A study of the validity of the Long-Term Orientation scale[1]

Estudo da validade da escala de mensuração da Orientação a Longo Prazo

Eric David Cohen - Universidade de Campinas, Brazil (EricDCohen@gmail.com)

RESUMO

A partir de estudos encontrados na literatura acerca da eficácia do modelo das dimensões culturais de Hofstede (1980), foi realizado um estudo empírico para verificar se o pressuposto de que os valores culturais mudam ao mesmo tempo e na mesma direção, conforme postula o autor. A presente pesquisa foi realizada junto a estudantes universitários em sete países (Brasil, Colômbia, Índia, Portugal, Romênia, Espanha e Turquia), utilizando uma amostragem do tipo "bola de neve", obtendo-se 1.452 respostas válidas. A participação foi razoavelmente uniforme em relação à distribuição por gênero, perfil etário e escolaridade. Foram aplicados procedimentos recomendados para validação da escala de orientação de longo prazo (Bearden *et al.*, 2006). A análise revela que ocorreram mudanças culturais nas coortes geracionais na comparação frente ao estudo original, pois os escores da dimensão de orientação de longo prazo mudaram de forma significativa. Desta forma, coloca-se por terra o pressuposto das mudanças na mesma direção, preconizados por Hofstede. Reforça-se, desta maneira, a necessidade de atualizar os conceitos teóricos a fim de preservar a relevância acadêmica e gerencial da cultura mundial e de sua natureza mutável. Com isso, pretende-se assegurar uma visão mais acurada da perspectiva cultural, de maneira a equipar os alunos e os gestores com o melhor conjunto de informações possíveis para atuar nos mercados internacionais.

Palavras-chave: Dimensões culturais, Hofstede, Escala de mensuração, Orientação de longo prazo.

---

[1] O presente trabalho foi desenvolvido a partir de artigo publicado nos anais dos Seminários em Administração da Universidade de São Paulo (SEMEAD 2019), de título "Um estudo das mudanças culturais na orientação de longo prazo de Hofstede em múltiplos países".

ABSTRACT

Based on questions found in the literature about the effectiveness of Hofstede's model of cultural dimensions (1980), an empirical study is carried out to analyze the assumption that cultural values will change in synch and in the same direction. The survey is carried out with undergraduate students from Universities in seven countries (Brazil, Colombia, India, Portugal, Romania, Spain and Turkey), with 1,452 valid answers. Participation is uniformly distributed in terms of gender distribution, with a young age profile and a high level of education. The study applied recommended procedures for validation of Bearden *et al.* (2006) scale. Mode adjustment and validity indicators of the replicated model are adequate. The comparison of the countries surveyed seek to analyze possible cultural changes in generational cohorts, based on data collected in countries that participated in the original study. The results show that the long-term orientation dimension scores changed significantly, which puts aside the assumption of uniform, directional and synchronous change posited by Hofstede. This finding reinforces the need to update and adjust the theoretical concepts. Accordingly, a clear understanding of world culture and its changing nature is of great academic and managerial relevance, which improves the accuracy of cultural perspectives, while it equips students and managers with the best available managerial information.

Keywords: Cultural dimensions, Hofstede, Measurement scale, Long term orientation.

1. INTRODUCTION

When starting to discuss aspects of culture, it is relevant to present their underlying concepts. Within a broader perspective, it is considered that culture is related to patterns of development reflected in the systems of beliefs, knowledge, ideologies and values, which are anchored in society's daily rituals.

In turn, the organizational culture emanates from corporate structure and policies (which, despite the difficulty, can be modified), and from corporate culture - which is more difficult to transform, even though it is an important element of business strategy. In this context, organizational

culture is permeated by shared experiences, stories, beliefs and the underlying norms. It manifests itself in the organization's environment through the way people dress, talk to each other, and even through the organization of the business space (Dorval; Jobin; Benomar, 2019).

Culture studies have been used in several contexts. An extensive scientific production is found in the literature discussing its aspects, dealing with materialism (Rekret, 2016; Coole; Frost, 2010); personal satisfaction (Xiao and Tessema, 2019); the relations of the concepts underlying corporate governance (Melo; Maciel; Carvalho and Malaquias, 2020); the individual's maturity in relation to financial decisions (Ahunov and Van Hove, 2020); innovation (Diaz-Moriana; Clinton; Kammerlander; Lumpkin and Craig, 2020); and risk acceptance (Díez-Esteban; Farinha and García-Gómez, 2019), among other topics.

Given this interest, Geert Hofstede (1980) proposes a set of cultural characteristics present in the organizational environment (Gupta; Veliyath and George, 2018; Leung and Morris, 2015; Kirkman; Lowe and Gibson, 2006; Osland and Bird, 2000; Peterson and Sondergaard, 2011). This author's postulates are a highly relevant contribution to academic research and the business world (Fitzpatrick, 2017; Harrison, 2015; Serafeim, Saltzman and Ward, 2017). In the Social Science Citation Index, Hofstede appears among the 100 most cited authors, whose works are present in textbooks and have been published in several languages.

The dimensions proposed by Hofstede are widely used to present important questions of organizational culture. Authors such as Venaik and Brewer (2010), Fitzpatrick (2017), Beugelsdijk; Maseland and Van Hoorn (2015) and Minkov (2017) are unanimous in recognizing his contribution, as it leads us to an understanding of cultural differences in the organizational context (Nelson and Gopalan, 2003).

Nevertheless, recent studies have started to make considerations about the concepts and their assumptions (McSweeney, 2002; Sivakumar and

Nakata, 2001; Yeh and Lawrence, 1995). For example, an initial criticism concerns the difficulty of this theory in capturing dynamic aspects of organizational culture (Kirkman *et al.*, 2006; Beugelsdijk and Welzel, 2018).

In this regard, Hofstede (2001, p. 34–36) considers that such questions are incorporated into the theoretical concept, when stating that the organizational culture is stable over time; for the author, there would be no reason why such changes cannot be readily identified.

On the other hand, after that study, several events arose that undoubtedly produced important changes in the social and cultural fabric. Among others, the end of the Soviet bloc is cited, which dramatically altered the macroenvironment of contemporary times. In addition, new and important centers of technological, geopolitical influence, military power and culture emerged, which produced changes on the world stage.

The world prospered, and in the wake of these facts, the population's access to goods and services was facilitated - services and goods which are often produced in other countries, through communication technology, the Internet, the rapid dissemination of information, the computers and smartphones. It is considered that these issues had enormous relevance in the presentation of concepts and ideas, as well as in the dissemination of products and services.

