing the gender gap. *Research Brief N°10.* Retrieved from http://www.ilo.org/wcmsp5/groups/public/---dgreports/---inst/documents/publication/wcms_577685.pdf on April 26, 2020.

Jaworski, C., Ravichandran, S., Karpinski, A.C., & Singh, S. (2018). The effects of training satisfaction, employee benefits, and incentives on part-time employees' commitment. *International Journal of Hospitality Management*, *74*, 1-12.

Klasen, S., & Minasyan, A. (2017). Gender inequality and growth in Europe. *Intereconomics*, *52*(1), 17-23.

Knies, E., Leisink, P., & Van De Schoot, R. (2020). People management: developing and testing a measurement scale. *The International Journal of Human Resource Management*, *31*(6), 705-737.

KNOEMA (2019). World Data Atlas. Ukraine - Global gender gap index. Retrieved from https://knoema.com/atlas/Ukraine/topics/World-Rankings/World-Rankings/Global-gender-gap-index on May 3, 2020.

Kokocinska, M., & Puziak, M. (2018). Regional Income Differences and their Evolution after EU Accession. The Evidence from Visegrad Countries. Journal of Competitiveness, 10(4), 85-101.

Laundon, M., Cathcart, A., & McDonald, P. (2019). Just benefits? Employee benefits and organisational justice. *Employee Relations*, *41*(4), 708-723. https://doi.org/10.1108/ER-11-2017-0285

Mabaso, C.M., & Dlamini, B.I. (2017). Impact of compensation and benefits on job satisfaction. *Research Journal of Business Management*, *11*(2), 80-90.

Maloa, F., &Bussin, M. (2016). Determinants of executive compensation in South African state-owned enterprises. *South African Journal of Labour Relations*, *40*(1), 8-24.

McKinsey (2015) Why diversity matters. Retrieved from https://www.mckinsey.com/business-func-tions/organization/our-insights/why-diversity-matters on April 20, 2020.

Mishchuk, H., Samoliuk, N., & Bilan, Y. (2019). Measuring social justice in the light of effectiveness of public distributive policy. *Administration & Public Management Review*, (32). 63-76. https://doi.org/10.24818/amp/2019.32-05

Novikova, O., & Shamileva, L. (2020). Evaluation of social and economic insecurity risks for employ-ees during structural transformations in the modern labor market. *Social and Labour Relations: Theory and Practice*, *10*(1), 1-10.

Patiar, A., & Wang, Y. (2020). Managers' leadership, compensation and benefits, and departments' performance: Evidence from upscale hotels in Australia. *Journal of Hospitality and Tourism Management*, *42*, 29-39.

Plăiaş, I., Pop, C.M., Băbuţ, R., & Dabija, D.C. (2011). Employers' Perception of Competences acquired through Academic Marketing Training. *Amfiteatru Economic*, *13*(30), 448-463.

PwC (2017). Women in Work Index 2017. Retrieved from https://www.pwc.co.uk/services/economics-policy/insights/women-in-work-index.html#content-free-1-fadd on April 25, 2020.

Rasool, S.F., Samma, M., Wang, M., Zhao, Y., & Zhang, Y. (2019). How Human Resource Management Practices Translate Into Sustainable Organizational Performance: The Mediating Role Of Product, Process And Knowledge Innovation. *Psychology Research and Behavior Management*, *12*, 1009.

Šabić-Lipovača, A., Striełkowski, W., & Bilan, Y., 2016. Intertemporal Substitution and Labour Supply of Bosnian SME's. *Amfiteatru Economic*, *18*(43), 634-653.

Stacho, Z., Stachová, K., & Raišienė, A.G. (2019). Change in approach to employee development in organizations on a regional scale. *Journal of international Studies*, *12*(2), 299-308.

Stewart, G.L., & Brown, K.G. (2019). *Human Resource Management*. John Wiley & Sons.

Sułkowski, Ł., Bogacz-Wojtanowska, E., Wrona, S., Jędrzejczyk-Kozioł, A., Góral, E., & Wojdyła, K. (2019). Unsustainable power distribution? Women Leaders in Polish Academia. *Economics and Sociology*, *12*(3), 162-180. https://doi.org/10.14254/2071-789X.2019/12-3/11

Thibault Landry, A., Schweyer, A., & Whillans, A. (2017). Winning the war for talent: Modern moti-vational methods for attracting and retaining employees. *Compensation & Benefits Review*, *49*(4), 230-246.

Turner, P. (2020). Why Is Employee Engagement Important? In *Employee Engagement in Contempo-rary Organizations* (pp. 57-84). Cham: Palgrave Macmillan.

UNDP. Sustainable Development Goals. Retrieved from http://www.undp.org/content/undp/en/home/sustainable-development-goals.html on April 28, 2020.

UNFPA Ukraine (2019). Gender Equality and Response to Domestic Violence in the Private Sector of Ukraine: Call for Action. Retrieved from https://ukraine.unfpa.org/en/BADV2019eng on April 25, 2020.

WEF (2018). Global Gender Gap Report 2018. Retrieved from https://www.weforum.org/re-ports/the-global-gender-gap-report-2018 on May 2, 2020.

WEF (2020). Global Gender Gap Report 2020. Retrieved from https://www.weforum.org/re-ports/gender-gap-2020-report-100-years-pay-equality on May 3, 2020.

Yu, S., Liu, C.E., & Ren, H.Y.X.Y.J. (2019). Work-Related Identity Discrepancy and Employee Turnover Intention: The Mediation Effect of Job Satisfaction. *International Journal of Business and Social Science*, *10*(11).

Zeb, A., Sultan, F., Hussain, K., Javaid, M., Abbas, Z., & Imran, M. (2018). The influence of compensa-tion and benefits and employees' involvement on employees' outcomes-evidence from PTCL. *International Journal of Research and Review*, *5*(11), 98-103.

Authors

Contribution share of authors is equal and amounted to 25% for each of them.

