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Cultural contingencies in

Entrepreneurial Orientation – Firm Performance Relationship

Master’s Thesis by the 2nd year student

Concentration – Management

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**ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ**

Я, Швед Филипп Евгеньевич, студент второго курса магистратуры направления «Менеджмент», заявляю, что в моей магистерской диссертации на тему «Культурные особенности связи между предпринимательской ориентацией и результатами деятельности фирмы», представленной в службу обеспечения программ магистратуры для последующей передачи в государственную аттестационную комиссию для публичной защиты, не содержится элементов плагиата.

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**STATEMENT ABOUT THE INDEPENDENT CHARACTER OF THE MASTER THESIS**

I, Filipp Shved, second year master student, Master in Management program «Management», state that my master thesis on the topic «Cultural contingences in Entrepreneurial Orientation – Firm Performance relationship», which is presented to the Master Office to be submitted to the Official Defense Committee for the public defense, does not contain any elements of plagiarism.

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**ABSTRACT**

|  |  |
| --- | --- |
| Master Student’s Name | Filipp Shved |
| Master Thesis Title | Cultural contingences in Entrepreneurial Orientation – Firm Performance relationship |
| Faculty | Graduate School of Management |
| Main field of study | Management |
| Year | 2018 |
| Academic Advisor’s Name | Professor Galina V. Shirokova |
| Description of the goal, tasks and main results | Under an uncertain and increasingly competitive environment of today, firms are faced with an imperative of searching for new sources of competitive advantage. One of the opportunities is to implement the Entrepreneurial Orientation (EO) into the strategy-making process. Although the EO was extensively researched during the last decades, its influence on firm performance is not considered universally positive. This study explains the contradicting findings regarding the EO-Performance relation by investigating the moderating effect of national culture measured by the dimensions of uncertainty avoidance, individualism and power distance. Relying on the sample of 7384 firms from 46 countries, the study confirms the positive relation between EO and performance, supports negative moderation of the relation by uncertainty avoidance and proves that firms from individualistic national cultures experience more material benefits from the implementation of EO. |
| Keywords | Entrepreneurial orientation, firm performance, national culture, cultural contingencies |

**АННОТАЦИЯ**

|  |  |
| --- | --- |
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| Название магистерской диссертации | Культурные особенности связи между предпринимательской ориентацией и результатами деятельности фирмы |
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| Научный руководитель | Доктор наук, профессор Галина Викторовна Широкова |
| Описание цели, задач и основных результатов | В современных условиях нестабильности внешней среды и увеличивающейся конкуренции у бизнеса возникает крайняя необходимость искать новые источники конкурентных преимуществ. Одним из возможных путей решения данной проблемы является выбор компаниями Предпринимательской Ориентации (ПО) как основы принятия стратегических решений. Несмотря на то, что концепт ПО был тщательно исследован в течение последних десятилетий, её влияние на результаты деятельности фирмы так и не было признано однозначно положительным. Данная работа объясняет противоречия между результатами предшествующих исследований, рассматривая национальную культуру, как модератор связи между ПО и результатами деятельности фирмы. В качестве отдельных факторов данное исследование использует следующие измерения национальной культуры: индивидуализм, избегание неопределённости и дистанцию власти. Опираясь на данные 7384 фирм из 46 стран, исследование показывает, что связь между ПО и результатами деятельности фирмы является положительной, тогда как избегание неопределённости негативно влияет на данную связь, а в высоко индивидуалистических культурах данная связь выражается сильнее. |
| Ключевые слова | Предпринимательская ориентация, результаты деятельности, национальная культура |

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INTRODUCTION

Being one of the key drivers of today’s economic growth, ever-emerging firms have always been an essential target of scientific research. As contemporary external environment is characterized by consistent globalization processes and shortening product and business model lifecycles (Hamel, 2000), such firms are constantly involved in an increasing competition and environmental dynamism. Thus, firms’ managers are faced with an imperative of constantly striving for a sustainable competitive advantage guaranteeing the long-term growth. During the emergence of such firms, founders elaborate certain principles intended on the achievement of sustainable competitive advantage. These principles are also described by the term strategic orientation. Among others, the Entrepreneurial Orientation (EO) refers to an ability to develop and adopt innovative initiatives to rejuvenate market offerings, proactive behavior and willingness to try out new products, services and markets (Covin & Slevin, 1991). During the last decades, the construct of EO was extensively researched and became one of the most established concepts in entrepreneurial literature (Wales, 2016) sometimes even being called a central concept of the entrepreneurship theory that have received an impressive amount of attention from almost every part of global research community (Covin, Green, & Slevin, 2006).

Stemming from strategic management theory, the EO was considered a success factor of entrepreneurial firms being a subject to be proven empirically or statistically. Thus, many researchers concentrated their efforts on investigating the relation between the EO and firm performance. However, not all the results confirmed an undoubtedly positive impact of EO on firm’s performance: some of them have demonstrated weak or non-linear dependence (Smart & Conant, 1994) while others have proven it to be negative under some conditions (Hart, 1992), which indicates a necessity to explain the contingencies of its behavior according to one or another hypothesis.

Entrepreneurial orientation of a firm is dynamic: it evolves over time like other strategic components. Thus, the relation between the EO and performance is to be not only proven by itself on different samples, but also regularly in order to monitor the changes of the EO across many firms (Basso et al., 2009). From this perspective, the data being used by this study appear even more relevant: GUESSS survey that was conducted on university students is able to provide understandings based on the responses of emerging entrepreneurs, students who have already started own business and are likely to become main decision-makers of the nearest future.

According to some studies, the relationship between the EO and business performance appeared to be positive while other studies failed to indicate such positive relation. Consequently, the variance of the strength and direction of the relationship is likely to depend on the contingencies of each study. These contingencies or moderators can represent either internal or external environment of a firm. The present research was decided to be concentrated on external environment moderators due to the reasons discussed below.

Between moderators of external environment especially appropriate for this relation tend to be those related to national culture: cultural contingency was considered one of the most attractive directions of research on EO only about a decade ago (Lumpkin & Dess, 2005), which caused an increasing interest of the researchers. However, although some studies succeeded in explaining determinants of the relationship (Saeed et al., 2014), by 2017 studies on cultural contingencies of the aforementioned relation remain rare (Rigtering et al., 2017), resulting in a distinct research gap. Therefore, the present study is aimed to fill the gap by concentrating on cultural contingency as a moderator of the EO-Performance relation. As the most relevant measurement framework of natural culture is Hofstede’s cultural dimensions (Hofstede, 2011), it was decided to use some of its dimensions as the moderators. Considering the rationale present in the following chapter, the dimensions of Individualism, Power Distance and Uncertainty Avoidance were chosen to be the moderators.

Taking into account the aforementioned arguments, it was decided to concentrate specifically on the following research questions: How does national culture influence EO-performance relationship? What is the impact of individualism on the relation between EO and performance? How does power distance affect this relationship? Finally, how does the uncertainty avoidance influence this relation? To answer these questions, a sample of 7384 perspective entrepreneurs from 46 countries was used.

The first chapter focuses on the theoretical concepts crucial to understanding the EO-Performance relation, including the EO itself, its dimensions, its measurement principles as well as on the review of the findings made by the researchers of similar topics. Then the analysis of the moderators decided to be used by this research is present: the choice of the dimensions of individualism, power distance and uncertainty avoidance is explained along with Hofstede’s theoretical framework resulting in hypotheses statement.

The second chapter is concentrated on the results of quantitative study: all the data being used are described, applied variables and statistical procedure is explained. Moderated hierarchical linear regression analysis outputs are preceded by descriptive statistics and correlations. Then follows the judgment about hypotheses acceptance and managerial implications of the study.

## CHAPTER 1. ENTREPRENEURIAL ORIENTATION AND ITS RELATION TO PERFORMANCE

## The concept of Entrepreneurial Orientation

In order to proceed to the theoretical frameworks that constitute the basement of this research, it appears suitable to clarify the definitions present in them. The first and the most important term even being present in the topic of this research, is the Entrepreneurial Orientation.

The concept of Entrepreneurial Orientation originated from the strategic management theory that defined strategy as an organization wide process of analyzing, planning, decision-making, and many aspects of an organization’s culture, value system, and mission (Hart, 1992). The first research applying a concept similar to EO (Mintzberg, 1973) declared the existence of three major strategy development modes: entrepreneurial, adaptive and planning, where the first one is more authoritarian and less risk-averse, the second one implies a gradual adaptation to a more complex external environment while the last one used more formalized analysis techniques. Accordingly, the entrepreneurial mode is described using the terms similar to those operated by modern researchers of EO (e.g. the common dimensions discussed below) and therefore is a predecessor of the Entrepreneurial Orientation. It is important to note, that Mintzberg was claiming that entrepreneurial mode is applicable neither only nor solely for emerging businesses, but is acceptable for on different organizational levels and stages of firm’s life-cycle as well as is combined with another aforementioned modes.

The next milestone for the EO construct development was the study conducted by P. Khandwalla (1976/1977), where the author used the concept of entrepreneurial style somehow replicating the essence of the EO construct. Following the often-quoted strategic choice approach, the author argues that to adapt successfully to external environment, firms favor to use some distinct management style. Correspondingly, one of the styles named entrepreneurial is claimed to be particularly appropriate for hostile and dynamic external environment. Characteristics of this management style include relying on intuition instead of expert opinions, being flexible and making risky decisions. Furthermore, the approach implies that entrepreneurial style can be combined with other styles, e.g. professional style, which is claimed to combine organizational flexibility and risk-taking with planning capabilities and participative leadership.

The next years were noteworthy for the study by Miles and Snow (1978), which were devoted to firm typology. According to them, the key criteria for assigning a firm to one of distinct types is its approach of dealing with three kinds of problems: entrepreneurial, engineering and administrative, being the stages of firm’s “adaptive cycle”. Accordingly, one of the firm types (named ‘prospectors’) includes the attributes analogous to those of the EO, such as constant search for business opportunities (including risky ones), propensity to innovate, discrete growth under the conditions of dynamic external environment etc. (Miles & Snow, 1978). Thus, an Entrepreneurial Orientation of a firm is implicitly defined as a strategic style emerging in case of some combinations of firm’s external and internal factors and distinguishing one firm from another.

## Dimensions of Entrepreneurial Orientation

One of the most influential stages of the development of the topic was the development of three dimensions of EO that stay relevant even for today’s research. The framework originated from the research of Miller, where it was posited that an entrepreneurial firm is a firm “that engages in product-market innovations, undertakes somewhat risky ventures, and is first to come up with ‘proactive’ innovations, beating competitors to the punch” (Miller, 1983, p.771). In contrast to other types of firms (simple and planning ones), an entrepreneurial firm emerges in case of hostile and dynamic external environment, expressive leadership, internal transparency, delegation of responsibilities etc. Thus, what distinguishes an entrepreneurial firm from others are the three dimensions Incidentally, for that time the expression ‘Entrepreneurial Orientation’ was not used in the aforementioned study, which did not prevent them from elaborating on its content. Following that actual topic, other researchers agreed upon three main dimensions of EO (Wiklund, 1999; Zahra & Covin, 1995 etc.), which has led to a rather fixed set of dimensions including risk-taking, proactiveness and innovativeness.

