CONSIDERATIONS OF NATIONAL CULTURE'S ROLE IN EXPLAINING COMPETITIVENESS

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CONSIDERATIONS OF NATIONAL CULTURE'S ROLE IN EXPLAINING COMPETITIVENESS

Abstract

This paper aims to map the connection between national culture and competitiveness. Competitiveness includes the set of institutions, policies, and factors that determine the level of productivity of a country. Although competitiveness can be a result of several drivers, we argue that as some of these are people driven, competitiveness must be related to basic underlying assumptions, espoused values and artefacts shared by the people from the observed entity. This makes competitiveness closely related to national and organizational culture. Cross-country analysis has indicated that national culture features do have an impact on national competitiveness. The empirical analysis of global competitiveness index and Hofstede's cultural variables has shown that uncertainty avoidance index negatively affects competitiveness, but long term orientation index affects competitiveness in a positive way. Therefore, policy makers should be aware that not only tangible economic factors lead to competitiveness but intangible factors such as culture should also be considered in attempts to improve competitiveness.

Keywords: Competitiveness, national culture, organizational culture

1. Introduction

The concept of competitiveness has been largely discussed over the last decades. An important aspect of those discussions is the level at which the concept of competitiveness is defined since both companies and countries are forced to compete with each other in order to sustain economic development (Overbaugh, 2013). A separate issue is the question what causes the differences in competitiveness.

World Economic Forum defines competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity determines the level of prosperity that can be reached by an economy. Pursuant to said definition, the Global competitiveness report assesses the competitiveness of 140 economies, providing insight into the drivers of their productivity and prosperity.[1] Although those drivers are organized in 12 relatively independent pillars, we argue that, as being people driven, all those pillars are closely related to basic underlying assumptions, espoused values and artefacts shared by the people from the observed entity. This makes competitiveness closely related to national and organizational culture.

The concept of culture has been studied by many scholars; as a result, specific characteristics of culture at different levels (nations, industries, organizations) have become part of the extant knowledge.

As a consequence of different cultures, human behaviour becomes somewhat predictable. However, when it comes to managing specific cultures in a way that would foster certain goals, for instance productivity or competitiveness, there is a gap that requires further research and better understanding. The purpose of this paper is to perform an investigation of cultural determinants of competitiveness. The research question to be answered by this paper is: "Are some nations and organizations predetermined to be more competitive due to prevailing cultural values?"

Global competitiveness index was used[2] as the measure of country-level competitiveness. National cultures have been conceptualized by using Hofstede's framework of cultural dimensions (Hofstede, 1991). The results of this study identify critical features of national culture that are important for the effective management of organizational culture in order to boost competitiveness.

2. Theoretical framework

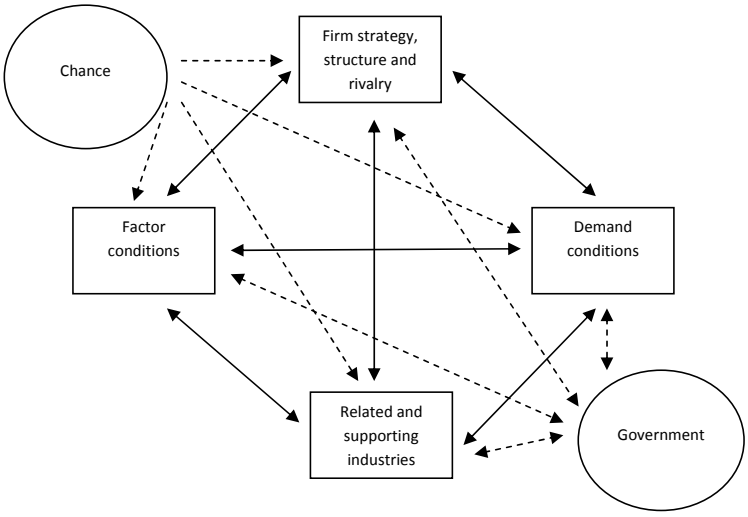
2.1 Competitiveness

Countries and leaders place great emphasis on competitiveness, since it is considered a key determinant for growth and new jobs creation. The issue of national productivity is a long-standing topic that occupied even classical scholars like Montesquieu, Smith and Weber (Yeganeh, 2013). These authors argued that work ethic in some countries influences economic development or is the reason for lower economic development in some countries. Yet, national competitiveness is considered a relatively new concept that has been widely defined and measured.

However, competitiveness is not an unambiguous concept and existing studies identify differences in unit entity. Meyer Stammer[3] suggested four levels of competitiveness: microlevel (where companies compete in competitive markets), mesolevel (targeted interventions against market failure), macrolevel (institutions, economic policies and framework conditions) and metalevel (basic orientations in a given society). Another study distinguished between competitiveness of companies, sector competitiveness, regional competitiveness, national competitiveness, bloc competitiveness and global competitiveness (Balkyte, Tvaronavičiene, 2010). Thus, definitions of competitiveness differ with respect to the level aspect.