Yuriy Bilan
Associate professor, Alexander Dubcek University Trenčín, Slovakia; Al-Farabi Kazakh National University, Republic of Kazakhstan. His research interests include migration and labour market, sustainable development, energy and society.
Correspondence to: Prof. Yuriy Bilan, Dr hab., Rzeszów University of Technology, Faculty of Management, al. Powstańców Warszawy 12, 35-959 Rzeszów, Poland, e-mail: yuriy_bilan@yahoo.co.uk
ORCID http://orcid.org/0000-0003-0268-009X

Halyna Mishchuk
ScD. in Economics and Professor of Labour Resources and Entrepreneurship Department, National University of Water and Environmental Engineering (Ukraine). Her research interests include well-being, factors of migration and job satisfaction, social and economic equality.
Correspondence to: : Prof. Halyna Mishchuk, ScD, National University of Water and Environmental Engineering, Faculty of Economics and Management, Soborna str. 11, 33028 Rivne, Ukraine, e-mail: h.y.mischuk@nuwm.edu.ua
ORCID http://orcid.org/0000-0003-4520-3189

Natalia Samoliuk
PhD. in Economics and Associate Professor of Labour Resources and Entrepreneurship Department, National University of Water and Environmental Engineering (Ukraine). Her research interests include distributive justice, social dialogue and entrepreneurship.
Correspondence to: Prof. Natalia Samoliuk, PhD, National University of Water and Environmental Engineering, Faculty of Economics and Management, Soborna str. 11, 33028 Rivne, Ukraine, e-mail: n.m.samoliuk@nuwm.edu.ua
ORCID http://orcid.org/0000-0001-8693-8558

Viktoriia Mishchuk
Junior Research Fellow in the project "Formation of a comfortable environment for living and working for the achievement of social security in a transboundary space" funded by Ministry of Education and Science of Ukraine (state registration No. 0119U000080), National University of Water and Environmental Engineering (Ukraine). Her research interests include behavioural economics, personal skills, and competencies development.
Correspondence to: Viktoriia Mishchuk, National University of Water and Environmental Engineering, Soborna str. 11, 33028 Rivne, Ukraine, e-mail: mishchuk_em19@nuwm.edu.ua
ORCID https://orcid.org/0000-0003-3626-5652

Foreign capital impact on insurance market development in EU-15 countries

Sławomir I. Bukowski, Marzanna Lament

A B S T R A C T
Objective: The objective of the article is to investigate how foreign capital influenced the development of insurance markets in EU-15 countries.
Research Design & Methods: A critical review of literature is undertaken, contents of factors which influence development of insurance markets are analysed, and econometric methods are applied. A panel model is constructed and results of its estimation are analysed.
Findings: Insurance markets in particular countries develop under the influence of many factors. The share of foreign insurance companies is treated as a structural factor. There is previous research into this subject was conducted, whose results do not confirm a clear impact of foreign capital on the insurance market's development. The study indicates that the development of insurance markets – measured with the penetration rate and with the ratio of insurance density – is affected by shares of foreign capital in life insurance companies.
Implications & Recommendations: To verify the hypothesis concerning the impact of foreign capital on the development of insurance markets, scholarship requires further studies of another group of countries (insurance markets).
Contribution & Value Added: This study will contribute to the development of theories concerning factors of the development of insurance markets.
Article type: research article
Keywords: international finance; insurance market; insurance companies; foreign capital; panel data model; random estimation
JEL codes: F3, F4, G2, O04
Received: 31 July 2019   Revised: 27 June 2020   Accepted: 29 June 2020

INTRODUCTION

The development of insurance markets and its determinants must be considered important for a number of reasons. First, insurance companies and banks are major financial market players in both their numbers and assets. Second, the share of insurance in Gross Domestic Product (GDP) is considerable, in excess of 10% in developed economies. Third, the development of insurance markets affects economic growth and development, chiefly by compensating for effects of random losses, but also through its benefits to businesses and entire national economies. Insurance companies have large cash inflows and reserves, which may be partly invested in less liquid instruments like bonds and equity. In this context, the development of insurance services plays an important role in financial markets' development through risk management, savings allocation, and market growth. Insurance markets of individual countries develop under the influence of various factors, which are divided into economic, demographic, social, and cultural. Scholars treat the share of foreign insurance companies as one of structural factors. Research into this subject was conducted, among others, by Outreville (1990, pp. 487-498; 1996, pp. 263-278), Moshirian (1997, pp. 159-173; 1999, pp. 34-49), Li *et al.* (2007, pp. 637-652), Dickinson (2000, pp. 10-18), Ma and Pope (2003, pp. 235-248), Carson *et al.* (2014, pp. 1-15), Bukowski and Lament (2019, pp. 33-45). They do not confirm the unambiguous influence of foreign capital on the development of insurance markets. The effect commonly appears only in life insurance companies, e.g. Outreville (1990, pp. 487-498; 1996, pp. 263-278) and Carson *et al.* (2014, pp. 1-15).

The analysis of dependencies between foreign capital and development of the insurance market in EU-15 countries is the prime objective of research presented in this paper. This required us to find answers to the following research questions:

− What factors determine the development of insurance markets?
− Does foreign capital influence the development of insurance markets?

In search of answers and in order to verify the research hypothesis, we will undertake a critical review of literature, analyse contents of factors that influence the development of insurance markets, and employ econometric methods. Next, we will construct a panel model and analyse results of its estimation. The share of foreign capital is treated as one of independent variables that influence the development of the insurance markets measured with insurance penetration rate and with the ratio of insurance density. Moreover, the following factors are assumed to affect the development of insurance markets (explanatory variables): market size (measured with the number of insurance companies) and structure (measured with the share of life insurance companies in the total number of insurance companies).

We will use annual data concerning insurance markets of EU-15 countries from 1999-2016 provided by the OECD.

This study will contribute to the development of theories concerning factors of the development of insurance markets.

The remainder of this study is structured as follows: first part of the article presents a review of specialist literature, second part describes the material and methods, third part reports on empirical findings, and fourth part discusses the findings.