Although the first mentions of the above-named compounds of EO did not identify them as separate dimensions (Miller, 1983) or described them among many other variables that influence the strategy-making process (Miller & Friesen, 1977, p. 277-278), the further development of the concept made by Covin and Slevin (parenthetically referring to the EO as an ‘entrepreneurial posture’) defined it as one of firm’s strategic orientations being measured by innovativeness, risk-taking and proactiveness as its dimensions and opposing it to a ‘conservative’ posture (Covin & Slevin, 1988). Furthermore, the research contains considerations concerning a moderating role of organizational structure and external environment factors such as its hostility in the relation between the EO and firm’s performance.

Moving to the essence of the EO components, as this research measures the EO using its common dimensions it appears suitable to describe them in detail.

The first dimension, risk-taking refers to the ability of a firm to actively participate in the initiatives with an unclear outcome, e.g. borrowing money intensively, investing into projects in uncertain environments. Historically, risk-taking has been associated with entrepreneurship for a long time as taking responsibility for an enterprise as well as for other workers implies significant risks in contrast to just being employed (Schillo, 2011).

Second, EO is described by the dimension of proactiveness, which is derived from the original definition of an entrepreneur, who is identifying opportunities in advance and acting proactively instead of imitating or reacting to the actions of competitors (Lumpkin and Dess, 1996). Thus, proactiveness denotes the anticipation of market, product and technological opportunities, successful enough to make a firm an industry leader.

The last classic EO dimension to be observed is innovativeness. As an innovative firm is a firm that has created new combinations of resources by entering on a market (Schumpeter, 1934), the innovativeness implies a posture of experimenting with resources and technologies as well as creation of new processes, services and products. From the point of corporate culture, innovativeness infers an openness to new ideas and means of corporate development (Lumpkin, Dess, 1996).

Furthermore, a number of researchers suggested an addition of several new dimensions into the existing framework in order to make the measurement more precise. The most used between them are the dimensions of *competitive aggressiveness* and *autonomy*. According to the researchers (Lumpkin and Dess, 1996), the former represents firm’s tendency to react aggressively in case of competitive threats and opportunities and willingness to outperform its rivals while the latter denotes the independence as a basis of conclusions and actions executed by an entrepreneur being the leader of a firm. Accordingly, the study reformulates the definition of EO taking into account two new dimensions. Furthermore, the researchers put emphasis on the differences between process and result in terms of EO, where the former are the dimensions while the latter is the entrepreneurship. Some researchers oppose this approach to the classic one in terms of the nature of entrepreneurship: “This constitutes a significant deviation from previous approaches. Previously, the three components of Entrepreneurial Orientation were used to define entrepreneurial behavior, but here, they are distinct from the act of entrepreneurship, redefined as the act of launching a new venture.” (Basso et al., 2009, p.318) Although the study by Lumpkin and Dess is considered as one of the cornerstones of the EO construct, the extended dimensionality have not received critical support from the research community: the majority of studies still use the original set suggested by Miller/Covin and Slevin (Rauch et al., 2009).

Having received such a significant support from the research community, the construct became an integral part of contemporary theory of entrepreneurship. Although the most crucial milestones of the concept were passed decades ago, a dramatic surge of citations incorporating the EO was experienced beginning from mid-2000s. During the following decade, the citation index of EO has not been shown any signs of decrease while having achieved its all-time maximum in 2016 (Appendix 1). This fact demonstrates the increasing relevance of the construct and therefore that of this research.

Consequently, the managerial literature of today normally defines the EO as a multidimensional construct that consists of one or several dimensions, discussed above (Financial Times). However, to increase the adequacy of the research being conducted, it was decided to summarize a number of relevant definitions of the phenomenon of EO. Table 1 explains the development of EO terminology across its main researchers by containing 14 definitions along with the corresponding researchers as well as the timeline of them (partly based on Covin & Wales, 2012).

Table 1.

Definitions of Entrepreneurial Orientation

|  |  |
| --- | --- |
| *Author* | *Definition* |
| Mintzberg (1973) | “In the entrepreneurial mode, strategy-making is dominated by the active search for new opportunities” as well as “dramatic leaps forward in the face of uncertainty” (p. 45). |
| Khandwalla (1976) | “The entrepreneurial style is characterized by bold, risky, aggressive decision-making” (p. 25). |
| Miller & Friesen (1982) | “The entrepreneurial model applies to ﬁrms that innovate boldly and regularly while taking considerable risks in their product-market strategies” (p. 5). |
| Miller (1983) | “An entrepreneurial ﬁrm is one that engages in product-market innovation, undertakes somewhat risky ventures, and is ﬁrst to come up with ‘proactive’ innovations, beating competitors to the punch” (p. 771). |
| Morris & Paul (1987) | “An entrepreneurial ﬁrm is one with decision-making norms that emphasize proactive, innovative strategies that contain an element of risk” (p. 249). |
| Covin & Slevin (1998) | “Entrepreneurial ﬁrms are those in which the top managers have entrepreneurial management styles, as evidenced by the ﬁrms’ strategic decisions and operating management philosophies. Non-entrepreneurial or conservative ﬁrms are those in which the top management style is decidedly risk-averse, non-innovative, and passive or reactive” (p. 218). |
| Merz & Sauber (1995) | “. . . entrepreneurial orientation is deﬁned as the ﬁrm’s degree of proactiveness (aggressiveness) in its chosen product-market unit (PMU) and its willingness to innovate and create new offerings” (p. 554) |
| Lumpkin & Dess (1996) | “EO refers to the processes, practices, and decision-making activities that lead to new entry” as characterized by one, or more of the following dimensions: “a propensity to act autonomously, a willingness to innovate and take-risks, and a tendency to be aggressive toward competitors and proactive relative to marketplace opportunities” (pp. 136–137). |
| Zahra & Neubaum (1998) | EO is “the sum total of a ﬁrm’s radical innovation, proactive strategic action, and risk taking activities that are manifested in support of projects with uncertain outcomes” (p. 124) |
| Voss et al. (2005) | “. . . we deﬁne EO as a ﬁrm-level disposition to engage in behaviors [reﬂecting risk-taking, innovativeness, proactiveness, autonomy, and competitive aggressiveness] that lead to change in the organization or marketplace” (p. 1134). |
| Avlonitis & Salavou (2007) | “EO constitutes an organizational phenomenon that reﬂects a managerial capability by which ﬁrms embark on proactive and aggressive initiatives to alter the competitive scene to their advantage” (p. 567). |
| Cools & Van den Broeck (2007) | “Entrepreneurial orientation (EO) refers to the top management’s strategy in relation to innovativeness, proactiveness, and risk taking” (p. 27). |
| Pearce et al. (2010) | “An EO is conceptualized as a set of distinct but related behaviors that have the qualities of innovativeness, proactiveness, competitive aggressiveness, risk taking, and autonomy” (p. 219). |
| Financial Times (2017) | “Entrepreneurial orientation is usually defined as a multidimensional construct, applied at the organizational level, which characterizes firm’s entrepreneurial behavior and includes one or several of these three dimensions: risk-taking, innovativeness and pro-activeness.” |

Eventually, taking into consideration respective timings, the aforementioned definitions replicate the set of EO dimensions, ‘classic’ on the first stages and the full set of five dimensions on many of the following ones. Obviously, the difference between dimensions lead to a possibility of satisfying the criteria according to some of them while not satisfying according to other ones.

As for this study, it was decided to define the construct of EO in a classic way, as a firm’s strategic orientation characterized by an emphasis on innovativeness, proactiveness and risk-taking. Although the construct of EO was clarified thoroughly enough, there appears a gap of linking a theoretical concept with firm’s strategy, which is considered as the key question of strategic management research (Lumpkin & Dess, 1996). Thus, in case of EO, the most essential of these dependencies will be its relation to firm performance. Trying to explain this relation, researchers were answering the question if the relation is positive or negative and, what is the most important, under which conditions is the relation maintained.

## 1.3 Measurement of EO

The EO is typically measured using a Likert-type scale containing nine questions, where three for each dimension in case of using the classic ones (Covin & Slevin, 1988, p. 218-225). Being referred to as an ‘entrepreneurial index’ his scale was based on the already mentioned studies (Khandwalla, 1977; Miller & Friesen, 1978), where ‘the higher the score, the more entrepreneurial the firm’. Each of them is split into two contradicting parts whereas a respondent is offered to choose his or her closeness to any of these two statements. In order to measure the closeness, the scale is divided by 7 numbers from the ones closer to the first statement to the ones closer to the second. Similar with the EO dimensions, it was decided to use the classic questionnaire in this research. Ergo, the scale itself is presented in its methodological part. Surprisingly, during the years of the development of EO, the set of questions and the scale did remain quite stable. Even after several researchers issued a challenge to further develop the EO measurement approaches (Lyon et al., 2000) the situation did not change much as the original scale is repeatedly used in the majority (more than 80%) of contemporary studies (Covin & Wales, 2012; Wales et al., 2013).

This study was decided to focus on three classic dimensions shaped by Covin and Slevin. Accordingly, two additional dimensions of autonomy and competitive aggressiveness will not be present in the numerical part of this research due to the following reasons: author’s preferences that mostly favor the classic approach, an intent to provide compatibility with former studies, specificity of the data being used and the fact that extra dimensions are proved to have multidirectional effects (Kreiser et al., 2002) that makes an aggregation of EO according to the unidimensional approach practically impossible.

As for the interdependence between three main dimensions, it has been statistically proven, that they are substantially (Tan & Tan, 2005; Richard et al., 2004) or even positively and strongly (Wales et al., 2013) intercorrelated. As a result, the majority of studies integrated the aforementioned dimensions into the one factor indicating the prevalence of unidimensional approach. According to the first meta-analysis on the topic of EO incorporating more than 50 studies (Rauch et al., 2009), the approach has become standard for the contemporary research of EO, which even resulted in conclusions that an opposing approach named multidimensional (arguing that every dimension of EO may demonstrate different relationship to firm performance) is not mature enough to be suggested as a rightful substitute of the unidimensional one. Thus, the unidimensional approach stays relevant for future research and does not lose its validity and is decided to be used in the quantitative part of this research.

## The EO-Performance Relationship

The first item to be discussed is a universally positive relation between the EO and firm performance. Historically, in many cases preference of entrepreneurial strategies was considered favorable for businesses mainly because of its close connection to innovative and creative processes and therefore massive support of such an image of it by popular press (Wallace, 1993). Looking from the perspective of the above-discussed dimensions of EO, the effect of each of them may be considered favorable to performance. First, starting with classical studies (Schumpeter, 1934), innovative firms are considered to be the key drivers of economic growth by achieving exceptional levels of performance. Second, proactive firms are able to exploit skimming strategies therefore achieving higher margins that obviously lead to better performance. Third, although already proven strategies guarantee more stable growth, risk-taking may be more beneficial in a long-term perspective, as a small number of very successful but risky projects tend to overweigh the sunk costs of failed ones (McGrath, 1999).

Moreover, taking into consideration contemporary trends, such as shortening product and business model lifecycles (Hamel, 2000) followed by uncertainty about future cash flows, firms are faced with a necessity to search more and more new business opportunities. In this case, the EO may be very benign for companies by enabling them to better adapt to rapidly changing external environment. Thus, the first hypothesis will have the following form:

**H1:** Across countries, EO is positively related to firm performance

However, there appears to be a significant normative bias about an inherent value of firm’s Entrepreneurial Orientation and its unconditionally positive impact on firm’s level of performance (Covin and Slevin, 1991; Zahra, 1993). Accordingly, the key focus of the research on EO was normally concentrated not on the presence of the relationship by itself, but on the conditions, under which the relation is strong or not.