In this paper we focus on country competitiveness. Regarding the country competitiveness, numerous scholars contributed to the contemporary theory. In his book "The competitive advantage of nations", Michael Porter introduced the Diamond model, comprising of four key elements that lead to national competitiveness (Porter, 1990).

Figure 1 Porter's Diamond model

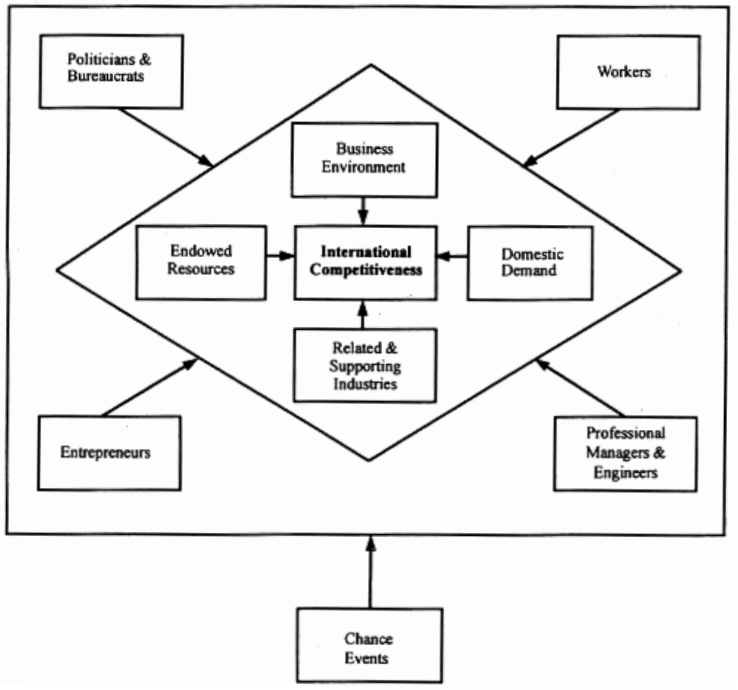


Source: Porter (1990: 127)

Many studies appreciated Porter's model and have evaluated the concept of national competitiveness based on it (Berger, 2008; Snowdon, 2006), but there are also researchers who have criticized it. Among the critics and due to the research question of this paper, it is interesting to single out the opinion of Bosch and Prooijen (1992), who have commented the lack of attention given to the role of national culture in the Diamond model. They emphasize that different national cultures cause different national environments, which give rise to differences in competitive advantages between European countries.

There are many other different frameworks of competitiveness (for an overview see e.g. Walter, 2005; Cellini, Soci, 2002), but speaking of cultural determinants of competitiveness, it is interesting to emphasize that even at the national level of competitiveness there are models appreciating "soft" elements. Moon and Cho (2000) proposed the integrated "Nine-Factor Model" of competitiveness, which encompasses both physical and human factors (Figure 2). Human factors mobilize physical factors, thereby creating and maximizing competitiveness.

Figure 2 The Nine-Factor Model



Source: Moon, Cho (2000: 22)

There are both scholarly and institutional definitions of competitiveness that are in compliance with competitiveness research at the national level. Balkyte and Tvaronavičiene (2010) argue that competitiveness refers to the overall economic performance of a nation measured in terms of its ability to provide citizens with growing living standards on a sustainable basis and broad access to jobs for those willing to work. World Economic Forum defined competitiveness as "the set of institutions, policies and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can achieve"[4]. Official opinion of the National Competitiveness Council in Croatia is built on that basis, describing competitiveness as "a group of elements, development policies and institutions which, by their correlation, influence the general level of productivity and the quality of the business sector and business environment"[5]. In the International Institute for Manage-

ment Development's (IMD) World Competitiveness Yearbook, competitiveness is defined as a field of economic theory which analyzes the facts and policies that shape the ability of a nation to create and maintain an environment that sustains more value creation for its enterprises and more prosperity for its people (Garelli, 2005). According to the findings from the WWWforEurope project, promoted by The Organisation for Economic Co-operation and Development (OECD), competitiveness is "the ability of a country (region, location) to deliver the beyond-GDP goals for its citizens today and tomorrow" (Aiginger et al., 2013). Similarly, at the German Development Institute in Berlin, competitiveness is defined as the "ability of a locality or region to generate high and rising incomes and improve livelihoods of the people living there."[6]

Building on level discussions, there are also authors (Yeganeh, 2013) suggesting that national competitiveness can be considered as the aggregation of competitiveness of all businesses operating in a country, meaning that a country is competitive when its companies are competitive. Thus, factors enhancing national competitiveness are very likely to encourage companies' competitiveness. As Michael Porter said: "It is the firms, not nations, which compete in international markets" (Porter, 1990: 33). Another Harvard Business School professor, Christensen, agrees that "nations/regions can compete only if their firms compete" (as per Ambastha, Momaya, 2004: 48). Indeed, the connection of macroeconomic competitiveness with company level competitiveness seems to be straightforward: a stable macroeconomic context increases the opportunity for the new value creation, but it does not create the value itself. The value is created by utilizing at best human capital and natural resources to produce goods and services, i.e. 'productivity'. But productivity depends on the microeconomic capability of the economy which ultimately resides in the quality and efficiency of the firms[7].