According to Wang (2006), Lu *et al.* (2010) and Edwards (1996), this macroenvironment affects cultural value systems. Based on these considerations, Sivakumar and Nakata (2001) criticize Hofstede's model, considering that it does not objectively confirm the social transformations of contemporary society.

In the midst of this discussion, the Chinese Culture Connection report (1987) is credited with the first contribution aimed at investigating these questions, in the wake of the initial development of the Hofstede model (1980).

Add to this question the prominence received by the Hofstede model and its wide dissemination (both in academic research and in the business environment), which end up expanding the need to redesign its precepts.

Thus, a detailed analysis of the effectiveness of this model in face of these changes is justified. The present work proposes a revision of the construct of long-term orientation, through an empirical research in Brazil, Colombia, India, Portugal, Romania, Spain and Turkey, in order to verify if the order of these countries remains valid .

2. THEORETICAL FOUNDATIONS

The concept of cultural dimensions is, by far, one of the most studied models in academia and is supported by a wide use in the world of international business, for presenting a mechanism for understanding cultural differences (Tang and Koveos, 2008; Kirkman, Lowe and Gibson, 2006; Osland and Bird, 2000; Peterson and Sondergaard, 2011). It was developed from data collected at IBM from 1967 to 1973, using questionnaires that were applied to employees of the company's subsidiaries, located in 72 countries. The aim of the study was to characterize attitudes in the workplace (Hofstede, 1980).

The theory has a four-dimensional structure: (1) power distance, (2) uncertainty avoidance, (3) individualism / collectivism and (4) masculinity / femininity. The dimensions present two possible extremes, in their operationalization and data collection (Hofstede, 1980; 1998).

In a subsequent theoretical evolution, a fifth dimension was proposed - which is the subject of this article. Originally, this new dimension was called "Confucian dynamism", in the wake of the work of a team of Asian researchers (Bond, 1987) who sought to minimize the Western cultural bias, which was supposed to be present in the original study. This dimension was

later added to this theoretical framework, receiving the name "long or short term orientation" (Hofstede, Hofstede and Minkov, 1991).

Long-term orientation (henceforth, LTO) is defined as the intensity with which people's values are turned to the future, postponing "immediate gratification" in exchange for more lasting or long-term goals. In other words, the long-term orientation prioritizes planning, the persistence of purposes and the construction of financial reserves to face future needs, while leaving aside traditions and customs, thus enabling plans for the future. In other words, long-term orientation leads people to save in order to build reserves, in order to face future contingencies, or even to pursue long-term goals - such as, for example, investing in education or personal development (Hofstede and Hofstede, 2001).

Subsequently, Hofstede *et al.* (2010) developed a new instrument based on three concepts from the World Values Survey (hereinafter, WVS). In fact, it is an evolution of the original LTO scale, which, however, uses assumptions based on the perspectives and thoughts of the Western world. Its use is justified on the grounds that the WVS would be more widely applicable to different countries. In view of this theory evolution, the new LTO scale was developed to incorporate aspects considered relevant. The scale is measured with values between 0 and 100 and - when it was first executed - the top four positions of the 93 countries surveyed were occupied by South Korea (100), Taiwan (93), Japan (88) and China (87).

Hofstede and Hofstede (2001) postulate that culture is stable and that its values are viscerally integrated with a country's population. Supported by this concept, the authors propose that these legacies form the basis of family structure, the legal system, educational system and the political environment. In this way, the idea that values are passed on from generation to generation is reinforced; in addition, this theoretical *corpus* would be endowed with self-sustainability and continued analysis. It is also

assumed that values and beliefs have shared historical origins - a fact that favors the notion of stability in the theoretical model.

In an aspect focused on the organizational culture perspective, the Hofstede model was widely used to develop business plans (Gill, 2017; Markman, 2018; Mody, 2017; Jain, 2020). There are clear advantages in applying the concepts of this model: initially, it is noted that it offers descriptions that are easily understood about the organizational culture, with relevant insights regarding the possible interpretations of its particularities, as well as the effective forms of interaction.

On the other hand, it is important to note that the guidelines pointed out by the original model appear to suffer wear and tear of efficiency over time. No major efforts were devoted to updating the model by Hofstede *et al.* (2010). As its focus rests on applicability, the model does not aim to build projective models adjusted to social, economic and cultural transformations.

To illustrate this point, the generations of Baby Boomers and Generation X are mentioned, which were succeeded by the generations Y and Z (or "centennials"). There is no doubt that the cohorts have distinct belief systems and values - which would immediately justify an analysis of cultural dimensions under different cuts - for example, segregating the analyzed age groups or generations.

In addition, it is necessary to consider its determinants in the aspects of politics, society, demography and economy. Certainly, changes in some countries will be more intense than in others. Thus, it is expected to find variations in a populations' perception regarding what is important in life, as well as the meanings attributed by them and their personal values (Parry and Urwin, 2011; Schuman and Scott, 1989).

Finally, it is relevant to note that the phenomenon of globalization was accompanied by a strong development of international trade, which led countries to be exposed to different systems of ideas and values. By the

way, there is a vast literature focused on the modernization of society and its effects on cultural value systems (Inglehart, 1997; Inglehart and Baker, 2000; Pollay *et al.*, 1990).

As an example, the transition from an industrial to a post-industrial society brought basic changes in people's lives, which are reflected in new worldviews (Inglehart and Baker, 2000). In this context, logical, rational, compartmentalized, hierarchical forms of organization, as well as general attitudes towards authority, give way to the post-industrial economy, which is dominated by services, giving greater importance to communication and information; in view of this, values such as self-expression and autonomy are highly highlighted (Inglehart, 1997). Transposing this illustrative example to Hofstede's conceptual framework, it is expected that the model of cultural dimensions will present higher scores in the individualism dimension, as well as lower scores in power distance.

It is worth mentioning that economic prosperity in developed countries will imply that individuals assume that survival and material security are guaranteed elements, considered to be already achieved. In this sense, when considering that people tend to attribute value to scarce objects, there will be a tendency to value attitudes in relation to quality of life, individual freedom and aesthetics, to the detriment of financial and physical security (Inglehart, 1997; Inglehart and Baker, 2000; Leung, 2008).

In view of this purpose, sociologists defined the concept of "generational impression" to denote the phenomenon through which the shared memory of significant and particular events will lead a specific generation to demonstrate a predisposition to certain forms of thoughts and experiences, which will define a set of attitudes, preferences and behaviors (Parry and Urwin, 2011; Schuman and Scott, 1989).

In this context, generations that have been deprived - or even those that have little access to resources that were scarce - will value survival through economic determinism, rationality, materialism, conformity and

respect for authority (Inglehart, 1997). On the other hand, generations that have received material comfort, ample access to resources and modern amenities will privilege postmodernist values, such as egalitarianism, individualism, interpersonal trust, tolerance to diversity and self-transcendence (Inglehart, 1997).