LITERATURE REVIEW

Development is a process of transformations or changes in a variety of areas that involve shifts towards conditions or forms that are more complex or in some respects more perfect. Its general objective may comprise qualitative and quantitative changes. As far as the insurance market is concerned, it may denote more transactions or revenue (quantitative changes) and efficiency enhanced by way of improvements to the market, insurers, and their insurance products (qualitative changes). Therefore, it is a complex and multi-dimensional process, which should lead to long-term economic and socio-economic growth (e.g. Owsiak, 2002, pp. 34-45; Pelegrin *et al.*, 2002, pp. 4-13; Levin, 1997, pp. 688-726). Insurance markets of individual countries develop under the influence of diverse factors. Authors commonly indicate three factor classes that affect the insurance market: economic (GDP, employment, inflation, etc.), demographic (age, gender, education, etc.), and social (aversion to risk, education, religion, etc.). This is corroborated by Sen and Madheswaran (2013, pp. 86-103), Sen (2007, pp. 3-8), Hwang and Greenford (2005, pp. 103-125), Zietz (2003, pp. 159-191), and Beck and Webb (2003, pp. 51-88), among others.

The economic development of a country is among the crucial factors that affect the development of insurance markets. It provides for adequate economic and financial levels, including standards of living. Adequate living standards contribute to greater levels of wealth, education, and demand for insurance, since financial resources accumulate which, in turn, translates into the economic growth of a country. According to the European Bank for Reconstruction and Development (EBRD) Transition Report 2018-19 (EBRD, 2019, p. 96) growth was broadly based in that period, with support provided by stronger investment activity and increases in exports. In the longer term, growth trajectories of countries in the EBRD regions are – to a large extent – shaped by those countries' demographic profiles. Some EBRD regions have similar rates of real output growth, despite considerably differing in terms of growth in per capita income and underlying growth in output per worker.

Kurylo *et al.* (2017, pp. 12-28) believe the development of insurance markets is driven by: improved competition, capitalisation, and concentration of insurers' funds; the emergence, introduction, and propagation of new, innovative types of insurance and reinsurance; the application of innovative technologies, mergers of insurance, banking, and financial capitals; and the adjustment of national insurance markets to established principles of international trade. Factors associated with the behaviour of insurance company customers are also important, primarily evolving approaches to the need for insurance protection, as affirmed by Wieczorek-Kosmala (2016, pp. 109-125). Burić *et al.* (2017, pp. 24-32) claim it is necessary to educate the public, develop insurance culture, and encourage a sense of individual responsibility for financial, personal, and family security by various forms of saving, including life insurance policies.

The development of insurance is also seen as part of a broader economic category of financial development, one of structural factors. This factor fosters the development of insurance with regard to both supply and demand (Bednarczyk, 2012, p. 101). This positive relationship between insurance consumption and the size of a financial sector is confirmed by Outreville (1990, pp. 487-498; 1996, pp. 263-278), Ward and Zurbruegg (2000, pp. 489-506), Beck and Webb (2003, pp. 51-88), Arena (2008, pp. 921-946), among others. Structural factors of insurance market development also comprise market monopolisation, the

presence of foreign firms, market concentration, the degree of market openness, the stand-ard of social security, legal system, the enforcement of property rights, and political risk. The involvement of foreign insurers is regarded as another structural factor. This field was studied by Outreville (1990, pp. 487-498; 1996, pp. 263-278), Moshirian (1997, pp. 159-173; 1999, pp. 34-49), Li *et al.* (2007, pp. 637-652), Dickinson (2000, pp. 10-18), Ma and Pope (2003, pp. 235-248), and Carson *et al.* (2014, pp. 1-15), among others. All of the above scholars fail to affirm the impact of foreign capital on the development of insurance markets. Foreign participation affects selected groups of markets, e.g. in developing countries, or segments of the insurance market, e. g. life insurance or property and liability insurance. This influence is most commonly noted only in life insurance companies, e.g. Outreville (1990, pp. 487-498; 1996, pp. 263-278) and Carson *et al.* (2014, pp. 1-15). However, according Bukowski and Lament (2019, pp. 33-45), Visegrad Group countries with higher foreign investment tend to have a higher insurance penetration in property and personal insurance companies.

Therefore, we formulate our research hypothesis:

H: The share of foreign capital in insurance sector is an important factor of insur-ance market development in EU-15 countries.

In statistical terms (e.g. GUS – Statistics Poland, PIU – Polish Insurance Association, KNF – Polish Financial Supervision Authority), the development of an insurance market is normally measured with values and growth dynamics of gross written premium and rates of insurance density (gross written premium/population) and penetration (gross written premium/GDP). This is reaffirmed by Browne and Kim (1993, pp. 616-634), Beck and Webb (2003, pp. 51-88), Zhang and Zhu (2005, pp. 1-14), Pye (2005, pp. 205-223), Li *et al.* (2007, pp. 637-652), Chui and Kwok (2008, pp. 88-101), Zheng *et al.* (2009, pp. 85-99), Cristian (2010, pp. 504-508), Han *et al.* (2010, pp. 183-199), Sankaramuthukumar and Alamelu (2012, pp. 27-47), Medveď and Kavčič (2012, pp. 105-120), Bednarczyk (2012, pp. 67-78), Brokešová and Vachálková (2016, pp. 63-72), Kurylo *et al.* (2017, pp. 12-28), Burić *et al.* (2017, pp. 24-32), and Bukowski and Lament (2019, pp. 33-45).

The analysis of these factors helps to identify the historical differences and cultural con-ditions that influence the development of insurance markets in particular countries. We should note prevailing legal and systemic solutions have a substantial impact on both the development of insurance markets and values of mentioned metrics; we mean here the ex-tent of compulsory insurance and its share in total written premium and national insurance systems that encourage resorting to personal life assurance, which protects against risks of sickness and old age. The penetration rate evaluates the relative significance of insurance sectors in national economies as they evolve. The penetration rate represents the weight of insurance sector in a country's economy. However, its sensitivity to GDP development is a weakness. This means the penetration rate may greatly vary following dramatic changes in GDP, even if an insurance market does not experience major shifts in the same period (Brokešová & Vachálková, 2016, pp. 66-68). The rate of insurance density reflects the popu-lation of a given country, a major determinant of demand for insurance products. Thus, it represents the real growth of insurance. Both these rates are essential to comparisons of insurance development among countries. The relationship between the development of in-surance markets and the economic development of countries is illustrated with Enz's 'S-curve' that represents the dependence between rates of insurance penetration and per cap-ita GNP (Enz 2000, pp. 396-406, Bednarczyk 2012, p. 115-126).