Firm level competitiveness can be defined as the ability of the firm to design, produce and/or market products superior to those offered by competitors, considering the price and non-price qualities (D'Cruz, Rugman, 1992), or simply as the ability to compete, to win and to retain position in the market[8]. In order to explain how competitiveness on the firm level can be achieved, business theory provides two basic concepts: market-based view (focusing on environmental factors of a company in order to explain competitive advantages) and resource-based view (focusing on successful utilization of internal resources to gain competitive advantage) (Berger, 2008).

Ambasta and Momaya (2004) have done a review of both external and internal sources of firm level competitiveness, as identified by different researchers. They have grouped them into three categories: assets, processes and performance. Firm assets can be inherited or created, and processes transform assets into economic results. All of the reviewed sources of competitiveness are presented below in Table 1.

Table 1 Sources of firm level competitiveness

ASSETS	PROCESSES	PERFORMANCE
• Brand • Reputation • Culture • Systems • Human resources • Technology	• Strategy • Innovations • Quality • Persuasion power • Flexibility, adaptability • IT applications • Managing relationships • Marketing • Manufacturing • Design & deploy talents • Managing relationships	• Customer satisfaction • Value creation • Market share • New product development • Productivity • Variety, range • Price, cost • Profitability

Source: Ambasta, Momaya (2004: 49)

Many of these sources have been studied before (Lalinski, 2013). However, there is a lack of studies analyzing cultural determinants of competitiveness (Yeganeh, 2013). As the culture has been identified not just as an asset with significant influence on competitiveness, but also as a base of several processes with significant influence (e.g. flexibility, adaptability, innovations, relationships management), we found it important to study the relationship of culture and competitiveness. Our findings shall be presented later in the paper.

2.2 National culture

Culture has become an essential factor in understanding human behaviour. In most general sense, it can be been defined as the collective programming of the mind which distinguishes members of one group or category of people from another (Hofstede, 1991). As with competitiveness, it can also be studied at different levels. A distinction is usually made between national cultures and organization culture, although one can recognize also occupational cultures, business cultures, gender cultures, age group cultures etc. (Hofstede, 1998). National cultures differ mainly on the level of fundamental values, unlike organizational cultures that differ more on the level of superficial practices and, according to Hofstede (1998), can be more manageable. To a greater or lesser extent, organizational culture will be determined by the national culture (Green, 1998; Hofstede, 1998; Ott, 1989).

Due to intangible features associated with cultures in general, organizational culture is a complex concept with different definitions. In the organizational science, the most influential scholar of the organizational culture, Edgar Schein (1992), defines organizational culture as the deeper level of basic assumptions and beliefs that are shared by members of an organization which define the organization's view of it and its environment as well as its *modus operandi*. Interestingly, although it became a widely used concept in the 1980s, its roots can be traced back to 1930s when Mayo and Barnard recognized that lack of competitiveness for some companies can be assigned to the human (cultural) factor (Green, 1998).

Numerous authors have been studying organizational culture and have identified different cultural dimensions (e.g. see Šandrk Nukić, Matotek, 2014). Despite somewhat different typologies, a consensus has emerged that individual members of any group – a nation, an industry segment, a company, etc. – share collective values and behaviour that influence the daily life and activities of that group. This very thinking is the basis of the study presented in this paper, since in this paper we shall study the relationship of competitiveness and culture at a national level but appreciating the fact that this relationship is reflected also to lower levels, especially the firm level of competitiveness and organizational culture. Therefore we shall be using dimensions of culture identified by Gert Hofstede and his colleagues (Hofstede et al., 2010), who have conducted some of the most comprehensive studies on how values in the workplace are influenced by national culture.

Hofstede's model of national culture consists of six dimensions. The cultural dimensions represent independent preferences for one state of affairs over another that distinguish countries from each other. Those dimensions are presented in Table 2.

Table 2 National culture dimensions

	Dimension	Description	Dimension	Description
1. **Power Distance Index (PDI)** *The degree to which the less powerful members of a society accept and expect that power is distributed unequally.*	Low Power Distance Index (PDI) *Value under 50*	In societies with low Power Distance, people strive to equalise the distribution of power and demand justification for inequalities of power.	High Power Distance Index (PDI) *Value over 50*	People in societies exhibiting a large degree of Power Distance accept a hierarchical order in which everybody has a place and which needs no further justification.
2. **Individualism versus Collectivism (IDV)** *A society's position on this dimension is reflected in whether people's self-image is defined in terms of "I" or "we."*	Collectivism *Value under 50*	Preference for a tightly-knit framework in society in which individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty.	Individualism *Value over 50*	Preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate families.