To introduce the findings that explain EO-Performance relation and its conditions, it appears crucial to explain two competing (or complementary) approaches used by researchers. These approaches are known as contingency and configurational. They describe the interdependence of factors influencing the EO-performance relation.

The contingency approach emphasizes an absence of universally applicable strategic principles, so that impact of managerial decisions and methods on firm’s performance depends on contextual factors of firm’s business environment (Cyert & March, 1963). The approach examines the relationship between two components of firm’s internal or external environment and the impact they make on some resulting indicator resulting in a two-way interaction. Hypotheses based on this approach could replicate the following one: the most financially successful firms existing under the conditions of hostile external environment are mostly those having high Entrepreneurial Orientation (Covin & Slevin, 1989). At the same time, configurational approach is claimed to be applicable in case of more complex relationships between environmental or organizational factors and performance (Doty et al., 1993). Ordinarily, this approach tries to identify a fit across several contingency variables, such as in the case of the discovered positive relation of venture performance to the fit among entrepreneurial style, organic structure, and mission strategy (Naman & Slevin, 1993).

These controversial findings do prove that the relationship between EO and performance is complex, context specific. The same outcome was drawn in the already discussed study (Lumpkin & Dess, 1996), which was mainly focused on identification of the conditions that explain the variation of the EO-performance relation. Between moderating factors were chosen ones belonging to external (dynamism, complexity, industry specificity etc.) and internal (firm size, structure resources etc.) environment of the firm. The study exploited both contingency and configurational approaches, where under contingency approach the moderating effect was investigated separately for external and internal environmental factors, while under the configurational approach the factors of both external and internal environment were combined together. The outcome of using two complementary methods was an increased suitability of configurational approach in case of EO-Performance relation based on a claim that it explains the relation in a more precise way (Dess et al., 1997, p. 691).

Configurational approach was used in the already discussed studies being among the earlies involving the concept of EO (Miller & Friesen, 1977, 1978). The study criticizes contingency approach for being too narrow to reflect the whole picture by describing two-fold relation without taking into consideration other factors. The authors propose to overcome these restrictions by creating firm’s archetypes made of 31 variable covering its strategy, structure, control and management styles that demonstrate a substantial cohesion while being predictive one to another. The evolution of these archetypes is claimed to be discrete and triggered by either leader’s will or crisis tendencies in firm’s performance (Miller & Friesen, 1984). Among potentially beneficial archetypes, authors mention an entrepreneurial firm, which exists under the conditions of heterogeneous and dynamic external environment constantly monitoring it and is characterized by decisive actions of a charismatic leader that strives for firm’s extensive expansion and growth (Miller & Friesen, 1978, p. 928).

Moreover, the concept of EO was also viewed from the Resource-Based View (RBV) perspective, claiming that the main sources of firm’s competitive advantage are its resources and competences, that have to satisfy the criteria of being valuable, rare, imperfectly imitable and not substitutable (Barney, 1991). According to it, resources lead to a formation of competences that give rise to competitive advantages (Grant, 1991). Respectively, the EO is considered one of such specific competences that may grant a company with significant strategic advantage (Wiklund & Shepherd, 2011).

The perspective of Resource-Based View does not interfere with the configurational and contingency approaches. Between the contingency studies may be distinguished the study by Martins and Criado (2013) that proves that environmental hostility positively moderates the EO-Performance relation. In this study, the EO is a viable organizational capability that helps a company to adapt to rapidly changing external environment by exploiting new products and processes. Furthermore, many researchers favoring the same approach focused on internal environment factors, such as characteristics of organizational structure, organizational learning capabilities, entrepreneurial networks and market orientation (e.g. Boso et al., 2013). As for the configurational approach, a relevant example of its application based on the RBV viewpoint is the study by Wiklund and Shepherd (2005), where the EO is also considered as an important organizational capability with a potential to improve firm’s performance. The moderators of the study include environmental dynamism and access to capital, so that lower level of the former and the latter lead to stronger relation comparing to the opposites. Moreover, Resource-Based View indicates that as the EO is resource-intensive, the benefits of it may be considered insufficient in a short term while firms with different resource base will experience different level of EO.

## 1.5 National culture as a moderator of EO-Performance relation

While the aforementioned studies refer to the moderating effect of factors related to the formal institutions (e.g. hostility of external environment), the factors that were widely researched during the last decades, this study is especially intended on examining the moderating effect of such an informal institution as national culture and its components on the EO-Performance relation. Although national culture may look quite an appropriate moderator of this relation, not many studies did concentrate on such effect so far. The formulation of the construct of EO as well as initial empirical tests were conducted in the context of North America not being cross-cultural at all (e.g. Miller, 1983, Covin & Slevin, 1989; Lumpkin & Dess, 1996). The reason of not paying enough interest to national context may relate to perceived universality of EO in terms of national culture: since its origin, there was an assumption that EO is equally valid for different countries (Rauch et al., 2009). From the other viewpoint, in some cases the moderating role of national culture is implicitly supported by some studies based on the data from one country and concluding that the relation strength is country-specific (e.g. Tang et al., 2008). However, more than a decade ago the necessity of further research in the direction of cultural contingencies of the discussed relation was explicitly formulated (Lumpkin & Dess, 2005).

Nevertheless, some researchers did pay efforts to explain cultural contingencies of the discussed relation even before the aforementioned appeal by Lumpkin and Dess. Although these studies did not precisely touch upon the moderating effect being the question of the present study, they did a solid contribution into the research of cultural contingencies of the discussed relation are worth being mentioned especially taking into consideration a small number of studies related to the topic.

The first such study did incorporate the analysis by Marino, Strandholm, Steensma and Weaver (2002) that concentrated on the relation between the EO and such an aspect of firm performance as strategic alliance portfolio extensiveness. According to the study, the national culture was measured using Hofstede’s dimensions of Uncertainty Avoidance, Individualism and Masculinity while the sample included 647 firms from six countries. The empirical evidence suggested the following results: Individualism and Masculinity negatively moderate the relation between EO and strategic alliance portfolio extensiveness. Obviously, this analysis is very different from the present study’s one in a way the firm performance is measured, which resulted in a negative moderation caused by Individualism. However, it incorporates almost the same approach as the one used by the present and a number of other contemporary studies while being conducted about decade earlier. The study influenced the development of the topic and was cited in the following papers (e.g. Rauch et al., 2009).

In 2003, Swierczek and Thanh Ha presented a cross-national study that explained the variance of the EO-Performance relationship by the different scores of national culture dimensions (especially, Uncertainty Avoidance). Overall, the authors were testing the difference on the three EO dimensions between only two nations, at the same time proposing that positive difference will influence business performance and only then introducing the effect of Uncertainty Avoidance on the EO and therefore on the EO-Performance relation (Swierczek & Thanh Ha, 2003). However, the sample included only the companies from two countries, while there was no moderating effect being tested by the hypotheses.

Although single studies had already touched the topic of cultural contingencies, at the time of the meta-study by Rauch, Wiklund, Lumpkin and Frese (2009) the state did not change significantly: apart from some studies that were explaining cultural contingencies of the relations involving EO did touch firm performance in an indirect manner only (e.g. Marino et al., 2002), the authors conclude that they are not aware of any studies investigating the moderating effect of national culture on the EO-Performance relation. Thus, the authors do not have any premises to associate any dimension of national culture with positive or negative moderation of the relation. Having incorporated more than 50 firms from 14 countries, the study itself was not solely confined to cultural contingencies: between other moderators are firm size and industry type. These two moderators were concluded to influence the relation in the following way: smaller businesses and high-tech firms benefit from the EO more that larger and non-high-tech respectively. As for the cultural contingencies, although the study was well focused on them, it appeared to be limited by its statistical procedure. As meta-analysis relies on previously conducted studies instead of primary or secondary data, the study was restricted by its specificity resulting in insufficient number of observations attributed to some countries to make conclusions about the significant moderating effects. Accordingly, the researchers involuntarily aggregated countries into continents (Europe, Asia, the United States of America, and Australia), which had a potential to distort the findings and to hide the differences between different countries, e.g. Hofstede’s dimensions vary across countries within the same continent considerably (Hofstede, 2013). The qualitative assessment resulted in a conclusion, that national culture does not influence the EO-Performance relationship. Nevertheless, these results are claimed to be not precise enough because it “may have hidden differences between countries” (Saeed et al., 2014, p.258).

Trying to move further in explaining the factors influencing firm level of EO, P. Kreiser along with other researchers conducted a study intended to discuss the impact of national culture on three conventional dimensions of EO (Kreiser et al., 2010). Accordingly, the study employed the multidimensional approach, which tested all possible combinations of four national culture dimensions (Uncertainty Avoidance, Power Distance, Individualism and Masculinity in this case) with the two dimensions of EO (Risk-taking and Proactiveness, arguing that the impact of Innovativeness was already explored by other researchers [Kreiser et al., 2010, p. 960]), totaling ten hypotheses. The sample being used consisted of more than 1,000 firms from six countries. Key findings of the study include the following ones: Power Distance and Uncertainty Avoidance are negatively associated with Risk-taking while Uncertainty Avoidance, Individualism and Power Distance are negatively associated with Proactiveness. At the same time, Masculinity did not demonstrate any significant relation neither Risk-taking nor Proactiveness. Although the study uses multidimensional approach and does not touch upon the EO-Performance relationship, it contains useful insights about the impact of national culture on EO that appear suitable enough to be used by the present study.

Later, almost the same research team decided to elaborate on similar topic by introducing business performance into the set of variables (Kreiser et al., 2012). The resulting hypotheses tested the shape of the EO-Performance relation on the sample of 1668 small-to-medium sized enterprises from nine countries, which was claimed to be curvilinear. Furthermore, the authors decided to explore the moderating role of only one dimension of national culture (Individualism) in the relationship between each of three EO dimensions and business performance. The choice of this dimension was explained by its prevalence over other ones in the previous research in the domain of strategic decision-making and entrepreneurship (p. 275). The results of the study demonstrated the relation between all the three dimensions of EO and performance to be U-shaped while Individualism was found a positive moderator of the relation. Although supporting the approach opposing to the one of the present study and focusing only on one of the dimensions of national culture, the analysis by Kreiser was apparently the first in applying a moderating effect of national culture to the EO-Performance relationship.