Levine (2004, pp. 15-18) argues financial systems in each country provide same functions, although sometimes in different ways. The quality with which individual systems fulfil these functions depends on the standard of a financial system's development, its effectiveness, and structure. In view of the foregoing, the development of insurance markets in particular countries varies depending on:

− the level of its development measured as numbers of insurance companies,
− the structure of an insurance market measured as share of life insurers and foreign capital,
− the effectiveness of an insurance market and its significance in a national economy, measured as rates of insurance density and penetration.

MATERIAL AND METHODS

We addressed the research problem of the relationship between the development of insurance markets and the share of foreign capital in equity of insurance companies. We studied a homogenous group of insurance markets, EU-15, regarded as high-income countries. The following measures of insurance market development (explained variables) are adopted:

− penetration rate (written premiums/GDP), which measures the total revenue of insurance companies and shows the importance of insurance in a national economy and indicates the development of insurance and demand for insurance products,
− the ratio of insurance density (written premiums per inhabitant), which reflects the population of a country, a major determinant of demand for insurance products.

The following (explanatory variables) are assumed to affect the development of insurance markets:

− market size, measured with numbers of insurance companies; the size of the insurance sector is significantly related to the level of development and the size of financial sector in specialist literature, e.g. Outreville (1990, pp. 487-498), Ward and Zurbruegg (2002, pp. 489-506), Li *et al.* (2007, pp. 637-652); it is hypothesised that market size has a positive impact on the development of insurance markets,
− the structure of an insurance market, measured with the share of life insurance companies in the total number of insurers; it is hypothesised that the larger the share of life insurance companies, the more positive impact on development of an insurance market; studies in this field were conducted by, among others, Haiss and Sümegi (2008, pp. 405-431) and Arena (2008, pp. 921-946),
− the share of foreign capital in the equity of insurance companies; it has been established for life and non-life insurance companies; it is hypothesised that foreign capital has positive impact on the development of insurance markets. Studies in this area were conducted by, e.g. Moshirian (1997, pp. 159-173, 1999, pp. 34-49), Dickinson (2000, pp. 10-18), Ma and Pope (2003, pp. 235-248), Carson *et al.* (2014, pp. 1-15), Bukowski and Lament (2019, pp. 33-45).

We used annual data concerning insurance markets of EU-15 countries from 1999-2016 published in the OECD's *Insurance Statistics Yearbook* and the OECD's *Business and Finance Outlook* (2008, 2011, 2015, 2016, and 2017). We built the following panel data models for the purpose of verifying our hypothesis:

Model 1: (1)

$$RP_{i,t} = a_{1i,t} + a_{2i,t}P_{i,t} + a_{3i,t}L_{i,t} + a_{4i,t}SI_{i,t} + a_{5i,t}Ni_{i,t} + u_{i,t}$$

Model 2: (2)

$$lnDI_{i,t} = a_{1i,t} + a_{2i,t}P_{i,t} + a_{3i,t}L_{i,t} + a_{4i,t}SI_{i,t} + a_{5i,t}Ni_{i,t} + u_{i,t}$$

where:

$RP_{i,t}$ - penetration rate (written premiums/GDP);

$DI_{i,t}$ - the ratio of insurance density (written premiums per inhabitant);

$P_{i,t}$ - the share of foreign property insurance companies in equity capital of all insurance companies;

$L_{i,t}$ - the share of foreign life insurance companies in the equity capital of all insurance companies;

$SI_{i,t}$ - the share of life insurance companies in the total number of insurance companies;

$Ni_{i,t}$ - the total number of insurance companies;

Ln - natural logarithm;

$u_{i,t}$ - random factor.

<div align="center">

RESULTS

</div>

Basic statistics concerning the variables studied are shown in Table 1.

Table 1. Basic statistics concerning the variables studied from EU-15 countries in 1999-2016

Specification	*RP*	*DI*	*P*	*L*	*SI*	*Ni*
Austria						
Average	0.053915	2374.462	0.392600	0.303185	0.378869	49.38462
Median	0.054000	2228.000	0.396500	0.322000	0.387400	52.00000
Minimum	0.047800	2061.000	0.352100	0.135200	0.324500	39.00000
Maximum	0.057600	2741.000	0.433900	0.393100	0.417300	54.00000
Belgium						
Average	0.081631	3390.385	0.024046	0.018231	0.646415	141.5385
Median	0.080000	3484.000	0.026300	0.017800	0.648100	148.0000
Minimum	0.063000	2612.000	0.007200	0.016800	0.543800	117.0000
Maximum	0.112600	4011.000	0.028700	0.019900	0.755500	171.0000
Denmark						
Average	0.094500	5224.615	0.207962	0.169369	0.689223	180.3846
Median	0.096000	5609.000	0.183400	0.185500	0.677100	184.0000
Minimum	0.070400	3174.000	0.144700	0.025000	0.584700	153.0000
Maximum	0.106000	6572.000	0.282600	0.204000	0.954100	202.0000
Finland						
Average	0.040392	1826.000	0.167485	0.376838	0.516054	91.76923
Median	0.037600	1739.000	0.238100	0.376300	0.505600	92.00000
Minimum	0.032800	1361.000	0.004700	0.343200	0.452600	48.00000
Maximum	0.051000	2546.000	0.250100	0.431100	0.595100	136.0000