	Dimension	Description	Dimension	Description
3. **Masculinity versus Femininity (MAS)** *In the business context Masculinity versus Femininity is sometimes also related to as „tough versus tender" cultures.*	Femininity *Value under 50*	Society's preference for co-operation, modesty, caring for the weak and quality of life. Society at large is more consensus-oriented.	Masculinity *Value over 50*	Preference in society for achievement, heroism, assertiveness and material rewards for success. Society at large is more competitive.
4. **Uncertainty Avoidance Index (UAI)** *Expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. The fundamental issue here is how a society deals with the fact that the future can never be known: should we try to control the future or just let it happen?*	Low uncertainty avoidance *Value under 50*	Weak UAI societies maintain a more relaxed attitude in which practice counts more than principles.	High uncertainty avoidance *Value over 50*	Countries exhibiting strong UAI maintain rigid codes of belief and behaviour and are intolerant of unorthodox behaviour and ideas.
5. **Long Term Orientation versus Short Term Normative Orientation (LTO)** *In the business context this dimension is related to as "(short term) normative versus (long term) pragmatic".*	Short term orientation *Value under 50*	Societies who prefer to maintain time-honored traditions and norms while viewing societal change with suspicion.	Long term orientation *Value over 50*	Societies that take a more pragmatic approach: they encourage thrift and efforts in modern education as a way to prepare for the future.
6. **Indulgence versus Restraint (IND)**	Restrained *Value under 50*	Society that suppresses gratification of needs and regulates it by means of strict social norms.	Indulgent *Value over 50*	Society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun.

Source: Hofstede (1991)

Hofstede's cultural dimensions framework has been applied to several outcomes, such as human resources management, decision making, financial and economic systems or innovation and R&D (e.g. Schneider, 1988; Gupta, 2012; Jones, Davis, 2000; van Everdingen, Waarts, 2002; Kwok, Tadesse, 2006). However, it has been researched as a source of economic development as well (Moon, Choi, 2001; Peng, Lin, 2009; Kwon, 2011).

Culture, especially national culture, has been seen as a reflection of national history influencing different aspects of the society as well as the minds and behaviour of people (Moon, Choi, 2001). Therefore, it is necessary to understand that culture will have an impact on business. Hofstede's contribution here is immense because he tried to describe the nature of cultural characteristics within a country.

Power distance (PDI) focuses on inequalities that exist in the society. The core issue is how the power is distributed and the social distance between the individuals. High power distance implies a hierarchical order, in which everybody has a place and which needs no further justification. This high social distance might inhibit organizational cooperation and therefore we hypothesize that: *High power distance has a negative effect on competitiveness (H1).*

Individualism (INV) denotes the relationship between the individuals and others. Within individualistic societies beliefs and behaviour are determined by the individual; whereas in a collectivistic society, loyalty towards one's family, job, and country tend to determine the individual's action and decision-making (Moon and Choi, 2001). Due to increasing uncertainty and global competitiveness, fast individual actions are highly appreciated and therefore we hypothesize that: *Individualistic orientation will have a positive effect on competitiveness (H2).*

Masculinity (MAS) represents a preference in society for achievement, heroism, assertiveness and material rewards for success. Its opposite, femininity, stands for a preference for cooperation, modesty, caring for the weak and quality of life. Clearly, values related to Masculinity result with competitiveness at all levels, therefore: *Masculinity will have a positive effect on competitiveness (H3).*

Uncertainty avoidance (UAI) denotes the extent to which individuals within a culture feel threatened by uncertain or unknown events; and the corresponding degree to which society creates rules, espouses absolute truth, and refuses to go against nature in order to avoid risks or any sudden changes. Countries exhibiting strong UAI maintain rigid codes of belief and behaviour and are intolerant of unortho-

dox behaviour and ideas. Clearly, with the globally accelerating pace of change individuals must accept risk as the norm. We hypothesize that: *High uncertainty avoidance will have a negative effect on competitiveness (H4).*