Along the same line, Mooji and Beniflah (2016) studied the cultural differences of North American ethnic groups. The article shows that the values of different groups differ little from traditional values. If, on the one hand, the research gives an indication of a certain convergence of values, on the other hand, he points out that the differences will be more intense when comparing cultural values by generational cohorts. In particular, the young Chinese American population was found to have a short-term orientation when compared to the older generation. As personal experiences change from generation to generation, the fact that people have been exposed to social changes, given the greater capacity to acquire material and consumer goods, may lead groups to present different values.

Other studies provide evidence that long or short-term orientation is not a stable feature. For example, the work by Jiang *et al.* (2010) showed that foreign direct investment in China produced changes in the population's culture, affecting their orientation, behavior and sense of collectivism. In another study, Tang and Koveos (2008) suggested that the long-term orientation initially decreases, but later increases, due to the growth of national wealth; the authors measured this growth through GDP per capita.

In view of these questions, it can be stated that countries do not develop at the same pace or in the same areas of activity (as, for example, in the economy or in politics). Therefore, it is to be expected that changes in nations' value systems will also be distinct. In this regard, the example of East Asia is cited: China's economy has developed at an accelerated pace in recent years (IMF, 2020), while in India, Thailand and Vietnam there has

been growth at a less accelerated pace; the Japanese economy, on the other hand, does not grow at expressive rates, and Russia, after several years of growth of 10% of GDP, experienced a recession in the period from 2015 to 2017 (since then, it has been growing at rates of 3% per year).

In clear opposition to Hofstede's (2001) notion that countries in certain regions will tend to show changes in values in the same direction, it is concluded that it is plausible to expect that countries' cultural values will change in different directions and intensities.

As a rule, the company's long-term orientation has a positive effect on innovation, as managers will tend to accept long-term risk. In addition, this stance encourages innovation processes (Zheng, Shen, Zhong and Lu, 2020), as long-term orientation encourages the breadth, speed and creativity of strategic decision-making processes (Lin, Shi, Prescott and Yang, 2019).

Celikkol, Kitapci and Doven (2019) corroborate this understanding by postulating that long-term orientation encourages entrepreneurship and economic progress. In the same vein, Gupta, Veliyath and George (2018) show that this orientation is associated with the processes of going public.

Regarding risk acceptance, the work of Yamen, Al Qudah, Badawi and Bani-Mustafa (2019) shows that short-term orientation is correlated with a higher incidence of financial crimes.

In view of this multiplicity of long-term orientation's effects, it is considered that it plays an extremely relevant role in the structure of business environments. Therefore, the precise assessment of culture is highly relevant both academically and managerially, as it promotes an environment in which good practices are used.

In this line, this article investigates the changes in the organizational culture's values, which arose from the macroenvironment's transformations. A counter position is made here to the assumption that values will change

at the same time and in the same direction, as advocated by Hofstede (2001). For this purpose, an empirical test of two hypotheses is carried out (noting, in passing, that proving one of these hypotheses will lead us to increase our confidence regarding the effects of the other hypothesis):

H_{1a}: There is a significant difference in terms of long-term orientation between the generations of the surveyed countries.

H_{1b}: There is a change in the relative positions in the ranking of LTO values of the analyzed countries, in comparison with the data from the WVS survey.

Table 1 - Classification of countries on the original scale

Relative position of surveyed countries	Global ranking WVS
Romania	38
India	40
Spain	44
Turkey	47
Brazil	49
Portugal	65
Colombia	87

Source: prepared by the author, based on Hofstede *et al.* (2010)

3. METHODOLOGICAL PROCEDURES

Following, the methodological procedures used in this study are presented. It is classified as quantitative, descriptive and uses the field survey technique.

In order to designate possible research collaborators from different countries for research, an invitation was sent to instructors in a multicultural

program aimed at international business - which has more than 1,000 universities worldwide - within the scope of the *Academy of Business*. There was no prior guidance from the researchers and the research was conducted in seven interested countries: Brazil, Colombia, India, Turkey, Portugal, Romania and Spain, which have a wide cultural, geographical and economic diversity. It should be noted that these countries are located at different points from Hofstede's (1980) original work.

The research's target audience is made up of university students, aged at least 18 years old and who accepted to participate voluntarily in the study. Thus, it is a convenience sample, non-probabilistic - a fact that places limits on the making of inferences from the indicated results.

For data collection, the self-administered questionnaire was electronically applied on Google Forms platform, between October and November 2019.

In the initial part of the questionnaire, information of a socioeconomic nature was requested, such as age, education and income. In the second part, information was collected on the level of attributed importance, by means of statements related to future perspectives and intention to invest thinking about tomorrow, using a 5-point Likert-type interval scale of agreement (1 = totally disagree, and 5 = strongly agree).

3.1 Sampling procedures

Participation in this study is voluntary, ensuring confidentiality and secrecy, subject to the formal acceptance of a free and informed consent term by the respondent. The questions considered disconnected from the cultural context are revised and adapted through a back-translation process, in order to eliminate discrepancies in their interpretation, as well as ambiguities or semantic inconsistencies.

The surveys were conducted with undergraduate and graduate students from Universities participating in the study. Subsequently, using the

snowballing technique, an invitation was extended to share the survey with the respondents' acquaintances that might be willing to participate.

1,452 valid responses were obtained: 164 from Brazil, 284 from Colombia, 203 from India, 250 from Turkey, 259 from Portugal, 107 from Romania and 185 from Spain. The sample is reasonably uniform in terms of gender distribution (ranging from 32% for Brazil, up to 59% for Turkey of male respondents). The profile of the respondents is relatively young, with ages varying from 24 to 30 years old, and they present a high level of education. Table 2 provides a summary of the study participants' profile.

Table 2 - Profile of the study participants

Country	Number of respondents	Male respondents	Age (median)	Higher education
Brazil	164	32%	23 y/o or less	93%
Colombia	284	38%	23 y/o or less	56%
Spain	185	41%	23 y/o or less	74%
India	203	50%	36 to 45 y/o	93%
Portugal	259	30%	24 to 30 y/o	70%
Romania	107	36%	24 to 30 y/o	90%
Turkey	250	59%	24 to 30 y/o	94%

Source: prepared by the author

3.2 Measurement scale

The present research is based on the work of Bearden *et al.* (2006, p. 457), who presented a measurement scale that respects the recommended criteria of reliability and validity, measuring individual differences in relation to long-term guidance. The authors argue that some of the subdimensions used in the original construction of Confucian dynamism - among them: planning, respect for tradition, hard work for future benefit and perseverance - are manifestations of values related to long-term orientation.