Specification	RP	DI	P	L	SI	Ni
France						
Average	0.099677	4086.538	0.001669	0.032492	0.628723	375.0769
Median	0.095400	4172.000	0.001000	0.008900	0.624200	381.0000
Minimum	0.086000	3246.000	0.001000	0.004700	0.598100	301.0000
Maximum	0.124100	4785.000	0.003000	0.176500	0.667200	473.0000
Greece						
Average	0.021817	497.0000	0.282762	0.440354	0.465308	72.38462
Median	0.021800	511.0000	0.345000	0.538000	0.472100	58.00000
Minimum	0.020050	356.0000	0.045800	0.090000	0.414200	45.00000
Maximum	0.024000	616.0000	0.573100	0.769000	0.504500	113.0000
Spain						
Average	0.053300	1538.846	0.238031	0.144162	0.445862	281.0769
Median	0.054200	1518.000	0.222000	0.122700	0.441500	287.0000
Minimum	0.050100	1294.000	0.170000	0.037100	0.407700	231.0000
Maximum	0.056000	1801.000	0.338600	0.519100	0.476100	332.0000
Netherlands						
Average	0.069854	3225.231	0.197777	0.217677	0.502123	273.4615
Median	0.065000	3484.000	0.185600	0.225000	0.511200	282.0000
Minimum	0.047000	2170.000	0.116000	0.046000	0.435400	186.0000
Maximum	0.099000	3776.000	0.294000	0.293800	0.561500	368.0000
Ireland						
Average	0.193900	9960.692	0.141777	0.002146	0.650215	276.0000
Median	0.195200	9820.000	0.131600	0.002200	0.663700	266.0000
Minimum	0.164600	8127.000	0.073600	0.000400	0.491100	217.0000
Maximum	0.238600	11284.00	0.243000	0.002900	0.835900	355.0000
Luxemburg						
Average	0.373977	39246.92	0.548477	0.876992	0.917785	336.4615
Median	0.346700	36262.00	0.533000	0.951000	0.915200	343.0000
Minimum	0.274900	22130.00	0.378200	0.625600	0.893900	297.0000
Maximum	0.520000	57520.00	0.645000	0.972100	0.943100	368.0000
Germany						
Average	0.066085	2656.000	0.150177	0.236546	0.396146	487.3846
Median	0.065800	2588.000	0.145000	0.260000	0.379300	489.0000
Minimum	0.061200	2390.000	0.080000	0.106800	0.331400	364.0000
Maximum	0.073000	3129.000	0.195200	0.301000	0.479100	740.0000
Portugal						
Average	0.074692	1550.462	0.433046	0.205715	0.672315	77.92308
Median	0.078000	1565.000	0.323800	0.072400	0.674600	78.00000
Minimum	0.055900	1109.000	0.265000	0.058100	0.588400	70.00000
Maximum	0.089200	2086.000	0.909600	0.774600	0.746100	86.00000
Sweden						
Average	0.061631	2956.692	0.521546	0.162823	0.553300	212.5385
Median	0.059900	2793.000	0.519000	0.173000	0.522100	207.0000
Minimum	0.042000	2388.000	0.448400	0.048300	0.467100	192.0000
Maximum	0.083100	3960.000	0.638000	0.326800	0.749200	245.0000

Specification	RP	DI	P	L	SI	Ni
The United Kingdom						
Average	0.132108	5480.385	0.515462	0.297485	0.711385	488.5385
Median	0.129000	5255.000	0.531000	0.233000	0.732600	503.0000
Minimum	0.092100	3724.000	0.380900	0.160000	0.617900	328.0000
Maximum	0.191600	8967.000	0.580000	0.569600	0.760600	552.0000
Italy						
Average	0.130046	2512.923	0.302492	0.298700	0.686669	236.4615
Median	0.075000	2442.000	0.300000	0.301000	0.671100	241.0000
Minimum	0.060700	2212.000	0.259000	0.237500	0.591500	214.0000
Maximum	0.797000	3089.000	0.348400	0.376500	0.778200	247.0000

Source: own elaboration based on OECD data (OECD, 2008, 2011, 2015, 2016, 2017).

The models estimated by between groups fit are relatively good. In the case of Model 1, the coefficient of determination equals 0.8 and – in the case of Model 2-0.63. The results of models' estimation are presented in Table 2 and in Table 3 below.

Table 2. Model 1: between-groups, using observations 1-15; dependent variable: RP

Specification	Coefficient	Std. Error	t-ratio	p-value	
Const	-0.190735	0.0511440	-3.729	0.0039	***
P	-0.0188705	0.0846027	-0.2230	0.8280	
L	0.134637	0.0693916	1.940	0.0810	*
SI	0.399400	0.0887818	4.499	0.0011	***
Ni	0.000111798	7.16861e-05	1.560	0.1499	
Mean dependent var		0.099623	S.D. dependent var		0.078498
Sum squared reside		0.016864	S.E. of regression		0.041066
R-squared		0.804509	Adjusted R-squared		0.726313
F(4, 10)		10.28832	P-value(F)		0.001434
Log-likelihood		29.64544	Akaike criterion		-49.29088
Schwarz criterion		-45.75062	Hannan-Quinn		-49.32859

*** The variable is significant at the level of 0.01.
** The variable is significant at the level of 0.05.
* The variable is significant at the level of 0.1.
Source: own elaboration based on OECD data (OECD, 2008, 2011, 2015, 2016, 2017).

In the case of insurance market development measured with the ratio of insurance penetration (RP), only variables (SI) and (L) are statistically significant; that is, respectively, the share of life insurance companies in the total number of insurance companies and the share of foreign life insurance companies in equity capital of all insurance companies (see Table 2).

In respect of another measure of insurance market development – the ratio of insurance density (DI; written premium per inhabitant) – the share of life insurance companies in the total number of insurance companies (SI) is statistically significant (see Table 3). In order to strengthen the results of analysis, we also used estimation by means of Groupwise Weighted Least Square (WLS). The results of models' estimation are presented in Table 4 and in Table 5.