The next notable attempt to address the request of the studies on cultural contingencies of EO-Performance relation was the meta-analysis by Saeed, Yousafzai and Engelen (2014), aimed to extend the findings of the first meta-study (Rauch et al., 2009). The sample equaled 177 companies from 41 countries while being more diverse geographically. Arguing that cultural difference does influence the relation, the authors build upon a premise that buyers of national cultures that are more loyal to entrepreneurial firms (or firms with high level of EO), tend to buy more from such firms and therefore positively influence the performance of such firms. Moreover, the individuals inside firms tend to act according to their cultural values, which influences firm performance as well. The moderating role of national cultures is described by its dimensions including uncertainty avoidance, power distance, in-group collectivism (reformulated Hofstede’s Individualism dimension [Venaik & Brewer, 2008]), and assertiveness, where the first three are based on original Hofstede dimension set while the last one is based on the GLOBE study (House et al., 2001). Apart from informal institutions (e.g. national culture), the study considers formal institutions as additional moderators of the discussed relation. Between them are market size, economic development, political stability and regulatory quality. The bivariate moderator analysis and meta-regression resulted in the conclusions as follows: in the countries characterized by low uncertainty avoidance and power distance, the EO-Performance relationship is stronger. As for in-group collectivism, the hypothesis about its positive moderation of the relation was partly accepted: the bivariate and regression analyses gave different results. The other four variables moderated the relation in the following order: relationship appeared to be stronger in case of smaller markets, developing countries, stable political environment and lower regulatory quality. Although the meta-study is pretending to be called the most ambitious and comprehensive, it did incorporate some limitations, which will be addressed in this study. For instance, relying on tertiary data, the authors may have omitted cultural difference inside particular firms. This issue is even compounded by the globalization trends (e.g. Crown, 2017), that enable firms to hire expatriates, who sometimes constitute a solid part of firm’s staff. Thus, a company reported to be European by several studies, may consist of Asian managers and vice versa. In this case, the managers (and therefore the company) would act according to their cultural values causing substantial inaccuracies in several studies. In contrast, the present study is intended to draw more precise conclusions based on the responses of entrepreneurs being key or the only managers of analyzed firms.

One more exception from the rule of neglecting the influence of national culture on the EO-Performance relationship (Rigtering et al., 2017), is a comparably recent study by Semrau, Ambos and Kraus (2016). The study investigates the moderating effect of performance-based and socially supportive culture (PBC and SSC respectively). The construct of PBC refers to the cultures that encourage individualism, orientation on the future and performance, reward competitiveness, initiative taking and innovation. Accordingly, SSC is a culture that values social connections, social capital and has high tolerance of failure (House et al., 2002). The sample is rather large and consists of more than 1200 small and medium-sized enterprises from seven countries (from Europe, Asia and the US). Having stated the hypotheses about universally positive impact of EO as well as about moderating roles of PBC and SSC, the authors concluded that the relation is positive across countries while PBC and SSC moderate the relation positively and negatively, respectively (Semrau et al., 2016). For today, study by Semrau appears to be the closest to the present one. However, the constructs of PBC and SSC are less precise compared to the individual dimensions of Hofstede, as the former approach include much less national culture determinants as the latter. Moreover, PBC and SSC, being characterized by several sub-items (e.g. individualism, future orientation etc.), may incorporate some of these sub-items, that do not explain the variance of the EO-Performance relation. To address these issues, the present study was decided to focus on several Hofstede dimensions as separate moderators of the relation. Furthermore, the number of observations and geographic diversity will be significantly improved by the present study.

Being the most recent but not the closest to the topic of the present study, the paper by Rigtering, Eggers, Kraus and Chang (2017) uses a complicated framework based on the configurational approach to investigate the impact of national culture on the EO-Performance relationship. Building upon the findings of the preceding meta-study (Saeed el al., 2014), the analysis uses the dimensions of Uncertainty Avoidance, Power Distance, and Long-Term Orientation, splits the sample into two groups per each dimensions taking into account its strength (e.g. firms from the cultures of low and high uncertainty avoidance) and investigates the effect of each group separately. Furthermore, the study uses a multidimensional approach and dimensionizes EO by innovativeness, risk-taking and proactiveness adding strategic planning to the underlying variable set. The resulting findings include positive effect of innovativeness regardless of national context, but combined with strategic planning, and a positive effect of proactiveness combined with strategic planning in case of high uncertainty avoidance and long-term orientation. Although the approach used by this study employs a reasonable and sophisticated model, it appears to be limited by only seven countries, which is not an extension compared to the previous analyses. Moreover, the present study does not support the multidimensional approach having been employed by the analysis, and argues that the EO’s nature is unidimensional.

The Table 2 summarizes the aforementioned studies and emphasizes the cultural contingencies of the discussed relation. The factors present in the studies but not related to national culture and its influence on the relation are omitted, as they do not appear relevant for the present research.

*Table 2.*

**Cultural contingencies in EO-Performance relation**

|  |  |  |
| --- | --- | --- |
| *Author and context* | *Contingencies* | *Findings* |
| (Marino et al., 2002),  647 firms, 6 countries | Uncertainty Avoidance, Individualism, Masculinity | Individualism and Masculinity negatively moderate the relation between EO and strategic alliance portfolio extensiveness |
| (Swierczek & Thanh Ha, 2003),  478 firms, 2 countries | Uncertainty Avoidance (no hypothesizing) | Uncertainty Avoidance explains the variance of EO-Performance relation between two countries |
| (Rauch et al., 2009),  Meta-analysis, 51 studies | Geographic regions (4 continents coded as dummy variables) | The moderating effect was not supported by the statistical evidence |
| (Kreiser et al., 2010),  1048 firms, 6 countries | Uncertainty Avoidance, Power Distance, Individualism, Masculinity as antecedents | Uncertainty Avoidance and Power Distance negatively influence risk-taking; Uncertainty Avoidance, Individualism, and Power Distance negatively influence proactiveness |
| (Kreiser et al., 2012),  1668 firms, 9 countries | Individualism | Individualism positively moderates the EO-Performance relationship |
| (Saeed et al., 2014),  Meta-analysis, 177 studies | Uncertainty Avoidance, Power Distance, Individualism | Uncertainty Avoidance and Power Distance negatively moderate the EO-Performance relation. There is no significant influence of Individualism. |
| (Semrau et al., 2016),  1248 firms, 7 countries | Performance-based culture (PBC), Socially supportive culture (SSC) | PBC positively moderates the EO-Performance relation, there is no positive moderation in case of SSC |
| (Rigtering et al., 2017)  2506 firms, 7 countries | Uncertainty Avoidance, Power Distance, Long-Term Orientation influencing configurations of innovativeness, proactiveness and risk-taking | Innovativeness leads to high performance and regardless of national context;  Proactiveness leads to high performance in case of high Uncertainty Avoidance and Long-term Orientation |

Listing the studies investigating the effect of national culture on the relationship between the EO and firm performance, the Table 2 provides us with a comprehensive understanding of research dynamics related to the topic. In particular, it explicitly reports about moderate number of national context, under which the cultural contingencies were investigated: apart from meta-studies, the number of countries has never exceeded ten. Moreover, some studies (Swierczek & Thanh Ha, 2003) do not incorporate statistical tests and are limited by a verbal explanation, which does not increase the validity. As for measurement of national culture, several papers (Kreiser et al., 2012) are limited by the usage of only one dimension, excluding other ones from the analysis. Accordingly, all these limitations are to be addressed in the empirical part of the present study.

After all, the research of cultural contingencies of the EO-Performance relation turn out to be increasingly relevant: according to Web of Science citation report (Appendix 2), from 2010 the topic has experienced a substantial surge, which was caused and supported by researchers claiming that studies on this topic are scarce while this direction of research is very promising (e.g. Rigtering et al., 2017). Here appears a distinct gap that was tried to be filled by the aforementioned researchers having faced with already explained limitations. Thus, the present study is intended on refining and updating the existing research, overcoming these limitations and therefore filling the described gap.

## 1.6 Measurement of national culture

To observe the cultural contingencies of the EO-Performance relation, the concept of national culture and its measurement system has to be described in detail. In consistence with an extant research (e.g. Maseland & Hoorn, 2009), between the national culture measurement frameworks it was decided to concentrate on the following ones: the one introduced by Geert Hofstede (1981), the one attributed to Ronald Inglehart (1990), the one developed by Shalom Schwartz (1994) and the one used in the GLOBE cross-cultural study (House et al., 2004). The comparison of these three frameworks is conducted in the subsequent paragraphs and is followed by the rationale of choosing one of them.

Being one of the most influential researchers in the domain of national culture (Minkov, 2017), Geert Hofstede defines culture as the “collective programming of the human mind that distinguishes the members of one group from those of another” (Hofstede, 1981, p. 24). The concept of national culture states that cultures tend to be homogeneous between individuals of the same nation making a nation an appropriate unit for the analysis of national culture (Minkov, 2017). The framework originates from the study of 1973, which was run on the employees of IBM Corporation from more than 40 countries, the set of whose was later extended to 76 (Hofstede, 2013). To measure national culture, Hofstede suggests dividing the national culture by the set of four dimensions (Individualism/Collectivism, Uncertainty Avoidance and Power Distance), which was later extended by Masculinity/Femininity and Indulgence/Restraint. According to Hofstede, dimension is defined as “an aspect of a culture that can be measured relative to other cultures” (Hofstede, 2011, p. 7). Being the earliest and the most quoted national culture measurement framework (Shaiq et al., 2011), Hofstede’s dimensions appeared to be used by an absolute majority of the studies on topic of cultural contingencies in EO-Performance relation.

Second national culture measurement framework to be reviewed is the one employed by the World Value Survey. It has grown up from the European Value Survey dated from 1981 and has spread all around the world during the subsequent years being coordinated by Ronald Inglehart. Between the years from 1981 to 2014, the project has overcome six iterations resulting in about 270,000 individuals in total. The number of countries equaled 97 (the highest between the approaches, which enables authors to claim about its representativeness for more than 90% of world population (WVS, 2018). The framework involves the following two dimensions: Traditional/Secular-rational and Survival/Self-expression values. By limiting itself by only two dimensions, the framework enabled the authors (Ronald Inglehart and Christian Welzel) to build a map of national cultures, where the former represents y-axis while the latter represents x-axis, while national cultures are represented by dots. Further, the countries are divided into clusters by geographical, historical and/or religious characteristics. Although the framework describes maximum number of cultures, it was not used by any of the studies on the present topic.

One more national culture measurement framework to be considered by the present study is the one based on Basic Human Values theory originally developed by Shalom Schwartz (1992). Later, the theory was refined by national culture measurement framework of the following three dimensions consisting of two extremes each: Embeddedness versus Autonomy (divided by Intellectual and Affective ones), Mastery versus Harmony, and Hierarchy versus Egalitarianism. The scores of these dimensions are measured by Schwartz Value Survey, which (in comparison to three other discussed frameworks) does not incorporate any massive regular international studies. The available data are based on the responses of more than 60,000 individuals from 64 countries (Fischer & Schwartz, 2011). Despite the framework aggregated a solid number of responses from a substantial amount of countries, the studies on cultural contingencies of the discussed relation were not noticed using it.

The GLOBE framework, in turn, originated from the study by six researchers headed by Robert House (House et al., 2004). Being conducted starting from the mid-1990s, the study involved more than 17,000 middle managers in 951 organizations across three industries. Comparing to the already described frameworks, GLOBE uses the highest count of dimensions and evaluates them twice: the values (‘should be’) are separated from practices (‘as is’). The total set of nine dimensions includes Performance Orientation, Assertiveness, Future Orientation, Humane Orientation, Institutional Collectivism, In-group Collectivism, Gender Egalitarianism, Power Distance and Uncertainty Avoidance. Projected as an extension of the findings of Hofstede, GLOBE framework inherited several dimensions from it while splitting some of them into separate ones (Venaik & Brewer, 2008). As for the topic-related usage of this framework, only several studies used the dimensions of GLOBE project and only in combination with Hofstede dimensions.

All of the discussed measurement frameworks were summarized in the Table 3 in order to provide the most concise comparison of them.