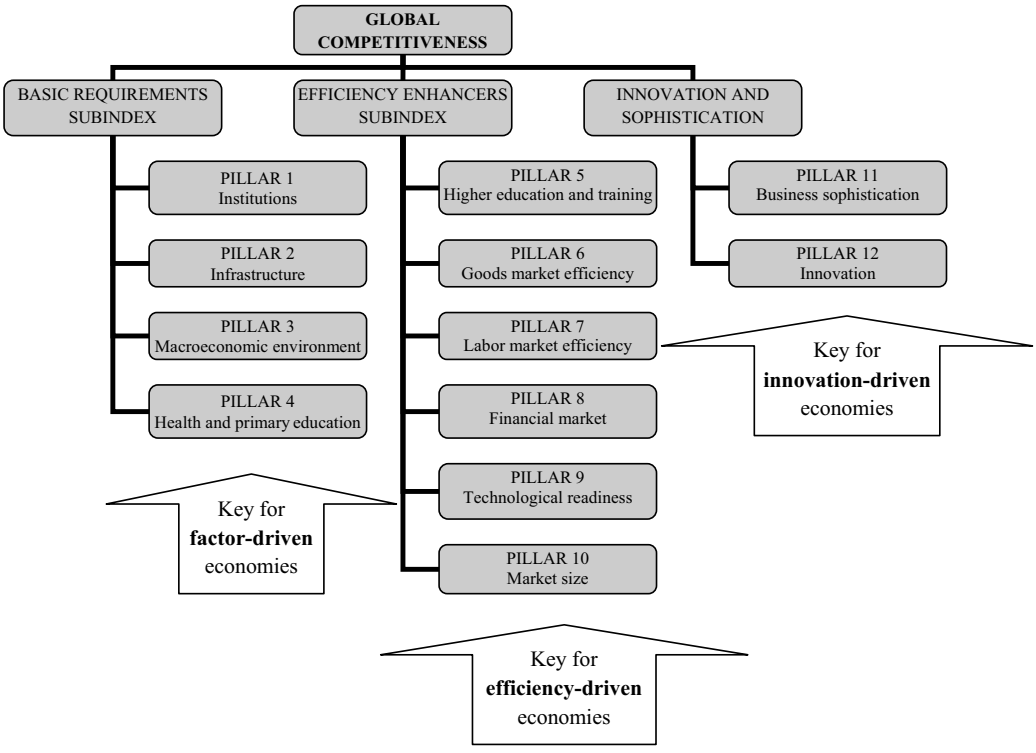
Long versus short term orientation (LTO) describes society's attitude towards past, present and future. Short term orientation societies prefer to maintain time-honoured traditions and norms while viewing societal change with suspicion. High score societies encourage thrift and efforts in modern education as a way to prepare for the future. Clearly, *Long term orientation has a positive effect on competitiveness (H5).*

Indulgence versus restraint (IND) measures whether people freely accept gratification of natural human desires or feel that gratification needs to follow existing social rules. Indulgent societies encourage their members to have fun and enjoy life, while restraining societies suppress gratification by imposing strict norms of social behaviour. We hypothesize that: *Indulgence will have a positive effect on competitiveness (H6).*

3. Methodology of research

Based on the presented theoretical framework, we define national competitiveness as the dependent variable that is likely to be affected by cultural dimensions (independent variables) and economic development (control variable). In order to measure national competitiveness, the World Economic Forum has constructed the Global Competitiveness Index (GCI). GCI provides a weighted average of 114 indicators, grouped into 12 pillars of competitiveness, each of which reflects one aspect of the complex concept of competitiveness.[9] As such, it is the internationally recognized and acclaimed competitiveness index and therefore it has been chosen as a dependent variable in our study. The basic framework of the GCI is presented in Figure 3.

Figure 3 The Global Competitiveness Index Framework



Source: World Economic Forum[10] *(2016: 6)*

The GCI assumes that, in the first stage, the economy is factor-driven and countries compete based on their factor endowments - primarily unskilled labour and natural resources. Maintaining competitiveness at this stage of development hinges primarily on well-functioning public and private institutions (1st pillar), a well-developed infrastructure (2nd pillar), a stable macroeconomic environment (3rd pillar), and a healthy workforce that has received at least a basic education (4th pillar)[11].

Michael Porter states that in the past, economic growth of nations was founded on comparative advantages like cheap workforce and natural resources, but today national competitiveness depends on advantages based on knowledge, developed infrastructure, high technologies and innovations (Porter, 2008). Although such opinion appreciates development stages, it does not recognize that even today there are countries driven by the 1st group of factors. Perhaps Porter's suggestion should be interpreted in the light of another study, saying that even in developing countries, that are generally factor-driven, the key engine for economic growth is the group of people with high level of education, motivation and dedication (Balkyte, Tvaronavičiene, 2010), being in fact the carriers of 2nd and 3rd group of pillars.

As a country becomes more competitive, productivity will increase and wages will rise with advancing development. Countries will then move into the efficiency-driven stage of development, when they must begin to develop more efficient production processes and increase product quality because wages have risen and they cannot increase prices. At this point, competitiveness is increasingly driven by higher education and training (5th pillar), efficient goods markets (6th pillar), well-functioning labour markets (7th pillar), developed financial markets (8th pillar), the ability to harness the benefits of existing technologies (9th pillar), and a large domestic or foreign market (10th pillar).

Finally, as countries move into the innovation-driven stage, wages will have risen by so much that they are able to sustain those higher wages and the associated standard of living only if their businesses are able to compete using the most sophisticated production processes (11th pillar) and by innovating new ones (12th pillar)[12].