Table 3. Model 2: between-groups, using observations 1-15. Dependent variable: ln_DI

Specification	Coefficient	Std. Error	t-ratio	p-value	
Const	4.64979	0.834642	5.571	0.0002	***
P	-0.0393014	1.38067	-0.02847	0.9779	
L	0.424242	1.13243	0.3746	0.7158	
SI	4.54426	1.44887	3.136	0.0106	**
Ni	0.00199247	0.00116988	1.703	0.1194	
Mean dependent var		7.920729	S.D. dependent var		0.943714
Sum squared reside		4.491395	S.E. of regression		0.670179
R-squared		0.639777	Adjusted R-squared		0.495687
F(4, 10)		4.440137	P-value(F)		0.025468
Log-likelihood		-12.23993	Akaike criterion		34.47985
Schwarz criterion		38.02010	Hannan-Quinn		34.44214

*** The variable is significant at the level of 0.01.
** The variable is significant at the level of 0.05.
* The variable is significant at the level of 0.1.
Source: own elaboration based on OECD data (OECD, 2008, 2011, 2015, 2016, 2017).

Table 4. Model 1: WLS, using 270 observations; included 15 cross-sectional units; dependent variable: RP; weights based on per-unit error variances

Specification	Coefficient	Std. Error	t-ratio	p-value	
Const	-0.0892728	0.00884470	-10.09	<0.0001	***
P	-0.0157628	0.0118308	-1.332	0.1839	
L	0.0750934	0.0128528	5.843	<0.0001	***
SI	0.241384	0.0130603	18.48	<0.0001	***
Ni	8.61991e-05	8.86194e-06	9.727	<0.0001	***
Statistics based on the weighted data:					
Sum squared resid		196.6321	S.E. of regression		0.861399
R-squared		0.583003	Adjusted R-squared		0.576709
F(4, 265)		92.62400	P-value(F)		3.64e-49
Log-likelihood		-340.3066	Akaike criterion		690.6132
Schwarz criterion		708.6053	Hannan-Quinn		697.8380
Statistics based on the original data:					
Mean dependent var		0.099623	S.D. dependent var		0.090432
Sum squared resid		1.147905	S.E. of regression		0.065816

*** The variable is significant at the level of 0.01.
** The variable is significant at the level of 0.05.
* The variable is significant at the level of 0.1.
Source: own elaboration based on OECD data (OECD, 2008, 2011, 2015, 2016, 2017).

The analysis of Tables 4 and 5 shows that the explanatory variables are statistically significant except for variable (*P*): the share of foreign property insurance companies in equity capital of all insurance companies.

Table 5. Model 2: WLS, using 270 observations; included 15 cross-sectional units; dependent variable: ln_DI; weights based on per-unit error variances

Specification	Coefficient	Std. Error	t-ratio	p-value	
const	5.52839	0.153973	35.90	<0.0001	***
P	0.113824	0.195021	0.5836	0.5600	
L	0.793680	0.190345	4.170	<0.0001	***
SI	3.27658	0.242244	13.53	<0.0001	***
Ni	0.00110849	0.000190156	5.829	<0.0001	***
Statistics based on the weighted data:					
Sum squared resid	254.7018	S.E. of regression		0.980377	
R-squared	0.503942	Adjusted R-squared		0.496454	
F(4, 265)	67.30285	P-value(F)		3.08e-39	
Log-likelihood	-375.2390	Akaike criterion		760.4781	
Schwarz criterion	778.4702	Hannan-Quinn		767.7029	
Statistics based on the original data:					
Mean dependent var	7.920729	S.D. dependent var		0.965187	
Sum squared resid	124.8640	S.E. of regression		0.686429	

*** The variable is significant at the level of 0.01.

** The variable is significant at the level of 0.05.

* The variable is significant at the level of 0.1.

Source: own elaboration based on OECD data (OECD, 2008, 2011, 2015, 2016, 2017).

DISCUSSION

The analysis of our research shows that the development of the EU-15 insurance markets in the period studied was affected by: the structure of insurance market measured with the share of life insurance companies (variable *SI*), the share of foreign capital in life insurance companies (variable *L*), and the number of insurance companies (variable *Ni*). It means that life insurance companies influence the development of EU-15 insurance market more than non-life insurers. Life insurance plays an important role in mobilising savings. Demand for life insurance is strongly correlated with rates of savings and per capita disposable income. The greater the tendency to save and household incomes, the higher the demand for and development of life insurance. Countries with larger shares of life insurers in structures of insurance markets exhibit greater rates of penetration. This agrees with studies by Haiss and Sümegi (2008, pp. 405-431) and Arena (2008, pp. 921-946). They demonstrate that life insurance is more important for high-income countries, whereas property-liability insurance is more important for emerging and developing countries. Research by Bukowski and Lament (2019, pp. 33-45) shows that life insurance is more importanty in Visegrad Group countries. These results are contested by Han *et al*. (2010, pp. 183-199), who show that both sectors play a much more important role in emerging than they do in developed countries. Some studies of insurance development acknowledge the heterogeneity problem and as a solution propose the separation of developing from developed countries, e.g. Outreville (1996, pp. 263-278), Beck and Webb (2003, pp. 51-88), and Li *et al.* (2007, pp. 637-652), Carson *et al.* (2014, pp. 1-15). Our article considers the

insurance markets of EU-15 countries, treated as high-income countries. Our research upheld earlier results, namely the greater significance of life insurance companies to the development of insurance markets in these countries.

The internationalisation of insurance services plays an important role – both direct and indirect – in the development process. Direct impact is linked to the modification of composition of the supply of funds to an economy: the relative supply of funds increases in the long term, which translates into increased demand for financial instruments, e.g. insurance products. Indirect impact consists in more institutional investors who – by means of innovative solutions – contributed to improved market efficiency by the specialisation of both financial intermediaries and the corporate sector, among other ways (Dickinson, 2000, pp. 10-18). According to Ma and Pope (2003, pp. 235-248) foreign participation in non-life insurance markets influences market competition and market liberalisation. Moshirian (1997, pp. 159-173; 1999, pp. 34-49) concludes that demand for insurance services and the size of insurance sector of a source country, among other factors, significantly influence the level of foreign investment in life insurance. Carson *et al.* (2014, pp. 12-15) suggest that developing countries with higher foreign investment tend to have a higher life insurance penetration. This is corroborated by our own results as well. Our results imply that the development of EU-15 countries' insurance markets is influenced by shares of foreign capital in life insurance companies (Model 1 in Table 2 and 4). Model 1 assumes penetration rate while Model 2 (Table 3 and 5) the ratio of insurance density as the dependent variable. The penetration rate was principally addressed in earlier studies of effects of foreign investments on insurance markets' development, e.g. Carson *et al.* (2014, pp. 1-15), Sawadogo and Guèrineau (2015, pp. 1-10), Bukowski and Lament (2019, pp. 33-45). Thus, our research expands the analysis of how foreign investments affect the development of EU-15 insurance markets with the ratio of insurance density (Model 2). The results further reinforce results of Model 1 estimation, pointing to the greater significance of life insurance companies to the development of insurance markets in high-income countries. Therefore, measured with the share of life insurance companies in overall number of insurance companies and the share of foreign life insurance companies in equity capital of total insurers' equity, market structure has a substantial impact on the development of the EU-15 insurance markets.