*Table 3.*

**National culture measurement frameworks compared**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Framework* | Hofstede’s dimensions of national culture | Inglehart’s cultural map of the world | Schwartz’s basic human values | GLOBE framework |
| *Source* | (Hofstede, 1981) | (Inglehart, 1990) | (Schwartz, 1994) | (House et al., 2004) |
| *Dimensions* | 1. Individualism vs. Collectivism 2. Power Distance 3. Uncertainty Avoidance 4. Masculinity vs. Femininity 5. Long Term vs. Short Term Orientation 6. Indulgence vs. Restraint | 1. Survival values vs. self-expression values (x-axis) 2. Traditional values vs. secular-rational values (y-axis) | 1. Embeddedness vs. Autonomy 2. Mastery vs. Harmony 3. Hierarchy vs. Egalitarianism | 1. Performance Orientation 2. Assertiveness 3. Future Orientation 4. Humane Orientation 5. Institutional Collectivism 6. In-group Collectivism 7. Gender Egalitarianism 8. Power Distance 9. Uncertainty Avoidance |
| *Informants* | 88,000+ IBM employees from 76 countries | 270,000+ respondents from 97 countries | 60,000+ individuals from 64 countries | 17,000+ middle managers from 62 countries |
| *Project* | Value Survey Module,  since 1982 | World Value Survey,  since 1981 | Schwartz Value Survey,  since 1994 | Global Leadership and Organizational Behavior Effectiveness Research,  since 2004 |

Source: partly based on (Warner-Søderholm, 2012)

Hofstede cultural dimension theory was decided to be used by the present research as main measurement framework of national culture. The rationale is as follows: First, comparing to GLOBE, Hofstede’s data appear to be more relevant for the present research in terms of lower number of countries from the sample, not covered by the data. Specifically, as for 2013/2014, Hofstede scores lack only four countries present in the resulting sample of this study while by GLOBE this number equals 13 (GLOBE Project, 2014). Second, the theory of Hofstede is the most renowned and widely accepted while still being relevant for contemporary research (Eringa et al., 2017), resulting in compatibility with the existing studies on the same topic. Third, compared to Inglehart’s framework, Hofstede’s dimensions describe national culture from substantially more perspectives and are not limited by only two dimensions, while the advantage of having larger country set does not increase the coverage of the sample of the present research significantly. Fourth, compared to the Schwartz’s model, Hofstede’s framework has more recent and standardized data, more profoundly dimensionizes national culture and better fits the sample of the present study in terms of nations.

From the theoretical perspective applied to the present research, national culture influences the EO-Performance relation in the following way: as an entrepreneur is an agent of his or her national culture, the actions performed by the company are explained by the entrepreneur’s cultural values, at least to some extent. Obviously, there is an assumption that the majority of the students being intentional founders do play a role in his or her company, important enough to influence its strategic decisions. Furthermore, there is an assumption that if a respondent is living in a country for more than ten years, his or her business is also located in the same culture and thus is influenced by cultural values of that particular country in a way that firm’s buyers’, suppliers’ and other counterparts’ actions are at least to some extent explained by their cultural values.

The set of dimensions being used by the present study was decided to be limited by an original one. While the original set of individualism/collectivism, uncertainty avoidance, power distance and masculinity/femininity was extended by two another dimensions of long-term orientation and indulgence/self-restraint, the first three dimensions were traditionally associated with innovation and entrepreneurship (e.g., Mueller & Thomas, 2001; Hayton et al., 2002). Moreover, having analyzed the studies on cultural contingencies of the EO-Performance relationship listed in the Table 2, it appeared that only the dimensions of Individualism/Collectivism (IDV), Uncertainty Avoidance (UAI) and Power Distance (PDI) are repeatedly proven to be significant moderators of the relation by the majority of researchers while the fourth dimension is not. As for the other dimensions having been applied, the hypotheses containing such dimensions tend to be rejected by the resulting analyses (e.g. Assertiveness in case of [Saeed et al., 2014] and Masculinity in case of [Kreiser et al., 2010]), which does not point to their relevance. Thus, Individualism/Collectivism, Uncertainty Avoidance and Power Distance will be the three dimensions tested to be the moderators of the discussed relation. The definitions of each dimension are based on Hofstede Centre’s ones.

Uncertainty Avoidance

The first dimension chosen to be one of the moderators for the present study if the Uncertainty Avoidance. Geert Hofstede refers to it as follows: “The Uncertainty Avoidance dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity” (Hofstede Insights, 2015). Accordingly, in the countries characterized by higher score on this dimension individuals tend to favor stricter rules and behaviors while not appreciating untraditional conducts and ideas.

The Uncertainty Avoidance mostly relates to the perception of risk expressed by ambiguity and unclear outcomes, and it should influence the EO-Performance relation through the dimensions of risk-taking and innovativeness. As the firms exploiting the EO in strategy-making process by definition tend to launch radically new products onto the market (Lumpkin & Dess, 1996), such innovative products often incorporate substantial risks for firm counterparts (e.g. risk of being not useful enough to substitute existing analogues although claimed), where counterparts are represented by firm’s suppliers, buyers and investors. Building upon the premises of the extant research (van Everdingen & Waarts, 2003), the present study suggests that entrepreneurial firm’s counterparts on the markets characterized by high uncertainty avoidance normally pay more attention to the risks associated with new products and therefore adopt or encourage such products and/or services more slowly or to a lesser extent. Consequently, the influence of innovative product on company performance may be substantially limited compared to its less innovative and less risky competitors.

Furthermore, from the point of internal environment, individuals from the cultures with low uncertainty avoidance, which are characterized by “tolerance of deviant persons and ideas” (Hofstede, 2011, p. 10), should be much more favorable to a constant flow of new ideas inside a firm inherent in the entrepreneurial process. As a result, such innovative products, services or ideas will be more likely executed or launched, and then commercialized. Consequently, the commercialization of such innovations may lead to an increased performance of a firm, which, in turn, would be considered as a more successful (in terms of firm performance) implementation of EO (Covin et al., 2006).

Taking into account the above given rationale, the present study posits that Uncertainty Avoidance negatively moderates the relationship between the EO and firm performance resulting in the following hypothesis:

**H2:** In cultures with high level of uncertainty avoidance, the relationship between EO and performance will be weaker.

***Individualism***

The second dimension to be observed, Individualism versus Collectivism, relates to “a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate families” (Hofstede Insights, 2015). The difference between two extreme points of this dimension lies in the terms of self-definition (“I” versus “we”). Extant research often attributed Individualism to entrepreneurship, arguing that the latter is an act, where an entrepreneur is rewarded individually (Hayton et al., 2002). As for the studies investigating the role of cultural contingencies (Table 2), Individualism appeared the most tested dimension of national culture. Moreover, the majority of studies explaining the role of this dimension in the entrepreneurial process did focus on individualism as on an antecedent of entrepreneurial activity (Kreiser et al., 2012). In contrast, the present study views individualism as a moderator of the EO-Performance relationship.

First, from the point of performance, individualism influences the discussed relation in a way that on average, individuals from such cultures tend to pay more attention to performance than those from collectivistic societies (Mueller & Thomas 2001; Morris et al. 1994). Consequently, being led by single individuals, the firms from such cultures consider performance as a primary goal of their efforts and pay more attention to the impact of their strategic process on business performance. Therefore, the outcomes from the implementation of EO are likely to appear sharper compared to those in the collectivistic cultures.

Second, taking into account the dimension of risk-taking, the individuals from collectivistic cultures are apt to attributing themselves to the group, which is indicated by a profound commitment (Hofstede Insights, 2015). Being afraid not to meet the expectations of the groups, these individuals tend to be less tolerant to failure and therefore they do not reward risky behavior, even if it leads to an increased performance. At the same time, individualistic cultures are characterized by the norms that encourage risk-taking and allow the firms involved into it to thrive and show better performance (Morris et al. 1994).

Third, from the point of proactiveness, on the markets characterized by collectivism proactive firms may be viewed as ones belonging to out-groups as long as they try to benefit from the opportunities not exploited by the majority of incumbent firms, which form so-called in-group. As collectivists do distinguish strongly between in-groups and out-groups while favoring the former (Triandis, 1994), the performance of proactive firms in the collectivistic cultures is likely to be negatively affected by skepticism of the market (Saeed et al., 2014).

Finally, from the point of innovativeness, the adoption of innovative products on the markets characterized by high individualism tend to be easier compared to collectivistic ones: extant research suggests individualistic cultures to be more tolerant to innovations, increasing sales of the products based on more substantial innovations comparing to collectivistic cultures, where such innovations are rewarded less (Morris et al., 1994). This may positively influence the performance of firms employing the EO.

Considering the aforementioned points, the present study suggests that in the individualistic cultures the firms employing EO will experience significant performance gains. In other words, Individualism positively moderates the discussed relationship:

**H3:** In individualistic cultures, the relationship between EO and performance will be stronger.

***Power Distance***

The last dimension to be discussed, Power Distance is defined in the following way: “This dimension expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally”. (Hofstede Insights, 2015). National cultures with high levels of power distance endorse an unequal hierarchy, where each of its members has a distinct place, not requiring to justify it. The societies with low score of power distance demand an egalitarian power distribution and do not endure inequality without justification.

As for the case of EO-Performance relation, the dimension influences it in the following way: first, in the societies with high power distance the link between lower-level subordinates and management is likely to be loose or unequal (“Subordinates expect to be told what to do”, not to be consulted and take the initiative [Hofstede, 2011, p. 9]), which may cause an inability for managers to identify the opportunities of innovating on the operational level. At the same time, due to high power distance subordinates may feel uncomfortable trying to communicate about existing problems and new ideas (Carl et al., 2004), which is likely to harm the link between innovativeness and proactiveness from one side and performance from the other.

Furthermore, a tendency to have less hierarchical organization structure may contradict with the values of individuals from highly power-distant cultures: the employees favoring hierarchy may experience performance decreases in case of the introduction of flatter structure inherent in entrepreneurial firms while employment of the staff tolerant to flatter structures may be too costly and affecting firm performance in a negative way.