1. It should be emphasized that the GCI takes into consideration also the stages of development, by attributing higher relative weights to those pillars that are more relevant for an economy, as proxied by its GDP *per capita* and the share of exports represented by raw materials[13]. So, although all 12 pillars matter, the relative importance of each one depends on a country's particular stage of socio-economic development. Since many of those factors included in the 12 pillars are human-based, it is interesting to investigate whether culture features can be a source of competitiveness and its improvement. Because of that, Hofstede's national culture dimension scores have been analysed as independent variables. Additionally, secondary data from the World Bank[14] for the gross domestic product per capita in 2015 was used to measure economic development. Our sample included only those countries with available both GCI and all national culture dimensions, so our final sample includes a total of 64 countries whose scores are shown in the following table.

Table 3 Countries at respective stages of development

Economy	GCI	Cultural dimensions					
		pdi	idv	mas	uai	ltovs	ivr
Switzerland	5.8	34	68	70	58	74	66
Singapore	5.7	74	20	48	8	72	46
United States	5.6	40	91	62	46	26	68
Finland	5.5	33	63	26	59	38	57
Germany	5.5	35	67	66	65	83	40
Hong Kong SAR	5.5	68	25	57	29	61	17
Japan	5.5	54	46	95	92	88	42
Netherlands	5.5	38	80	14	53	67	68

Economy	GCI	Cultural dimensions					
		pdi	idv	mas	uai	ltovs	ivr
Norway	5.4	31	69	8	50	35	55
Sweden	5.4	31	71	5	29	53	78
United Kingdom	5.4	40	91	62	46	26	68
Canada	5.3	39	80	52	48	36	68
Denmark	5.3	18	74	16	23	35	70
New Zealand	5.3	22	79	58	49	33	75
Qatar	5.3	80	38	53	68	23	34
Belgium	5.2	65	75	54	94	82	57
Luxembourg	5.2	40	60	50	70	64	56
Malaysia	5.2	100	26	50	36	41	57
United Arab Emirates	5.2	80	38	53	68	23	34
Australia	5.1	38	90	61	51	21	71
Austria	5.1	11	55	79	70	60	63
France	5.1	68	71	43	86	63	48
Ireland	5.1	28	70	68	35	24	65
Korea, Rep.	5.0	60	18	39	85	100	29
China	4.9	80	20	66	30	87	24
Czech Republic	4.7	57	58	57	74	70	29
Estonia	4.7	40	60	30	60	82	16
Chile	4.6	63	23	28	86	31	68
Spain	4.6	57	51	42	86	48	44
Thailand	4.6	64	20	34	64	32	45
Indonesia	4.5	78	14	46	48	62	38
Italy	4.5	50	76	70	75	61	30
Latvia	4.5	44	70	9	63	69	13
Lithuania	4.5	42	60	19	65	82	16
Poland	4.5	68	60	64	93	38	29
Portugal	4.5	63	27	31	99	28	33
Malta	4.4	56	59	47	96	47	66
Philippines	4.4	94	32	64	44	27	42
Russian Federation	4.4	93	39	36	95	81	20
South Africa	4.4	49	65	63	49	34	63
Turkey	4.4	66	37	45	85	46	49
Bulgaria	4.3	70	30	40	85	69	16
Colombia	4.3	67	13	64	80	13	83
India	4.3	77	48	56	40	51	26
Mexico	4.3	81	30	69	82	24	97
Romania	4.3	90	30	42	90	52	20
Slovenia	4.3	71	27	19	88	49	48
Vietnam	4.3	70	20	40	30	57	35

Economy	GCI	Cultural dimensions					
		pdi	idv	mas	uai	ltovs	ivr
Hungary	4.2	46	80	88	82	58	31
Morocco	4.2	70	46	53	68	14	25
Peru	4.2	64	16	42	87	25	46
Slovak Republic	4.2	100	52	100	51	77	28
Brazil	4.1	69	38	49	76	44	59
Croatia	4.1	73	33	40	80	58	33
Iran, Islamic Rep.	4.1	58	41	43	59	14	40
Uruguay	4.1	61	36	38	98	26	53
Greece	4.0	60	35	57	100	45	50
El Salvador	3.9	66	19	40	94	20	89
Serbia	3.9	86	25	43	92	52	28
Trinidad and Tobago	3.9	47	16	58	55	13	80
Argentina	3.8	49	46	56	86	20	62
Bangladesh	3.8	80	20	55	60	47	20
Pakistan	3.4	55	14	50	70	50	0
Venezuela	3.3	81	12	73	76	16	100

Note: pdi = Power distance index, idv= Individualism, mas= Masculinity, uai= Uncertainty avoidance index, ltovs= Long term orientation index, ivr= Indulgence
Source: Authors' selection based on Hofstede et al. (2010)

It is obvious from the rankings presented in Table 3 that countries differ both in terms of competitiveness and cultural characteristics. For example, although Finland, Germany, Hong Kong, Japan and Netherlands have the same global competitiveness ranking (index 5.5), they differ in cultural dimensions (e.g. see Finland versus Hong Kong). With such varied secondary data, our research question is: Can national culture cause differences in national competitiveness and in fact act as a determinant of national competitiveness?