In this line, the authors' scale is replicated for this research. In the original work, it was obtained factorial loads that emerged from the review of each item's content, revealing two subdimensions: "tradition" and "planning".

The items in the "planning" sub-dimension are:

1. I work hard to succeed in the future
2. I don't mind giving up on the fun today to succeed in the future
3. persistence is important to me
4. I plan long term

The items of the "tradition" sub-dimension are:

1. respect for tradition is important to me
2. I value a strong bond with my past
3. family cultural heritage is important
4. traditional values are important to me

3.3 Analytical techniques used

The Statistical Package for the Social Science (SPSS) is used to analyze the collected data, as well as the R software with the Lavaan and SEM Tools packages to perform confirmatory factor analysis and structural equation modeling.

The data's internal consistency is tested with Cronbach's alpha (an instrument widely used to measure the internal reliability of psychometric instruments), followed by analysis of variance (ANOVA) to test the hypotheses presented here

4. ANALYSIS AND DISCUSSION OF RESULTS

4.1 Validation of the measurement scale

The frequency distribution reveals that the item's data show asymmetry, as few people responded that they totally disagree with the questions. There is little data missing; notably, only 1% of the answers, and mainly in the item corresponding to the respondent's income information. In line with Graham's recommendations (2009), it is not necessary to employ data imputation strategies.

The correlations between variables belonging to the same sub-dimension were, in general, much higher than the cross correlations between variables that belong to the other sub-dimension. Furthermore, the correlations are significant.

Following the recommendations of Anderson and Gerbing (1988) and Bearden *et al.* (2006), the analysis of the LTO measurement scale's main components is performed, which corroborates the two-dimensionality of the measurement scale. The factorial loads and the scree plot reveal that the planning factor captures 51.0% of the total variation; in the tradition sub-dimension, the factor explains 54.7% of the total variation, and the cumulative proportion of the joint variation is 53.9%.

Then, in accordance with the recommended procedures in the literature, factor analysis is performed using the main axis factoring method and promax oblique rotation, which results in acceptable factorial loads, with a correlation between the planning and tradition subdimensions.

Then, a confirmatory factor analysis is performed with a robust estimator (WLSMV); the maximum likelihood method is used, suitable for the case of categorical variables. The model's adjustment measures are comparative fit index (CFI) = 0.905; root mean square error of approximation (RMSEA) = 0.975; standardized root mean square residual (SRMR) = 0.055, and GFI = 0.952. It is relevant to note that the results are in line with those presented by Bearden *et al.* (2006).

Figure 1 - LTO measurement scale
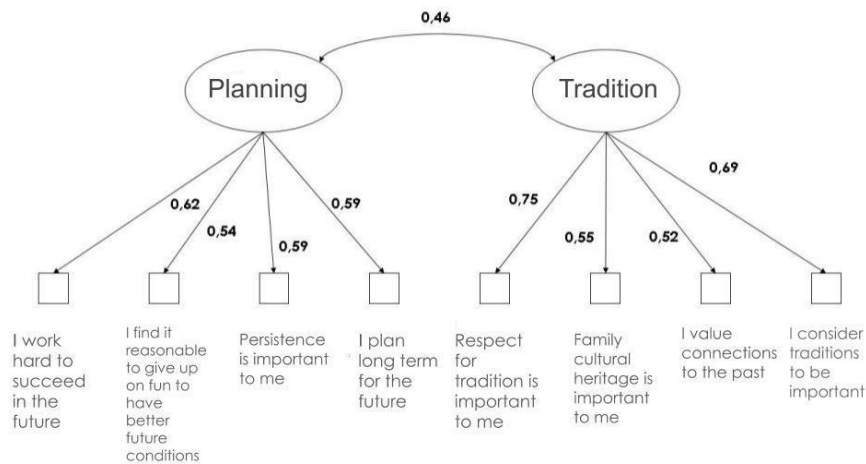
Source: prepared by the author

Then, the model's χ2 = 103.42 is calculated. Fixing the correlation between the sub-dimensions in the unit value, χ2 = 384.60, allows us to conclude that the model has discriminant validity.

Regarding the convergent validity, the average variation extracted (AVE) for the planning factor is 0.3431 and the composite reliability (CR) is 0.6757 (marginally acceptable value). However, AVE is insufficient. In the tradition factor, the AVE is worth 0.4029 and the CR is worth 0.7251.

In summary, the results in terms of scale validation are:

- Analytical techniques allow to compare the long-term orientation for Brazil, Colombia, India, Portugal, Spain, Romania and Turkey, from a common methodological perspective

- The research approach allows us to highlight conceptual traits that emanate from cultural differences, as well as possible problems of interpretation and bias in responses
- The collected data show that the questionnaire has an adequate repertoire for the researched population
- Regarding the recommended procedures for its validation, this research shows that the scale replication maintains the original general properties
- The distribution of the data is considered adequate, with few missing data; the items' correlations are significant and the factorial loads are high; cross factorial loads are tiny; the main component analysis shows that there's a two-dimensionality in the face of the two sub-dimensions of planning and tradition; the factorial loads and the proportion of explained variation are considered adequate.
- The adjustment indicators (CFI, SRMR and GIF) are within the parameters recommended by Hair Jr. *et al.* (2009). The standardized $\chi2$ and the RMSEA are in line with the findings of the study by Bearden *et al.* (2006).
- The discriminant validity has been confirmed; in relation to convergent validity, an acceptable composite reliability was found.

4.2 Hypothesis Testing

No uniform and general support for H_{1a} is found, as it is observed in Brazil, Spain, Romania and Turkey. However, no empirical support is found to show significant differences for Colombia, India and Portugal.