Thus, by causing substantial obstacles to the successful implementation of EO, the dimension of Power Distance is suggested to negatively moderate the discussed relation, resulting in the following hypothesis:

**H4:** In cultures with high level of power distance, the relationship between EO and performance will be weaker.

The aforementioned hypotheses are intended to describe cultural contingencies of the EO-Performance relationship in the most coherent manner. The given rationale justifies the usage of three distinct dimensions of national culture as well as the direction of moderation. The big picture of the study is reflected by the Figure 1 that summarizes the stated hypotheses and depicts their position relative to the EO-performance relation:

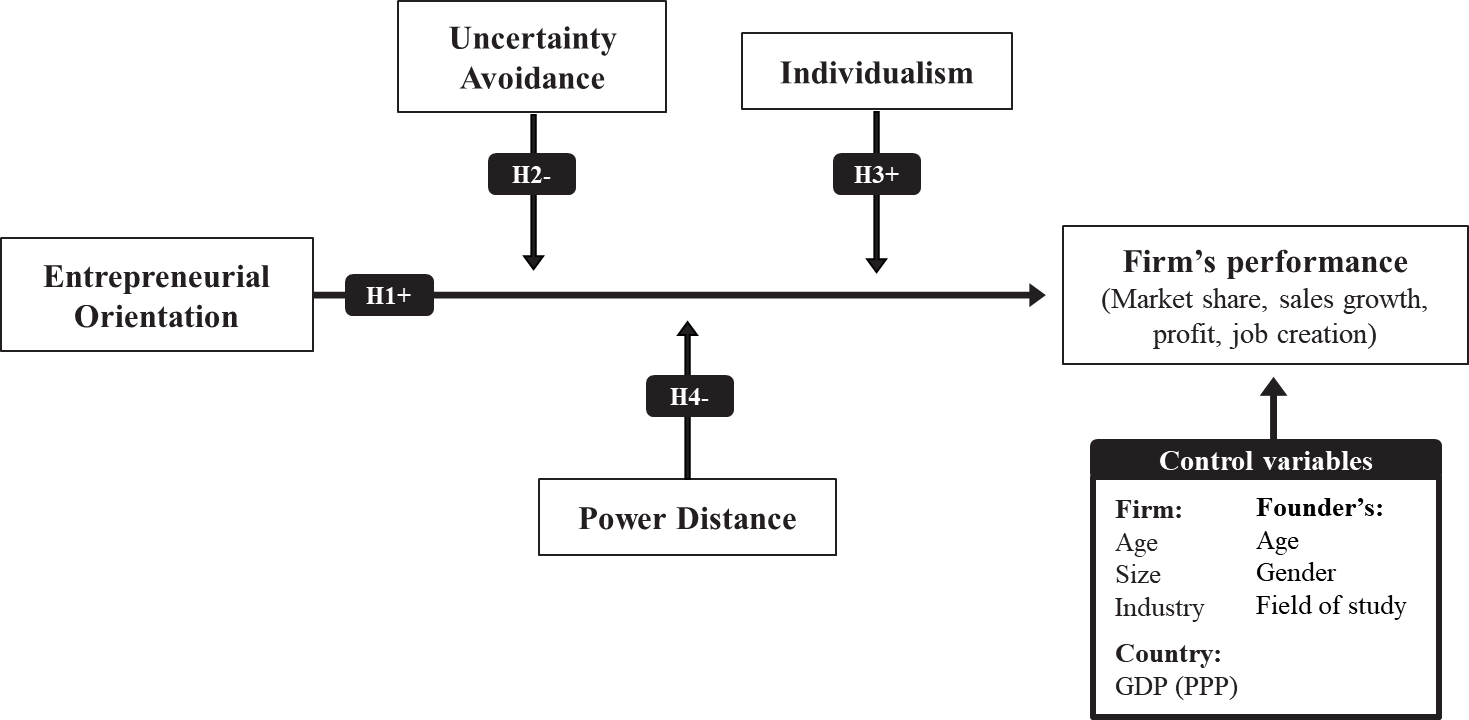


Figure 1. Theoretical model

By itself, the first chapter of the present study proved the relevance of the construct of Entrepreneurial Orientation and identified a gap present in the research of the factors influencing the EO-Performance relationship. Apart from stating the hypothesis about unconditionally positive relation between EO and performance, the review pointed out the importance of its cultural contingencies. Between other measurement frameworks, the study has reasonably chosen Hofstede’s cultural dimensions concentrating on uncertainty avoidance, power distance and individualism, which was reflected by the corresponding hypotheses to be tested in the next chapter. The quantitative side of the study is aimed at identifying the hypotheses suitable for being a basis of final managerial implications. These implications are to suggest a list of countries, where the implementation of EO would be followed by the most substantial economic effect.

CHAPTER 2. MODERATING ROLE OF NATIONAL CULTURE IN THE EO-PERFORMANCE RELATION: EMPIRICAL EVIDENCE FROM 46 COUNTRIES

## 2.1. Sample

The primary source of data being used in this study is the Global University Entrepreneurial Spirit Students’ Survey (GUESSS). GUESSS is an international survey conducted inside more than 1,000 universities from more than 50 countries. In order to make this study more relevant, the seventh and the latest possible edition of GUESSS dating from the year of 2016 was used. The total number of respondents for 2016 equaled 122,509 respondents from 187 countries, while data collection was conducted in Spring/Summer of 2016. GUESSS is organized by Swiss Institute for Small Business and Entrepreneurship at the University of St. Gallen and is run every two years since 2003 under the initial title of ISCE – International Survey on Collegiate Entrepreneurship. Its fundamental target is to identify the number of active and potential entrepreneurs from among university students, as well as drivers and motivations of their intentions and activities. For today, the survey was conducted 7 times: in the years of 2003, 2004, 2006, 2008, 2011, 2013/2014, and 2016. The official GUESSS international report substantiates the relevance of the study in the following way: “Young individuals, and particularly students, represent the entrepreneurs of tomorrow. It is thus imperative to know how many students intend to pursue an entrepreneurial career, why, why not, and how many are in the founding process or have already created a business.” (Sieger et al., 2016, p.1) Thus, it appears important to note, that GUESSS gives us an opportunity to get the perspective of emerging entrepreneurs, the generation that will be in charge of the most influential business decisions during the subsequent decade all around the world.

Russia started its participation in GUESSS survey in the year of 2011, when 2882 respondents from 23 Russian universities participated in the project. In 2016, the latest edition of the survey experienced further increase on scope: from May to July, the project gathered data of 33 universities. The Center of Entrepreneurship at Graduate School of Management of Saint-Petersburg State University was in charge of survey distribution, translation as well as engagement of universities. Professor Galina V. Shirokova, the Russian leader of the project, provided an access to the results of GUESSS 2016 to be used by the present study.

The study consists of ten integral sets of questions, starting with the identification of a respondent and then moving to the questions about university environment, career planning and the place of entrepreneurship in it, cultural specifics and perceptions, business succession and active entrepreneurial efforts. The latter is especially crucial for this report, as one of the subsets of the survey exactly resembles the most common Entrepreneurial Orientation index questionnaire already discussed in the first chapter of this research. Moreover, GUESSS enables its users to get data about business performance of those who has already become active entrepreneurs.

The first step of getting the sample used to test the hypotheses, was to exclude the respondents who are not entrepreneurs and therefore do not manage any kind of business to draw conclusions about its Entrepreneurial Orientation and performance. In order to provide the clearest understanding possible, the steps of sample adjustment are presented below:

1. Exclusion of the respondents not owning a business
2. Exclusion of the international exchange students, motivated by the fact that the businesses of these respondents are likely to be located in their home countries, which may result in incorrect measurement of national culture
3. Exclusion of the respondents living in the country reported by them, for less than 10 years. Such values are likely to contaminate the results, as the national origin of firms founded by the respondents may be different from founders’ nationality
4. Exclusion of the participants from the countries with no data of Hofstede cultural dimensions
5. Missing values: it was decided to exclude all the missing values possible to influence the calculations in order to achieve the most precise result
6. Exclusion of the values likely to contaminate the outcomes due to their unreliability (e.g. respondents older than 100 years etc.)

The resulting sample contained **7384** firms from **46** countries.

## 2.2 Measures employed

Dependent variable

In accordance with the topic, the data about performance of the same firms had to be collected. Naturally, the only appropriate source of these data was the GUESSS study, where it was reflected in the section 9.4. It is important to note, that the perceived performance is questioned in its relative form (i.e. comparative to competitors), which increases the relevance of the data. The original question required assessing four performance-related measures comparing to firm competitors. The measures included making profit, sales growth, market share growth and job creation and were to be assessed using 7-point scale from ‘very poor’ to ‘very well’.

Similar to the calculation of dependent variable, in this case the average value between all four responses was calculated and used in the hypotheses testing. The resulting Cronbach’s alpha for the components of this variable equaled 0.89, signaling about a high level of summative rating reliability.

Independent variable

The independent variable if obviously represented by the Entrepreneurial Orientation. As it was discussed above, the majority of today’s studies are using the classic Miller/Covin-Slevin questionnaire (‘Entrepreneurial Orientation index’) with three questions per each dimension of innovativeness, proactiveness and risk-taking (Covin & Slevin, 1989). Consistent with this, the GUESSS study incorporated this set of questions under the section 9.4, so that the questions were not modified at all. A respondent is asked to choose, which of two opposing statements is closer to him/her. The scale has also remained similar: there are seven points from the closest to the first statement to the closest to the second. The set of questions measuring the level of EO is presented in the Appendix 3 along with the measurement scale.

It was decided to employ the unidimensional approach of measuring the EO. Between the reasons of it are the following: already discussed relevance of the approach, better compatibility with existing studies and author’s adherence to unidimensionality of the construct. As the questionnaire’s scale is coherent, an average of all nine values was calculated in order to form the resulting variable to be used during the hypotheses testing. The resulting measure of consistency (Cronbach’s alpha) of this variable equaled 0.87, which indicates a high level of reliability.

Moderator variables

The first chapter of this study explained the choice of natural culture as a moderator of the EO-Performance relationship. To assess national culture, the most established and compatible framework was chosen. Due to the reasons explained in the first chapter, the only dimensions used in this study are Power Distance (PDI), Individualism (IDV) and Uncertainty Avoidance (UAI). To get the exact scores of each of resulting 46 countries, we used the scores based on Geert Hofstede’s latest Value Survey Module (Hofstede Insights, 2015). The resulting list of the country scores is represented by the Table 4.

*Table 4.*

**Hofstede scores of Individualism, Power Distance and Uncertainty Avoidance by country***.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Country* | *PDI* | *IDV* | *UAI* | *Country* | *PDI* | *IDV* | *UAI* |
| Albania | 90 | 20 | 70 | Ireland | 28 | 70 | 35 |
| Argentina | 49 | 46 | 86 | Italy | 50 | 76 | 75 |
| Australia | 36 | 90 | 51 | Japan | 54 | 46 | 92 |
| Austria | 11 | 55 | 70 | Lithuania | 42 | 60 | 65 |
| Belgium | 65 | 75 | 94 | Luxembourg | 40 | 60 | 70 |
| Brazil | 69 | 38 | 76 | Malaysia | 100 | 26 | 36 |
| Canada | 39 | 80 | 48 | Mexico | 81 | 30 | 82 |
| Chile | 63 | 23 | 86 | Morocco | 70 | 46 | 68 |
| China | 80 | 20 | 30 | Norway | 31 | 69 | 50 |
| Colombia | 67 | 13 | 80 | Pakistan | 55 | 14 | 70 |
| Czech Republic | 57 | 58 | 74 | Panama | 95 | 11 | 86 |
| Ecuador | 78 | 8 | 67 | Peru | 64 | 16 | 87 |
| United Kingdom | 35 | 89 | 35 | Poland | 68 | 60 | 93 |
| El Salvador | 66 | 19 | 94 | Portugal | 63 | 27 | 99 |
| Estonia | 40 | 60 | 60 | Russia | 93 | 39 | 95 |
| Finland | 33 | 63 | 59 | Slovakia | 100 | 52 | 51 |
| France | 68 | 71 | 86 | Slovenia | 71 | 27 | 88 |
| Spain | 57 | 51 | 86 | South Korea | 60 | 18 | 85 |
| Croatia | 73 | 33 | 80 | Sweden | 31 | 71 | 29 |
| Germany | 35 | 67 | 65 | Switzerland | 34 | 68 | 58 |
| Greece | 60 | 35 | 100 | Ukraine | 92 | 25 | 95 |
| Hungary | 46 | 80 | 82 | United States | 40 | 91 | 46 |
| India | 77 | 48 | 40 |  |  |  |  |

Every dimension was coded in the original scale, which resulted in three separate variables. Accordingly, these variables were used as the moderators during the hypotheses testing.