CONCLUSIONS

The critical review of specialist literature and the analysis of our research results into insurance markets of EU-15 countries in 1999-2016 enabled us to answer the research question and verify the hypothesis. The literature review demonstrated that the development of insurance markets is determined by a variety of factors: macroeconomic, cultural, and social. Economic (e.g. GNP, employment), demographic (age, gender), and social (education, the development of insurance culture) factors are studied most frequently. The involvement of foreign capital in insurance companies is treated as a structural factor. Research fails to unambiguously corroborate that the participation of international capital affects development of insurance markets. This effect normally applies only to life insurance companies, e.g. Outreville (1990, pp. 487-498; 1996, pp. 263-278) and Carson *et al.* (2014, pp. 1-15).

The analysis of our study of EU-15 countries in 1999-2016 proved that the development of insurance markets measured with penetration rate (Model 1) is determined by

the share of foreign capital in life insurance companies (*L*), by the share of life insurers in overall numbers of insurance companies (*SI*), and by the number of insurance companies (*Ni*). This partly means – only in respect of life insurers – that the share of foreign capital affected the development of studied insurance markets. This helps to verify our research hypothesis. The development of insurance markets as measured with the penetration rate (Model 1) is also affected by the share of life insurers in overall numbers of insurance companies. This means that the development of examined insurance markets was affected by insurance market structure.

The analysis of our study proved that the development of insurance markets – measured with the ratio of insurance density (Model 2) – is affected by the share of life insurance companies in the total number of insurance companies (*SI*), the share of foreign capital in life insurance companies (*L*), and the number of insurance companies (*Ni*).

Therefore, the verification of hypotheses concerning the impact of foreign capital on development of insurance markets requires further studies of another group of countries (insurance markets). This will be the subject matter of our future research.

The above research results reinforce research on the development of theories concerning factors in the development of insurance markets. Nevertheless, more research is needed to examine the impact of macro- and microeconomic factors in the development of insurance markets that operate in different parts of the world. This would broaden the scope of insurance markets research in different parts of the world and improve methodology by selecting diverse metrics of panel model data.

REFERENCES

Arena, M. (2008). Does insurance market promote economic growth? A cross-country study for industrialized and developing countries. *Journal of Risk and Insurance, 75*(4), 921-946. https://doi.org/10.1111/j.1539-6975.2008.00291.x

Beck, T., & Webb, I. (2003). Economic, demographic, and institutional determinants of life insurance consumption across countries. *World Bank Economic Review, 17*(1), 51-88.

Bednarczyk, T. (2012). *Wpływ działalności sektora ubezpieczeniowego na wzrost gospodarczy.* Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.

Bukowski, S., & Lament, M. (2019). Impact of foreign capital on the insurance market development in the Visegrad Group countries. *Journal of Management and Financial Sciences, 38,* 33-45.

Brokešová, Z., & Vachálková, I. (2016). Macroeconomic environment and insurance industry development: The case of Visegrad group countries. *Central European Review of Economic Issues. Economická Revue, 19*, 63-72.

Browne, M.J., & Kim, K. (1993). An international analysis of life insurance demand. *The Journal of Risk and Insurance*, *60*(4), 616-634. https://doi.org/10.2307/253382

Burić, M.N., Smolović, J.C., Božović, M.L., & Filipović, A. L. (2017). Impact of economic factors on life insurance development in Western Balkan Countries. *Zbornik radova Ekonomskog fakulteta u Rijeci : časopis za ekonomsku teoriju i praksu, 35*(2), 24-32.

Carson, J.M., Chen, P.H., & Outreville, J.F. (2014). *Does foreign direct investment affect the supply of life insurance in developing countries?.* Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.684.9911&rep=rep1&type=pdf on June 5, 2018.

Chui, A.C., & Kwok, C.C. (2008). National culture and life insurance consumption. *Journal of International Business Studies, 39*(1), 88-101. https://doi.org/10.1057/palgrave.jibs.8400316

Cristian, B.C. (2010). Current coordinates of the Romanian insurance sector. *Annals of Faculty of Economics, 1*(2), 504-508.

Dickinson, G. (2000). *Encouraging a dynamic life insurance industry: economic benefits and policy issues.* London: Center for insurance and investment studies. Retrieved from www.oecd.org. on June 5, 2018.

EBRD (2019). *Transition Report 2018-19.*

Enz, R. (2000). The S-curve relation between per-capita income and insurance penetration. *The Geneva Papers and Insurance, 25*(3), 396-406. https://doi.org/10.1111/1468-0440.00072

Haiss, P., & Sümegi, K. (2008). The relationship between insurance and economic growth in Europe: a theoretical and empirical analysis. *Empirica, 35*(4), 405-431. https://doi.org/ 10.1007/s10663-008-9075-2

Han, L., Li, D., Moshirian, F., & Tian, Y. (2010). Insurance development and economic growth. *Geneva Papers on Risk and Insurance, 35*(1), 183-199. https://doi.org/10.1057/gpp.2010.4

Hwang, T., & Greenford, B. (2005). A cross-section analysis of the determinants of life insurance consumption in Mainland China, Hong Kong, and Taiwan. *Risk Management and Insurance Review, 8*(1), 103-125. https://doi.org/10.1111/j.1540-6296.2005.00051.x

Kurylo, V., Kurylo, L., Zhovnirchyk, Y., Kartashov, Y., & Sokol, S. (2017). The development of the insurance market of Ukraine amid the global trends in insurance. *Investment Management and Financial Innovations, 14*(1), 213-225. https://doi.org/ 0.21511/imfi.14(1-1).2017.07

Levine, R. (2004). *Finance and growth: theory and evidence* (NBER Working Papers, 10766). National Bureau of Economic Research, Cambridge.