Thus, as expected, respondents from the "older generation" - 35 years old or older - are more long-term oriented than the "younger generations" in the following countries:

Brazil (M_{old} = 3.37, M_{young} = 3.01, F = 9.284, p = 0.000)

Spain (M_{old} = 3.78, M_{young} = 3.50, F = 10.315, p = 0.000)

Romania (M_{old} = 4.16, M_{young} = 3.89, F = 6.733, p = 0.05)

Turkey (M_{old} = 3.92, M_{young} = 3.69, F = 6.454, p = 0.05)

Table 3 - Statistics of the studied countries' generations

Country	Means / standard deviation - in parentheses		F
	Younger generation	Older generation	
Brazil	3,01 (0,61)	3,37 (0,48)	9,284 ***
Colombia	4,09 (0,51)	4,16 (0,54)	0,794 n.s.
Spain	3,50 (0,54)	3,78 (0,46)	10,315 ***
India	3,90 (0,54)	3,83 (0,57)	0,827 n.s.
Portugal	3,70 (0,61)	3,69 (0,56)	0,009 n.s.
Romania	3,89 (0,47)	4,16 (0,54)	6,733 *
Turkey	3,69 (0,62)	3,92 (0,64)	6,454 *

Source: prepared by the author
* correspondent to p=0,01;   ** p=0,05;   *** p=0,1;   n.s. = non-significant

As for the H1b hypothesis, the countries' LTO score was compared. Table 4 shows that Colombia is more long term oriented (M = 4.22, SD = 0.493), followed by Romania (M = 4.02, SD = 0.485), India (M = 3.85, DP = 0.546), Portugal (M = 3.80, SD = 0.591), Turkey (M = 3.75, SD = 0.632), Spain (M = 3.65, SD = 0.549) and Brazil (M = 3.12, SD = 0.559).

Table 4 - Means and differences of the scale items
(standard deviation in parentheses)

Scale items	Brazil	Colombia	Spain	India	Portugal	Romania	Turkey
I consider traditions to be important	1,71 (0,93)	3,99 (1,03)	3,37 (1,19)	3,91 (0,79)	3,3 (1,12)	3,79 (0,95)	3,68 (0,96)
Respect for traditions is important	3,23 (1,21)	4,05 (1,02)	3,65 (1,15)	3,87 (0,97)	3,36 (1,07)	3,87 (0,94)	3,92 (1,04)
Family's cultural heritage is important	3,77 (1,21)	3,73 (1,19)	3,31 (1,19)	3,96 (0,90)	3,26 (1,20)	3,90 (1,01)	3,78 (0,99)
I value connections to the past	2,99 (1,24)	3,56 (1,20)	3,51 (1,00)	3,58 (0,98)	3,33 (1,13)	3,40 (1,13)	3,59 (0,97)
I work hard to obtain future success	3,92 (0,89)	4,43 (0,91)	3,75 (1,00)	4,03 (0,90)	4,05 (0,89)	4,40 (0,71)	3,69 (0,96)
I find it reasonable to give up the fun in exchange for an improved future condition	3,23 (1,22)	3,87 (1,08)	3,49 (0,92)	3,77 (0,90)	3,75 (1,04)	4,10 (0,82)	3,33 (1,10)
I think it's important to be persistent	3,84 (1,18)	4,64 (0,69)	3,85 (1,11)	3,97 (0,84)	4,59 (0,55)	4,29 (0,66)	4,18 (0,76)
I plan for a long-term future	1,95 (0,98)	4,56 (0,80)	3,65 (1,08)	3,84 (0,90)	3,94 (0,99)	3,98 (0,74)	3,74 (0,97)
LTO Score	3,12 (0,57)	4,22 (0,49)	3,65 (0,55)	3,85 (0,55)	3,80 (0,59)	4,02 (0,49)	3,75 (0,63)

Source: prepared by the author

The subdimensions of each country are analyzed. An indication of planning guidance for Romania was found when compared to India, with a significant difference ($M_{Romania}$ = 4.17, M_{India} = 3.86, F = 19.507, p = 0.000).

A similar effect emerges in the comparison between Portugal and Turkey. Portugal has a higher score in the planning sub-dimension than Turkey ($M_{Portugal}$= 4.09, M_{Turkey}= 3.78, F = 26.310, p = 000). However, it's score in the tradition dimension is low ($M_{Portugal}$= 3.31, M_{Turkey}= 3.75, F = 26.310, p = 000).

Then, the LTO scores are analyzed and classified, ranging from the highest to the lowest long-term orientation, and then compared to the classification of Hofstede WVS survey. The cultural dimensions are, in reality, a classification system that remains valid if, and only if, all countries maintain the original order, also accepting the situation in which the countries' scores move in the same direction and at the same time.

However, the results point in the opposite direction, since from the collected data there is a new ordering of the surveyed countries. Romania - which in Hofstede's poll comes first - falls to second place. No country maintains its original position: while Romania moves down one position, Spain moves from third to sixth.

Table 5 - Research and comparison results
with the classification of Hofstede's original study

Final ordering	Country	LTO Score	Standard Deviation	WVS Score	WVS Classification	WVS Ordering
1	Colombia	4,22	0,49	13	87	7
2	Romania	4,02	0,49	52	38	1
3	India	3,85	0,55	51	40	2
4	Portugal	3,80	0,59	28	65	6
5	Turkey	3,75	0,63	46	47	4
6	Spain	3,65	0,55	48	44	3
7	Brazil	3,12	0,57	44	49	5

Source: Prepared by the author

More significantly, Colombia jumped from the seventh position to the first; but in order to overcome Romania, Colombia would have to jump many positions, going from number 87 to number 38!

That said, it is observed that the countries' order has been completely changed: no country has maintained the original order presented by Hofstede (2010).

5. DISCUSSION OF RESULTS

Cultural studies have broad ramifications, which can be applied to different disciplines and fields of knowledge. In business literature, they focus mainly on form and effects in face of organizational behavior (Naeem and Khurram, 2019). Several studies have focused on aspects of cultural values (Díez-Esteban, Farinha and García-Gómez, 2019). However, some uncertainty persists regarding the use of its conceptual framework.

In this article, we seek to analyze: (1) the possible changes in generational cohorts based on data collected in countries that participated in the original Hofstede study; and (2) if the values in the LTO dimension have changed recently. Since it's a positive case, the relative position of the countries is analyzed, which differs from the previously registered classifications.

Regarding the first question, the results indicate that some countries have undergone major changes, while others have not. As for the second question, of the surveyed countries, no one maintained their position in the general order. This data is particularly important, as it contradicts an important assumption of the cultural dimensions system's theoretical framework, in which a relative positioning of nations is postulated (Hofstede, 1991, p. 46; Piotti, 2012).

In this sense, the ordering of relative positions undergoes significant changes. It is concluded, from this result, that the LTO instrument - which is

characterized by providing a value system, applied in order to know and to be able to operate in that particular nation - will lose part of its effectiveness and usefulness. This result has important implications for the activities of researchers and professors in the field of Administration, International Relations and International Marketing, as well as practitioners in the area of International Business, who make wide and unrestricted use of Hofstede's very relevant contributions and tools.

From the "real world" point of view, the conclusions of this study are important for business professionals, who often use Hofstede's theoretical framework in their plans to enter international markets, as the environment is often not known (Harrison , 2015; Serafeim *et al.*, 2017; Gill, 2017). To enter these markets, it is essential to know the culture, the business environment and the possible implications for business strategy (Hofstede, 1994, Lewin and Kim, 2004).