Control variables

Consistent with other researchers (e.g. Dess et al., 2010), it was decided to use the following set of firm-related variables as controls:

* Gross domestic product (at purchasing power parity) per capita for each of 46 countries, also used as a control variable by other studies he data is based on the estimations of Worldbank (The World Bank Group, 2016)
* Firm age, proven to influence firms’ behavior in a way that younger firms tend to be more open for innovations and change (Tang & Hull, 2012), was based on the corresponding question of GUESSS survey (section 9.1). The original question asked a respondent about the year, when he or she has founded a business. Correspondingly, the age of a firm was simply calculated by the subtraction from the year of 2018 resulting in moderator variable.
* Firm size, which is likely to affect the level of EO (Wiklund & Sheperd, 2005; Lumpkin & Dess, 1996), is similarly based on the question from the same section of GUESSS questionnaire. The question asked about a precise number of employees or full time equivalents employed by an entrepreneur’s firm. The resulting scaling of the variable remained unchanged.
* Industry, to which a firm belongs, was also considered as one of control variables, as it was already shown to influence the level of EO (Kreiser et al., 2010). The data needed were provided by the same questionnaire in a form of closed question (the original text of the questionnaire was subjected to minor changes). The question required to choose one industry from the list of eleven supplemented by the term ‘other’. The resulting list of industries (present in Table 7) is developed in accordance with the official NACE classification that is a standard for the European Community (Eurostat, 2017). To introduce such a categorical variable as industry into the hierarchical regression, it was decided to follow the approach suggested by other researchers (e.g. Kreiser et al., 2010) by coding it as 12 separate dummy variables.

Furthermore, following the approach of other researchers (e.g. Rauch et al., 2010), the study was decided to control for founder-related factors along with firm-related ones. All the following variables based on the corresponding items of GUESSS 2016. The founder-related control variables are listed as follows:

* Founder’s gender, coded as dummy variable, where 1 denoted ‘male’ and 0 denoted ‘female’.
* Founder’s age, which is (along with the gender) considered to specifically influence the strategy-making process (Verheul et al., 2006). The age was calculated by subtracting of respondent’s year of birth from the year of 2016, when the study was conducted.
* Field of study, which was coded as a dummy variable. The original question containing 8 alternatives including ‘other’, where economy-related studies (including business and law) while accumulating around 36% of the sample were opposed to all other variants. The rationale of it was to check if economics background might influence the study results.

Empirical models

Studies from the domain of entrepreneurship are notable for using regression analysis to prove the stated hypotheses (Urbano & Alvarez, 2014). Therefore, this research was decided to exploit it in the form of hierarchical linear regression. Moreover, due to the stated hypotheses, moderator variables will be included into this method in a form of interactions. The first regression model was built by adding the aforementioned control variables. Second, the model was enhanced by the independent variable (compound Entrepreneurial Orientation score) and the moderator variables. Finally, on the third stage the moderators (Power Distance, Individualism and Uncertainty Avoidance) and the interactions between moderators and the independent variable were introduced into the model in order to prove the moderating effects.

## 2.3 Results

In order to provide a more coherent understanding of the data being used, the resulting set of variables including controls and moderators was summarized in the Table 5 using the most common descriptive statistics.

*Table 5.*

**Descriptive statistics**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Variable* | *Means* | *S.D.* | *Min* | *Max* |
| *Dependent variable* |  |  |  |  |
| Firm performance | 4.5742 | 1.5836 | 1 | 7 |
| *Control variables (Country- and firm-related)* | |  |  |  |
| GDP (PPP) per capita | 24479 | 13287 | 5235 | 102389 |
| Size | 4.9886 | 33.065 | 0 | 2010 |
| Age | 4.0231 | 5.2366 | 0.8 | 151.8 |
| *Control variables (Founder-related)* |  |  |  |  |
| Age | 26.298 | 5.3866 | 18 | 47 |
| Field of study | 0.3563 | 0.4789 | 0 | 1 |
| Gender | 0.5641 | 0.4959 | 0 | 1 |
| *Moderators* |  |  |  |  |
| Power Distance | 63.993 | 19.103 | 11 | 100 |
| Individualism | 72.601 | 19.566 | 29 | 100 |
| Uncertainty Avoidance | 36.42 | 23.208 | 8 | 91 |
| *Independent variable* |  |  |  |  |
| Entrepreneurial Orientation | 4.5659 | 1.2113 | 1 | 7 |

Note: N=7384

The Pearson’s pairwise correlation coefficients between each of the variables except industry-related ones are reported in the Table 6.

Table 6.

Summary of correlations

N=7384. Correlations greater than 0.02 are signiﬁcant at p < 0.05.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *N* | *Variable* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *8* | *9* | *10* | *11* |
| 1 | Firm performance | 1.00 |  |  |  |  |  |  |  |  |  |  |
| 2 | GDP (PPP) per capita | -0.38 | 1.00 |  |  |  |  |  |  |  |  |  |
| 3 | Firm size | 0.05 | -0.04 | 1.00 |  |  |  |  |  |  |  |  |
| 4 | Firm age | -0.01 | 0.08 | 0.09 | 1.00 |  |  |  |  |  |  |  |
| 5 | Founder’s age | -0.11 | 0.17 | -0.01 | 0.30 | 1.00 |  |  |  |  |  |  |
| 6 | Founder’s field of study | 0.07 | -0.08 | 0.00 | -0.03 | -0.05 | 1.00 |  |  |  |  |  |
| 7 | Founder’s gender | -0.03 | 0.06 | 0.00 | 0.00 | 0.00 | -0.01 | 1.00 |  |  |  |  |
| 8 | Power Distance | 0.27 | -0.65 | 0.02 | -0.10 | -0.25 | 0.06 | -0.04 | 1.00 |  |  |  |
| 9 | Individualism | -0.04 | -0.10 | -0.04 | -0.06 | -0.04 | 0.14 | 0.05 | -0.05 | 1.00 |  |  |
| 10 | Uncertainty Avoidance | -0.35 | 0.74 | -0.03 | 0.09 | 0.22 | -0.02 | 0.02 | -0.64 | -0.07 | 1.00 |  |
| 11 | Entrepreneurial Orientation | 0.40 | -0.19 | 0.03 | -0.04 | -0.02 | 0.00 | 0.06 | 0.15 | -0.10 | -0.23 | 1.00 |

*Table 7.*

**Regression outputs (Models 1, 2 and 3)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Variables* | *Model 1* | | *Model 2* | *Model 3* | |
| *Control variables* |  | |  |  | |
| GDP (PPP) per capita | 0.000\* | | 0.000\* | -0.013\* | |
| Advertising/Design/Marketing | -0.437\* | | -0.397\* | 0.127\* | |
| Architecture and Engineering | -0.480\* | | -0.445\* | -0.060† | |
| Consulting | -0.303\* | | -0.278\* | 0.011\* | |
| Construction | -0.193 | | -0.146 | 0.000\* | |
| Education and training | -0.543\* | | -0.431\* | -0.380\* | |
| Financial services | 0.000 | | 0.000 | -0.457\* | |
| Human health / social work | -0.190 | | -0.148 | -0.176 | |
| Information technology | -0.504\* | | -0.514\* | -0.281\* | |
| Manufacturing | -0.424\* | | -0.308\* | -0.389\* | |
| Tourism and leisure | -0.248\*\* | | -0.155 | 0.000\* | |
| Trade | -0.238\*\* | | -0.114 | -0.144 | |
| Other | -0.505\* | | -0.365\* | -0.474\* | |
| Firm size | 0.002\* | | 0.001\* | -0.279\* | |
| Firm age | 0.009\* | | 0.013\* | -0.133 | |
| Founder’s age | -0.015\* | | -0.016\* | -0.076 | |
| Founder’s field of study | 0.085\*\* | | 0.092\* | -0.324\* | |
| Founder’s gender | -0.008 | | -0.069\*\* | 0.001\*\* | |
| *Independent variable* |  | |  |  | |
| Entrepreneurial Orientation |  | | 0.446\* | 0.386\* | |
| *Moderator variables* |  | |  |  | |
| Uncertainty Avoidance |  | |  | 0.020\* | |
| Individualism |  | |  | -0.016\* | |
| Power Distance |  | |  | -0.022\* | |
| *Interactions* |  | |  |  | |
| Entrepreneurial Orientation x Uncertainty Avoidance | | | | -0.005\* | |
| Entrepreneurial Orientation x Individualism | | | | 0.002\* | |  | |
| Entrepreneurial Orientation x Power Distance | | | | 0.005\* | |  | |
| Constant | 6.326\* | 4.059\* | | | 4.385\* | |
| R² | 0.156 | 0.266 | | | 0.281 | |
| ΔR² |  | 0.110 | | | 0.015 | |

Notes: \*significance at the level p < 0.01; \*\*significance at the level p < 0.05; †significance at the level p < 0.1.

In accordance with the method, the hierarchical linear regression was run in three steps. The first step resulted in the creation of base model (Table 7, Model 1) explaining the variance of dependent variable using the control variables only. The second step (Table 7, Model 2) lay in identifying the direction of the discussed relationship by adding an independent variable (Entrepreneurial Orientation) into the model. The third and last step (Table 7, Model 3) is related to the moderating effect of the dimensions of national culture by adding moderator variables and their interactions.

The base model intended on identifying the control variables possible to influence the tests of hypotheses resulted in the following outcomes: GDP per capita showed a very weak influence on company performance although being a significant predictor. The majority of industries present in the study have a statistically significant impact on company performance except for construction, financial services, human health / social work. The majority of industry coefficients appeared to be negative, indicating a negative relation, which may be caused by the specificity of data. Controlling for firm age and size resulted in a weak positive relation, which could be explained by the premise that the entrepreneurial firms that exist for some time on the market tend to accumulate experience and therefore increase the performance. Founder’s age occurred to negatively influence firm performance: according to extant research, ageing negatively influences creativity, a mental ability that is very essential for entrepreneurship (Roskos-Ewoldsen et al., 2008). Finally, field of study appeared to be the biggest positive predictor of the base model: economy-related education does comply with its purpose quite well. By itself, the base model explained only about 16% of variation although being statistically significant: the resulting R-squared equaled 0.156 (P<0.05).

The second model formed by adding the EO into the based model significantly increased the explained variance: the R-squared coefficient grew by 70% resulting in a value of 0.266. As expected, Entrepreneurial Orientation demonstrated a solid positive influence on firm performance resulting in a coefficient of 0.446 (P<0.01) which is consistent with other studies while considerably surpassing the meta-score of 0.242 (Rauch et al., 2009). Thus, the regression analysis suggests a presence of statistically significant positive association that enables us to accept the Hypothesis 1.

The set of variables added to the second model was intended on testing of the moderating effect of national culture and consisted from three already discussed dimension scores and the corresponding interactions. The model demonstrated further growth of the percentage of explained variance: R-squared equaled 0.281 resulting in a 5% increase. Although it was not the question of the present study, by themselves, Individualism and Power Distance showed a weak negative association with firm performance, while Uncertainty Avoidance showed a positive.