Before presenting the results of our research, it is very important to elaborate also a time aspect of the methodological approach. Although technological and other changes have generated a huge difference in the way of life as it is today in comparison to the past, in terms of culture there are only superficial changes. This outer, changed dimension of culture concerns practices, but core culture dimensions, i.e. values and assumptions remain stable over decades. Exactly those fundamental elements have been measured and presented by the scores of cultural dimensions in Table 3.

At Professor's Hofstede official web page (https://geert-hofstede.com/national-culture.html)[15] there is even a question whether the scores of cultural dimensions are up to date. The given explanation says that the most recent 3rd edition of scores, resulting from Professor's work, dates from 2010, but since culture only changes very slowly, the scores can be considered up to date.

Because of that, authors of this paper find it appropriate to study the influence of culture dimensions on competitiveness, although the chosen variables date from different years.

4. Research results and discussion

The effect of national culture on country level competitiveness is not a well-researched topic. However, although scarce, existing empirical evidence supports the existence of such a relationship. On a sample of post-communist countries Overbaugh (2013) found that two cultural variables, power distance and uncertainty avoidance, are significant predictors in determining the global competitiveness of these countries. Yeganeh (2013) found that autonomy, hierarchy and mastery, cultural dimensions according to Schwartz's (1994) cultural model, foster national competitiveness. Moon and

Choi (2001) have also concluded that culture is an exogenous variable affecting economic and business performance at the country level in a measurable way.

Correlation and ordinary least squares regression were used to determine the relationship between national competitiveness, cultural dimensions and economic development. The analysis was performed by using SPSS software.

Table 4 Bivariate correlations between national culture dimensions and competitiveness

		GCI	pdi	idv	mas	uai	ltovs	ivr
GCI	Pearson Correlation	1	-.445**	.544**	-.062	-.457**	.270*	.771**
	Sig. (2-tailed)		.000	.000	.628	.000	.031	.000
	N	64	64	64	64	64	64	64

***. Correlation is significant at the 0.01 level (2-tailed).*
**. Correlation is significant at the 0.05 level (2-tailed).*
Source: Authors' calculations

Bivariate correlations presented in Table 4 show that competitiveness has significant negative correlation with power distance index (PDI). In cases of countries with high power distance index like Croatia, this could imply lower competitiveness. Negative correlation has been found for competitiveness and both Masculinity (MAS) and uncertainty avoidance (UAI) as well. Individualism versus collectivism (IDV) as well as Long term orientation versus short term normative orientation (LTOVS) and Indulgence versus restraint (IVR) show a positive correlation with competitiveness. Although correlation coefficients offer some indication for the sign of relationship (positive or negative) due to multidimensional nature of national culture, the overall effect of national culture to competitiveness was assessed by using ordinary least squares (OLS) regression analysis including all six culture variables (Table 5).

Table 5 Modelling the relationship between competitiveness and culture dimensions

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta		
	Model 1					Model 2				
(Constant)	4.276	.463		9.239	.000	1.321	.560		2.361	.022
pdi	-.001	.004	-.041	-.311	.757	.003	.003	.085	.846	.401
idv	.010	.003	.375	3.014	.004**	.003	.003	.132	1.317	.193
mas	-.002	.003	-.074	-.782	.437	-.001	.002	-.048	-.665	.509
uai	-.010	.003	-.358	-3.828	.000**	-.010	.002	-.361	-5.157	.000**
ltovs	.010	.003	.359	3.282	.002**	.005	.002	.201	2.364	.022*
ivr	.007	.003	.246	2.130	.037*	.001	.003	.029	.316	.753
LNGDPcapita						.358	.053	.637	6.734	.000**
	R=.725[a] R^2=.526 Adjusted R^2=.476					R=.859[a] R^2=.738 Adjusted R^2=.705				
a. Dependent Variable: GCI										

Source: Authors' calculations

Table 5 shows that when all independent cultural dimensions are taken together (Model 1) there is a slight change with respect to the impact of cultural variables on competitiveness. As indicated by the results of Model 1, Power distance index and Masculinity are not any more significant predictors of competitiveness. All other cultural dimensions maintained their significance and rate of impact (positive/negative) as in the case when they were explored independently (correlation).

In order to control for economic development, due to its impact on overall competitiveness, LNGDP/capita variable was introduced in Model 2. Regression model shows some modifications when compared to Model 1, namely, only two cultural variables remain statistically significant predictors of competitiveness: Uncertainty avoidance (UAI) with a negative sign (stand. coeff.= -0.361, t=-5.157, p=0.0) and Long term versus short term orientation (LTOVS) with a positive association (stand. coeff.= 0.201, t=2.364, p=0.022). Economic development has a positive impact on competitiveness.