In this line, international managers must deeply understand social, economic and cultural differences (Ghemawat, 2007). Certainly, companies can use intuition or their own knowledge, as well as "business gurus" (Namaki, 2012), who - together with business publications and newspapers - can offer inputs to help the company in the internationalization processes (Gill, 2017; Markman, 2018; Bohl, 2019; Grant, 2019).

In any case, Hofstede's model has become a *de facto* standard and a mandatory reference to works regarding cultural differences (Triandis, 2004). According to Trompenaars (1993), the Hofstede model deserves recognition for "opening the eyes" of company managers to the importance of the cross-cultural management concept. In this sense, the Hofstede model presents a relevant mark, and is widely used in understanding cultural differences.

Culture affects perceptions and shapes the company's responses to the environment (Schneider and De Meyer, 1991). In addition, culture

influences individual behavior in the macro environment (Andrews, 2001; Matten and Moon, 2008). Therefore, if the company uses conceptual models that have lost effectiveness, decision making may be impaired - possibly, reaching the point where it would be better not to use any information a priori, as there will always be the possibility of misunderstandings and false prejudices, which are often unintentional. Thus, there is an evident need to better investigate cultural transformations, as well as the validity of prevalent theories.

Within an instructional perspective, the results presented here serve as an important reminder that we, teachers and researchers, must always pay attention to the fact that the concepts we transmit must be reasonably accurate. In this sense, the Hofstede model that we teach allows a more effective and productive interaction with other cultures. Nevertheless, indications are found leading us to understand that the information we are routinely transmitting to students is probably inaccurate. Such fact can lead to the confusion that emanates from the attempt to apply in the real world the concepts that are taught in the classroom.

The results are relevant from the teacher's point of view, as many students accept the teachings as accomplished facts. However, in relation to culture, that does not seem to be the case. Many students will develop international business; the instructors would like to provide a complete world view, but the transmission of concepts and values - measured a long time ago - is no favor, so a clearer understanding of culture in today's world is of great academic and managerial relevance, as well as an understanding of its changing nature in order to improve the accuracy of these world perspectives. As educators, we have a responsibility to equip students with the best possible set of information.

An implication of the results in relation to cultural research is cited here. As mentioned earlier, the researchers who criticize the Hofstede model focus mainly on the methodological issues of that study (Yeh and

Lawrence, 1995; Tang and Koveos, 2008; Sivakumar and Nakata, 2001; Jones, 2007), but not on the presented results. On the other hand, this article shows that - regardless of whether the original dimensional scores are correct or not - some of the effectiveness of the measurement scale appears to have been lost. Even so, it is recognized that the model remains one of the most used methods, and that it is extremely useful to understand the cultural aspects of the organization.

Being or not in the position of defenders of this theoretical framework, it is up to the academic community, through research aimed at culture, to ensure the accuracy of what is put as a fact (that is, which is not discussed). In view of the multifaceted aspects of human behavior, it is considered possible that cultural traits may change over time.

In retrospect, some changes seem quite obvious: the manifestations of the LBGTQ segment of society; the decrease in birth rates in developed countries; and the increase in consumer indebtedness in developing countries clearly demonstrate the transformations in social and cultural values.

It is proposed that this discussion is not to be aimed at the authors of the various theoretical currents, but rather that it be focused on possible ways of accurately evaluating cultural traits and recent developments.

Some possibilities for future studies are suggested based on this research. A first recommendation is aimed at understanding the changes that may have emerged within the scope of the LTO / STO dimension when compared to the other cultural dimensions. Today, more than ever, the world is interconnected through international trade and the ease of traveling and communicating, which have been largely affected by exposure to external cultures.

Rapid technological progress and communication and logistical transportation facilities make cultural changes widespread. Thus, it is also

suggested to investigate cultural differences within nations using a scale developed for use at the individual level.

Another aspect of future work would be related to the refinement of the scale from Bearden *et al.* (2006), aiming at creating an adequate instrument to effectively measure long-term orientation. In the same vein, the study of the LTO / STO scale in conjunction with the other dimensions of the original Hofstede scale is suggested as a future referral, in order to investigate whether its items are not reflected in these other dimensions.

In terms of research limitations, the collection of data with sampling using the snowball technique is mentioned, since the respondents are mainly university students or recent graduates. In this sense, it is considered that the present research shares a similar limitation to Hofstede's work, since the author interviewed employees of the researched company.

In the present case, the profile of the participants is young, with a median age of less than 30 years old and with a good educational background, it being clear that the sample's organizational culture presents a different profile from the original study by Hofstede, which involved executives. On the other hand, the survey presents comparable multinational data, with samples that cannot be considered representative. In this sense, it is suggested to adopt probabilistic sampling procedures in future works, in order to allow a test of the LTO scale with a greater variety of demographic configurations and contexts. That would serve to grant the research a generalization of results - which would reinforce and give validity to the theories related to the cause relations of cultural changes.

Other issues concern the sample size by country; however, it is observed that the original study includes a small number of participants: 50 men and 50 women (Chinese Culture Connection, 1987, pp. 146). Hofstede's research at IBM, however, covers several countries, but the participation of less than 200 participants (Hofstede, 1980: 411).

6. FINAL CONSIDERATIONS

There are several ramifications of the implications regarding the results presented here. Several studies contest the validity of the Hofstede dimension model (Ailon, 2008; McSweeny, 2002; Schmitz *et al.*, 2014).

That is not the intention of this article. Instead, there is a need to update the measures and approaches currently used to guide students and managers about what to expect when interacting with people from other cultural backgrounds.

The cultural dimensions of Hofstede represent an important reference for their field of knowledge, as they contribute significantly to the study of culture, providing a categorization system that is easy to understand and immediately applied to business decisions, being useful for recognizing people's cultural perspectives.

As for the possible causes of the change in the countries' order since the original Hofstede research was carried out, it is plausible to assume that the younger population of some countries (such as Colombia and Portugal) has come to give importance to long-term planning and tradition. On the other hand, some countries started to have a more immediate perspective and the search for self-gratification (cases of Brazil and Spain, for example). In this sense, it is considered appropriate to investigate the reasons behind these changes in the studied countries' organization.

Nevertheless, the theoretical model has remained largely untouched since its proposition, thirty years ago. Cultures change over time, and we believe that the measurement of these dimensions must accompany them, in accordance with their development. With this, it is expected that the process of adjustment and evolution of this theoretical body begins.