Levine, R. (1997). Financial development and economic growth: views and agenda. *Journal of Economic Literature*, *35*(2), 688-726.

Li, D., Moshirian, F., Nguyen, P., & Wee, T. (2007). The demand for life insurance in OECD countries. *Journal of Risk and Insurance, 74*(3), 637-652. https://doi.org/10.1111/j.1539-6975.2007.00228.x

Ma, Y.L., & Pope, N. (2003). Determinants of international insurer's participation in foreign non-life markets. *Journal of Risk and Insurance, 70*(2), 235-248. https:/doi.org/10.1111/1539-6975.00058

Medveď, D., & Kavčič, S. (2012). An empirical study of efficiency in Croatia and Slovenia insurance markets. *Ekonomska Istraživanja, 25*(1), 105-120.

Moshirian, F. (1999). Sources of growth in international insurance services. *Journal of Multinational Financial Management, 9*(2), 34-49.

Moshirian, F. (1997). Foreign direct investment in insurance services in the United States. *Journal Multinational Financial Management, 7*(2), 159-173.

OECD (2008). *Insurance Statistics Yearbook 1997-2006*.

OECD (2011). *Insurance Statistics Yearbook 2003-2010*.

OECD (2015). *Insurance Statistics Yearbook 2007-2014*.

OECD (2016). *OECD Business and Finance Outlook 2015*.

OECD (2017). *OECD Business and Finance Outlook 2016*.

Outreville, J.F. (1996). Life insurance market in developing countries. *Journal of Risk and Insurance, 63*(2), 263-278. https://doi.org/ 10.2307/253745

Outreville, J.F. (1990). The economic significant of insurance markets in developing countries. *Journal of Risk and Insurance, 18*(3), 487-498.

Owsiak, S. (2002). Metodologiczne aspekty badań nad sektorem finansowym. In S. Owsiak (Ed.), *Sektor finansowy w Polsce.* Warszawa: PWE.

Pelegrin, F., Schich, S., & de Serres, A. (2002). *Increases in business investment rates in OECD countries in the 1990s: How much can be explained by Fundamentals?* (OECD Economic Department Working Papers, No. 327).

Pye, R. (2005) The evolution of financial services in transition economies: An overview of the insurance sector. *Post-communist Economies*, 17(2), 205-223.

Sankaramuthukumar, S., & Alamelu, K. (2012). A SWOT analysis of Sri Lankan insurance sector. *The Journal of Risk and Insurance, 9*(1), 27-47.

Sawadogo, R, & Guèrineau, S. (2015). Does insurance development affect the financial markets in developing countries?. *Etudes et Documents*, *20*, CERDI. Retrieved from http://cerdi.org/production/show/id/1718/type_production_id/1 on October 15, 2018.

Sen, S. (2007). *Are life insurance demand determinants valid for selected Asian economies and India?* (Paper for Presentation at Annual Meeting of APRIA, 1-27). Institute for Social and Economic Change. Retrieved from https://www.scribd.com/document/230968492/13507Paper-APRIA-Subir-Draft on October 15, 2018.

Sen, S., & Madheswaran S. (2013). Regional determinants of life insurance consumption: evidence from selected Asian economies. *Asian-Pacific Economic Literature, 27*(2), 86-103. https://doi.org/10.1111/apel.12024

Ward, D., & Zurbruegg, R. (2000). Does insurance promote economic growth? Evidence from OECD countries. *Journal of Risk and Insurance, 67*(4), 489-506. https://doi.org/10.2307/253847

Wieczorek-Kosmala, M. (2016). Non-life insurance markets in CEE countries – part I: products' structure. *Journal of Economics and Management, 25*(3), 109-125.

Zhang, C., & Zhu, N. (2005). *Determinants of the development of insurance in China under the globalization* (Working Paper Centre D'Études et de Recherches sur le Développement International). Retrieved from https://pdfs.semanticscholar.org/5b03/2f2e73daba3584185301f73be197250e7fe9.pdf on October 15, 2018.

Zheng, W., Liu, Y., & Deng, Y. (2009). A comparative study of international insurance sector. *The Geneva Papers on Risk and Insurance – Issues and Practice*, *34*(1), 85-99. https://doi.org/10.1057/gpp.2008.37

Zietz, E. N. (2003). An examination of the demand for life insurance. *Risk Management and Insurance Review, 6*(2), 159-191. https://doi.org/ 10.1046/J.1098-1616.2003.030.x

Authors

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

Sławomir I. Bukowski

Professor in Economics and Finance, the Faculty of Economics and Finances, Kazimierz Pulaski University of Technology and Humanities in Radom, Poland. His research interests include the integration of financial markets, international finance, and econometrics methods.
Correspondence to: Prof. dr hab. Sławomir Bukowski, Faculty of Economic and Finance, Kazimierz Pulaski University of Technology and Humanities in Radom, ul. Chrobrego 31, 26-600 Radom, Poland, e-mail: s.bukowski@uthrad.pl
ORCID ⓘ http://orcid.org/0000-0001-8039-895X

Marzanna Lament

Assistant Professor in Finance and Accounting, PhD, the Faculty of Economics and Finances, Kazimierz Pulaski University of Technology and Humanities in Radom, Poland. Her research interests includes the accounting and finance of insurance companies and insurance market.
Correspondence to: Dr Marzanna Lament, Faculty of Economic and Finance, Kazimierz Pulaski University of Technology and Humanities in Radom, ul. Chrobrego 31, 26-600 Radom, Poland, e-mail: m.lament@uthrad.pl
ORCID ⓘ http://orcid.org/0000-0001-5185-6990

Published by Cracow University of Economics – Krakow, Poland