With regard to the second hypothesis, the third regression model suggests that Uncertainty Avoidance negatively moderates the EO-Performance relationship. In other words, in the cultures characterized by high level of Uncertainty Avoidance, the discussed relation will be weaker. As the regression coefficient resulted to be statistically significant (b=-0.005; p=0.000), it empowers us to accept the second hypothesis.

The next hypothesis to be discussed is the hypothesis 3 stating that individualism positively moderates the relation between EO and firm performance. According to the result of regression analysis, the interaction of EO and individualism appeared to be a positive predictor of firm performance, which indicates a positive moderation of the discussed relation by individualism. Taking into account the significance of the coefficient (b=0.002; p=0.008), the hypothesis 3 is suggested to be accepted: in highly individualistic cultures, the relation will be stronger.

Finally, the fourth hypothesis concerning the moderating effect of power distance resulted in the interaction coefficient that suggests its positive contribution into the EO-Performance relation (b=0.005; p=0.000). Accordingly, the result contradicts with the stated hypothesis while passing the significance test and leaving us nothing but to reject the fourth hypothesis. An attempt to explain the reasons of this outcome will be made in the subsequent section of the study.

In order to summarize the results of hypotheses testing, we created Table 8, which provides the reader with judgements about significance of the tests and the conclusions about each of hypotheses.

*Table 8.*

**Hypotheses testing summary**

|  |  |
| --- | --- |
| *Hypothesis* | *Result* |
| **H1**: Across countries, EO is positively related to firm performance | Accepted |
| **H2**: In cultures with high level of uncertainty avoidance, the relationship between EO and performance will be weaker. | Accepted |
| **H3**: In individualistic cultures, the relationship between EO and performance will be stronger. | Accepted |
| **H4**: In cultures with high level of power distance, the relationship between EO and performance will be weaker. | Rejected |

## 2.4 Discussion

The present study exploited the most widely used EO conceptualization approaches, agreeing with a vast majority of researchers about the unidimensionality of EO, prevalence of contingency approach and the original set of three dimensions of EO (Covin & Slevin, 1989). It allowed us to dive deeply into the contingencies of the EO-Performance relation and follow one of the most promising avenues of the research by stating the hypotheses about the moderating role of national culture in the relationship.

First, consistent with an extant research (Saeed et al., 2014), the discussed relationship appeared to be positive and, as it was already mentioned, even substantially stronger than by many other studies. The regression analysis has shown one more time, that by adopting innovativeness, proactiveness and risk-taking a firm is very likely to perform successful. Moreover, from the perspective of unidimensionality, the specific strength of the relation could be explained by the specificity of the sample: it mainly consists of young entrepreneurial firms, between whose the relation tends to be stronger because they are more flexible and faster to act to the emerging opportunities (Rauch et al., 2009).

Second, the negative moderation of the relation by uncertainty avoidance supported by the statistical test can be explained by the already discussed rationale: the skepticism of risk-averse counterparts and stakeholders of an entrepreneurial firm tend to cause insufficient innovation adoption and resource allocation, thus decreasing firm performance (van Everdingen & Waarts, 2003). Moreover, an absence of uncertainty avoidance facilitates the flow of ideas inside an entrepreneurial firm, allowing risky and deviant but perspective ideas to be embodied in the products that increase company performance. Furthermore, the finding about positive moderation of the relation by Uncertainty Avoidance is supported by the extant studies including one meta-analysis (Swierczek & Thanh Ha, 2003; Saeed et al., 2014).

Third, Individualism was found to positively moderate the EO-Performance relationship. Among other two cultural contingencies, this finding is the most supported by the extant research. Previous studies both as an antecedent and a moderator of the discussed relation, while the letter is supported both by the studies based on primary data (Kreiser et al., 2012) and meta-analyses (Saeed et al., 2014). Furthermore, the finding is implicitly supported by the study employing a measurement framework different to the one used by the present study (Semrau et al., 2016). The finding corresponds with the rationale of the stated hypothesis: First, firms from individualistic cultures tend to be more performance-centric, which influences the results of the implementation of EO positively. Second, individualistic cultures are more tolerant to failures, which enables entrepreneurial firms to execute their strategy more successfully. Finally, collectivistic environment may consider proactive entrepreneurial firms as out-groups, which is likely result in a skepticism towards products or services of such firms and thus a decreased performance. Similarly, individualistic markets would encourage innovations and grant innovative firms with substantial performance gains.

Fourth, the reject of the hypothesis suggesting the negative moderation of the discussed relationship caused by Power Distance and its discrepancy with the results of some extant studies (e.g. Saeed et al., 2014) may be attributed to the specificity of the sample. For instance, the finding may be explained by the fact, that a vast majority of the used sample of firms have the size of one or several employees and even in case of highly power-distant national cultures, the inhibiting effects of this dimension do not play any important role. However, taking into account the fact, that no previous study testing the impact of Power Distance on the discussed relationship was based on primary data, this discrepancy does not appear to be an issue for the present study.

Next, between the variables we controlled for, the most noteworthy appeared the founder’s field of study, which has proven that economy-related background does influence firm performance positively. Furthermore, gender appeared to be an insignificant moderator, which contradicts with some extant research (e.g. Pines et al., 2010) and possibly shows some recent shifts in gender equality.

Finally, the present study contributes to the extant research in the field of international entrepreneurship in a way that the source of data being used expresses the insights of young entrepreneurs. These individuals have founded their businesses while their primary occupation was university studies, which reflects their entrepreneurial ambitions and talent. Furthermore, some part of these active entrepreneurs are likely to grow into powerful top managers and key decision makers in the following decade. Thus, the study may even increase in its relevance during the subsequent years.

CONCLUSION

The goal of the present study was to identify the factors influencing the relationship between the Entrepreneurial Orientation and firm performance. Using more than a hundred of academic sources to outline the origins of the construct of EO, its relation to firm performance and the moderators possible to influence this relationship, the present study concludes on investigating the moderating role of national culture to address the existing research gap. Taking into account the discussed rationale, the study concludes on using Hofstede dimensions as national culture measurement framework.

Based on premises of the extant research, the dimensions of uncertainty avoidance, individualism and power distance were chosen to be the moderators of the EO-Performance relationship. The moderating effects and a universally positive influence of EO on performance was tested using the techniques of hierarchical linear regression on the sample of 7384 students from 46 countries retrieved from the GUESSS 2016 study. The results indicate a positive association between the EO and firm performance, which appear to be stronger in the cultures characterized by low uncertainty avoidance and individualism. Moreover, the regression analysis failed to support the hypothesis about negative moderation of the same relationship caused by power distance.

Expectantly, the findings of the present study would appear relevant for the academic community, as it explicitly addresses the research gap and requests of other scientists concerning an insufficient amount of studies concentrated on cultural contingencies in the discussed relationship. In particular, this research is the only one concentrating on the moderating effect of uncertainty avoidance, individualism and power distance in the discussed relationship while considering the EO as a unidimensional construct. Furthermore, the study is based on very reliable data supposed only to increase their relevance during the subsequent years. By incorporating 46 countries, these data substantially broaden the scope of the extant research, which was on average concentrated on less than ten countries. Finally, the study contributes to the research of international entrepreneurship by investigating

Similar to any other research, the present study has its limitations. Foremost, the resulting sample is characterized by a substantial homogeneity, as it consists of emerging firms managed by student entrepreneurs only, which narrowed the scope of findings. The future researchers are proposed to broaden the scope of research by testing similar hypotheses on different and more diverse samples. Second, the set of control and moderating variables was limited: controls included only one country-level and several firm- and founder-related moderators while limiting national culture measurement by the Hofstede framework. Accordingly, future studies may explain variance of the discussed relation to a greater extent by controlling for more variables and/or employing different measurement of national culture. Ultimately, the moderators employed by the present study may appear to be antecedents of the investigated relation. This issue is also suggested being addressed by the further research.

Regarding the implications managers can get from the results of this study, first, Entrepreneurial Orientation is likely to be a viable source of competitive advantage for businesses existing under today’s increasingly competing and complex environment. Especially, if a business corresponds with characteristics of the sample (Table 5) to some extent, it is likely to get substantial performance gains from the implementation of EO. Second, the business existing in the national cultures characterized by low uncertainty avoidance, it is likely to specifically benefit from the implementation of EO compared to the countries with higher score on this dimension. Similarly, the study results suggest that in countries with higher individualism the discussed relation will be stronger compared to those with lower score on this dimension, which indicated increased performance improvements in case of EO implementation. Accordingly, firms from the cultures characterized by collectivism and high uncertainty avoidance are suggested to consider other strategic orientations, as in such cases the positive EO-Performance relation appeared to be weaker. Summarizing the results, between the 46 countries present in the study, firms from the cultures of individualism and low uncertainty avoidance (e.g. United States, Australia, United Kingdom etc.) are advised to pay a specific attention to Entrepreneurial Orientation, as it is able to grant them with significant performance gains.

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APPENDICES

*Appendix 1. Publications on Entrepreneurial Orientation, 1995-2017 (Web of Science)*

*Appendix 2. Publications on cultural contingencies of Entrepreneurial Orientation, 2011-2017 (Web of Science)*

*Appendix 3. Set of questions measuring the Entrepreneurial Orientation, GUESSS 2016.*

|  |  |  |
| --- | --- | --- |
| *The following questions contain two opposing statements. Neither is better or worse than the other. Please indicate with which statement you are closer in agreement (1=first answer, 7= second answer). In general, my business in a whole favors…* | | |
| **Innovativeness items** |  |  |
| In general, the top managers of my firm favor . . . | | |
| A strong emphasis on the marketing of tried-and-true products or services | 1 2 3 4 5 6 7 | A strong emphasis on R&D, technological leadership, and innovations |
| How many new lines of products or services has your firm marketed in the past five years (or since its establishment)? | | |
| No new lines of products or services | 1 2 3 4 5 6 7 | Very many new lines of products or services |
| Changes in product or service lines have been mostly of a minor nature | 1 2 3 4 5 6 7 | Changes in product or service lines have usually been quite dramatic |
| **Proactiveness items** |  |  |
| In dealing with its competitors, my firm . . . | | |
| Typically responds to actions which competitors initiate | 1 2 3 4 5 6 7 | Typically initiates actions to which competitors then respond |
| Is very seldom the first business to introduce new products/services, administrative techniques, operating technologies, etc. | 1 2 3 4 5 6 7 | Is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc. |
| Typically seeks to avoid competitive clashes, preferring a “live-and-let-live” posture | 1 2 3 4 5 6 7 | Typically adopts a very competitive,  “undo-the-competitors” posture |
| **Risk-taking items** | | |
| In general, the top managers of my firm have . . . | | |
| A strong proclivity for low-risk projects (with normal and certain rates of return) | 1 2 3 4 5 6 7 | A strong proclivity for high-risk projects (with chances of very high returns) |
| In general, the top managers of my firm believe that . . . | | |
| Owing to the nature of the environment, it is best to explore it gradually via cautious, incremental behavior | 1 2 3 4 5 6 7 | Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm’s objectives |
| When confronted with decision-making situations involving uncertainty, my firm . . . | | |
| Typically adopts a cautious, “wait-and-see” posture in order to order to minimize the probability of making costly decisions | 1 2 3 4 5 6 7 | Typically adopts a bold, aggressive posture in maximize the probability of exploiting potential opportunities |