BIBLIOGRAPHIC REFERENCES

Ahunov, M.; Van Hove, L. (2020). National culture and financial literacy: International evidence. *Applied Economics*, 52(21), 2261-2279. doi:10.1080/00036846.2019.1688241

Ailon, G. (2008). Mirror, Mirror on the Wall: Culture's Consequences in a value Test of Its Own Design. *Academy of Management Review*, 33(4), 885-904

Anderson, J.; Gerbing, D. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423. https://doi.org/10.1037/0033-2909.103.3.411

Andrews, T. (2001) Downsizing the Thai Subsidiary Corporation: A Case Analysis. *Asia Pacific Business Review* 8(2), 149-170

Arantes, P.; Peixoto, F.; Carvalho, L.; Malaquias, F. (2020). Cultural determinants of corporate governance: A multi-country study. *Internext: Revista Eletrônica de Negócios Internacionais da ESPM*, 15(2), 56-71. doi:10.18568/internext.v15i2.580

Bearden, W.; Money, R.; Nevins, J. (2006). A measure of long-term orientation: development and validation. *Journal of the Academy of Marketing Science*, 34(3), 456-467.

Beugelsdijk, S.; Maseland, R.; van Hoorn, A. (2015) Are Scores on Hofstede's Dimensions of National Culture Stable over Time? A Cohort Analysis. *Global Strategy Journal*, 5(3), 223-240

Beugelsdijk, S.; Welzel, C. (2018) Dimensions and Dynamics of National Culture: Synthesizing Hofstede With Inglehart. *Journal of Cross-Cultural Psychology* 49(10) doi: 10.1177/00220221118798505

Çelikkol, M.; Kitapçi, H.; Döven, G. (2019). Culture's impact on entrepreneurship and interaction effect of economic development level: An 81-country study. *Journal of Business Economics & Management*, 20(4), 777-797. doi:10.3846/jbem.2019.10180

Chinese Culture Connection (1987) Chinese Values and the Search for culture-free dimensions of culture: The Chinese Culture Connection. *Journal of Cross-Cultural Psychology*, 18(2), 143-164.

Coole, D.; Frost, S. (2010) *New Materialisms: Ontology, Agency, and Politics*. Durham and London: Duke University Press

Diaz-Moriana, V.; Clinton, E.; Kammerlander, N.; Lumpkin, G.; Craig, J. (2020). Innovation motives in family firms: A transgenerational view. *Entrepreneurship: Theory and Practice*, 44(2), 256-287. doi:10.1177/1042258718803051

Díez-Esteban, J.; Farinha, J.; García-Gómez, C. (2019). How does national culture affect corporate risk-taking? *Eurasian Business Review*, 9(1), 49-68. doi:10.1007/s40821-018-0105-0

Dorval, M.; Jobin, M.; Benomar, N. (2019) Lean culture: a comprehensive systematic literature review, *International Journal of Productivity and Performance Management*, Vol. 68 No. 5, pp. 920-937, Emerald Publishing Limited, DOI 10.1108/IJPPM-03-2018-0087

Edwards, S. (1996). Why are Latin America's savings rates so low? An international comparative analysis. *Journal of Development Economics*, 51(1), 5-44.

Fitzpatrick, F. (2017) Taking the "culture" out of "culture shock" - a critical review of literature on cross-cultural adjustment in international relocation. *Critical Perspectives on International Business* 13(4), 278-296

Ghemawat, P. (2007) *Redefining global strategy: crossing borders in a world where differences still matter*. Boston, MA: Harvard Business School Publishing Corporation.

Gill, C. (2017) Hofstede's cultural dimensions and differences across cultures. Oxford's University Press: *Academic Insights for the Thinking World*, OUPblog. Available in https://blog.oup.com/2017/03/hofstede-cultural-dimensions/ access May 17, 2019.

Graham, J. (2009). Missing data analysis: making it work in the real world. Annual Review of Psychology. 60: 549–576. doi:10.1146/annurev.psych.58.110405.085530.

Gupta, D.; Veliyath, R.; George, R. (2018). Influence of national culture on IPO activity. *Journal of Business Research*, 90, 226-246. doi:10.1016/j.jbusres.2018.04.023

Hair Jr.; Black; Babin; Anderson; Tatham (2009) *Análise Multivariada de dados* 6a edition. Porto Alegre: Bookman, ISBN 978-85-7780-534-1 1.

Harrison, K. (2015) *What's Different About Business Overseas? One Map Says It All*. Disponível em https://www.forbes.com/sites/kateharrison/2015/02/25/whats-different-about-business-overseas-this-map-says-it-all/#350213083937 acesso em 11 de maio de 2019.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Thousand Oaks, CA: SAGE Publications.

Hofstede, G. (1994) Management Scientists are Human. *Management Science* 40(1), 4-13. doi:10.1287/mnsc.40.1.4

Hofstede, G.; Bond, M. (1988). The Confucius connection: From cultural roots to economic growth. *Organizational Dynamics*, 16(4), 5-21.

Hofstede, G.; Hofstede, G.; Minkov, M. (1991). *Cultures and organizations: Software of the mind* (Vol. 2). London, UK: McGraw-Hill.

Hofstede, G.; Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: SAGE Publications.

Hofstede, G.; Hofstede, G.; Minkov, M. (2010). *Cultures and organizations: Software of the mind* (3rd edition). New York, NY: McGraw-Hill.

IMF DataMapper (2020) *Real GDP growth, Annual percent change (2019)*, available in: https://www.imf.org/external/datamapper/NGDP_RPCH@WEO/OEMDC/AD VEC/WEOWORLD

Inglehart, R. (1997). *Modernization and post-modernization: Cultural, economic, and political change in 43 societies*. Princeton, NJ: Princeton University Press.

Inglehart, R.; Baker, W. (2000) Modernization, cultural change, and the persistence of traditional values. *American Sociological Review*, 65(1):19-51

Jain, T. (2020) Hofstede's legacy and separate national responses to the Covid-19 crisis. *The London School of Economics and Political Science Business Review* https://blogs.lse.ac.uk/businessreview/2020/04/10/hofstedes-legacy-and-separate-national-responses-to-the-covid-19-crisis/

Jiang, L.; Chen, Q.; Liu, Y. (2010). FDI and the change of the Chinese culture. *International Journal of Social Economics*, 37(2), 101-118.

Jones, M. (2007) Hofstede – Culturally questionable? *Oxford Business and Economics Conference*. Oxford, UK, 24-26 June 2007.

Kirkman, B.; Lowe, K; Gibson, C (2006). A quarter century of culture's consequences: A review of empirical research incorporating Hofstede's cultural values framework. *Journal of International Business Studies*, 37(3), 285-320.

Lanier, C. (2020) Launching Rockets: Introducing Hofstede Pairs to Business Analyses, and the Risks of Ignoring them. *Review of Business* 40(1), 1-15.