Both presented models have a high predicting value. Model 1 explains almost 53% of competitiveness variability (R^2=.526), whereas the second models is even stronger and explains 74% of variability (R^2=.738).

Based on the empirical results presented in Table 5, hypothesis H4 and H5 are supported (both by Model 1 and Model 2). H2 and H6 are supported only by Model 1. Other hypotheses (H1 & H3) are not supported by the analyzed models. This means that we can argue that the increase in the uncertainty avoidance index hinders competitiveness, but the increase of long term orientation index improves national competitiveness.

Although this study conceptualized and analyzed the competitiveness and culture at the national level, due to strong influence the national culture exhibits on organizational culture it is possible to extrapolate the findings to the business level as well.

5. Conclusion

As an often mentioned theoretical concept, competitiveness has an extensive theoretical aspect, but also a deep practical value. On the one hand, it refers to the ability of companies to compete in domestic and global markets. On the other hand, competitiveness relates to the capacity of countries to support the development of businesses. As presented in the paper, numerous definitions of competitiveness orientate themselves around the challenges for nations, regions, industries and/or firms to succeed in passing the test of the market and to maintain and expand the real income of people.

Throughout this paper the role of culture in determining competitiveness was explored. Culture exists at different levels, with national and organizational culture being the most researched levels. The research and discussion presented in this paper suggests that national culture not only has an impact on organizational culture, but also some wider consequences on national competitiveness. To be more precise, the regression analysis of global competitiveness index (GCI) and Hofstede's cultural variables has shown that uncertainty avoidance index negatively affects competitiveness, but long term orientation index affects competitiveness in a positive way. Such findings can be used by policy makers in order to improve competitiveness.

The regression models presented in this paper have a strong explanatory power and explain almost 74% of variability in global competitiveness index. However, an additional point to mention is that it is very difficult to change culture, especially at the national level. Thus, our research results can be used for shaping organizational cultures. It has been shown that by increasing long term orientation, adapting to changing circumstances, increasing awareness that the traditions can be changed and planning ahead will result in some improvements in competitiveness. On the other hand, fixed societal norms, emphasizing traditions, religious or ideological fundamentalism will lead to decreased competitiveness. At the same time, high uncertainty avoidance, manifested as increased formalism, emphasizing security, rejecting risks and ambiguities, will result in decreased competitiveness. Prototypically, low uncertainty avoidant cultures, i.e. those that possess features like informal governing structures, acceptable risk taking and receptiveness to new ideas and concepts, will lead to increased competitiveness.

However, we must also emphasize that competitiveness and its determinants form a very complex issue. There can be large-scale differences in national cultures among different countries (e.g. Arab countries vs. Anglo-Saxon countries), but their national competitiveness indexes can be similar.

We acknowledge that the study presented in the paper has limitations. A major limitation for our study is the lack of longitudinal data. However, since it is usually assumed that culture is relatively permanent, we find that our sample might be appropriate for the purpose of this study. As the data for some countries were not available, only 64 countries were included in our study, which is less than 50% of the total number of countries in the world. Future research should be based on a larger sample and include longitudinal data about competitiveness and economic development.

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RAZMATRANJE ULOGE NACIONALNE KULTURE U OBJAŠNJAVANJU KONKURENTNOSTI

Sažetak

Cilj je ovog rada identificirati poveznice nacionalne kulture i konkurentnosti. Konkurentnost uključuje niz institucija, politika i čimbenika koji određuju razinu produktivnosti neke zemlje. Iako konkurentnost može biti rezultat različitih čimbenika, obzirom da su neki od tih čimbenika ovisni o ljudima i njihovom ponašanju, tvrdimo da uslijed toga konkurentnost mora ovisiti i o osnovnim pretpostavkama, vrijednostima i simbolima koji su zajednički ljudima iz promatrane skupine. To čini konkurentnost usko vezanom za nacionalne i organizacijske kulture. Međunarodna analiza je pokazala da nacionalna obilježja kulture imaju utjecaja na nacionalnu konkurentnost. Empirijska analiza globalnog indeksa konkurentnosti i Hofstedeovih kulturnih varijabli pokazala je da indeks izbjegavanja neizvjesnosti negativno utječe na konkurentnost, ali indeks dugoročne orijentacije utječe na konkurentnost na pozitivan način. Zbog toga kreatori politike moraju biti svjesni da nisu materijalni ekonomski čimbenici jedini koji dovode do konkurentnosti, nego i nematerijalne čimbenike, kao što je kultura, također treba uzeti u obzir u nastojanjima da se unaprijedi konkurentnost.

Ključne riječi: konkurentnost, nacionalna kultura, organizacijska kultura