Leung, K. (2008) Chinese culture, modernization, and international business. *International Business Review* 17(2), 184-187.

Leung, K.; Morris, M. (2015) Values, schemas, and norms in the culture-behavior nexus: A situated dynamics framework. *Journal of International Business Studies*, 46(9), 1028-1050.

Lewin; Kim (2004) The Nation-State and Culture as Influences on Organizational change and Innovation. Poole and Van de Ven (Eds.) *Handbook of Organizational Change and Innovation*. New York, NY; Oxford University Press.

Lin, Y.; Shi, W.; Prescott, J.; Yang, H. (2019). In the eye of the beholder: Top managers' long-term orientation, industry context, and decision-making processes. *Journal of Management*, 45(8), 3114-3145. doi:10.1177/0149206318777589

Litvin, S. (2019) Hofstede, cultural differences and TripAdvisor hotel reviews. International *Journal of Tourism Research* 21(5) 712-717. https://doi.org/10.1002/jtr.2298

Lu, J.; Chen, Q.; Liu, Y. (2010). FDI and the change of the Chinese culture. *International Journal of Social Economics*, 37(2), 101-118.

Markman, A. (2018) 3 Ways to Identify Cultural Differences on a Global Team. *Harvard Business Review*: https://hbr.org/2018/06/3-ways-to-identify-cultural-differences-on-a-global-team

Matten, D.; Moon, J. (2008) "Implicit" and "Explicit" CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of Management Review* 33(2), 404-424

McSweeney, B. (2002) Hofstede's Model of National Cultural Differences and their Consequences: A Triumph of Faith – a Failure of Analysis. *Human Relations*, https://doi.org/10.1177/0018726702551004

McSweeney, B. (2013) Fashion founded on a flaw: The ecological mono-deterministic fallacy of Hofstede, GLOBE, and followers. *International Marketing Review* 30(5), 483-504

Minkov, M. (2017) A revision of Hofstede's model of national culture: old evidence and new data from 56 countries. *Cross-Cultural and Strategic Management*, 25(2), 231-255.

Mody, P. (2017) *Infosys: A story of cultural differences*. available at: The Economic Times https://economictimes.indiatimes.com/blogs/et-commentary/infosys-a-story-of-cultural-differences/ (accessed May 15, 2020)

Mooij, M.; Beniflah, J. (2016) Measuring cross-cultural differences of ethnic groups within nations: convergence or divergence of cultural values? The case of the United States. *Journal of International Consumer Marketing*, 1-9.

Naeem, M.; Khurram, S. (2019). Does a CEO's national culture affect corporate social responsibility? *Journal of Managerial Sciences*, 13(3), 129-134.

Namaki, M. (2012) Does the thinking of yesterday's management gurus imperil today's companies? *Ivey Business Journal* March/April 2012 https://iveybusinessjournal.com/publication/does-the-thinking-of-yesterdays-management-gurus-imperil-todays-companies/

Nelson; Gopalan (2003). Do organizational cultures replicate national cultures? Isomorphism, rejection and reciprocal opposition in the corporate values of three countries. *Organizational Studies* 24(7), 1115-1151

Osland, J.; Bird, A. (2000). Beyond sophisticated stereotyping: Cultural sensemaking in context. *The Academy of Management Executive*, 14(1), 65-77.

Parry, E.; Urwin, P. (2011). Generational differences in work values: A review of theory and evidence. *International Journal of Management Review*, 12, 79-96.

Peterson, M.; Søndergaard, M. (2011). Traditions and transitions in quantitative societal culture research in organization studies. *Organization Studies*, 32(11), 1539-1558.

Piotti, G. (2012) An institutional-cognitive perspective on headquarters-subsidiary conflicts *Critical Perspectives on International Business*, 8(2), 136-156.

Pollay, R.; David, K.; Wang, Z. (1990) Advertising propaganda, and value change in economic development: The new cultural revolution in China and attitudes toward advertising. *Journal of Business Research*, 20(2), 83-95.

Rekret, P. A critique of new materialism: ethics and ontology. *Subjectivity* 9, 225–245 (2016). https://doi.org/10.1057/s41286-016-0001-y

Schmitz, L.; Weber, W. (2014) Are Hofstede's dimensions valid? A test for measurement invariance of Uncertainty Avoidance. *Interculture Journal* 13(22)

Schneider, S.; De Meyer, A. (1991). Interpreting and responding to strategic issues: The impact of national culture. *Strategic Management Journal* (John Wiley & Sons, Inc.), 12(4), 307-320. doi:10.1002/smj.4250120406

Schuman, H.; Scott, J. (1989). Generations and collective memories. *American Sociological Review*, 54, 359– 381.

Serafeim, G.; Saltzman, D.; Ward, B. *How Laws and Culture Hold Back Socially Minded Companies* Available at: https://hbr.org/2017/05/how-laws-and-culture-hold-back-socially-minded-companies (May 18, 2017). (accessed May 11, 2019).

Sivakumar; Nakata (2001) The stampede toward Hofstede's framework: Avoiding the sample design pit in cross-cultural research. *Journal of International Business Studies*, 32(3) 555-574

Tang; Koveos (2008) A framework to update Hofstede's cultural value indices: economic dynamics and institutional stability *Journal of International Business Studies*, 39, 1045-1063

Triandis H. (2004) The many dimensions of culture *Academy of Management Perspectives* 18(1), 88-93

Trompenaars, F. (1993) *Riding the waves of culture difference: Understanding cultural differences in business*. London: Nicholas Brealy.

Venaik, S.; Brewer, P. (2010) Avoiding uncertainty in Hofstede and Globe. *Journal of International Business Studies*, 41, 1294-1315

Wang, Y. (2006). Value changes in an era of social transformations: college-educated Chinese youth. *Educational Studies*, 32(2), 233-240.

Xiao, G.; Tessema, K. (2019). Values, materialism and life satisfaction: A study of cultural influence and gender differences in china. *Journal of Business Diversity*, 19(5), 100-107. doi:10.33423/jbd.v19i5.2648

Yamen, A.; Al Qudah, A.; Badawi, A.; Bani-Mustafa, A. (2019). The impact of national culture on financial crime. *Journal of Money Laundering Control*, 22(2), 373-387. doi:10.1108/JMLC-01-2018-0004

Yeh, R.; Lawrence, J. (1995) Individualism and Confucian Dynamism: A Note on Hofstede's Cultural Root to Economic Growth. *Journal of International Business Studies* 26(3), 655-669.

Zheng, W.; Shen, R.; Zhong, W.; Lu, J. (2020). CEO values, firm long-term orientation, and firm innovation: Evidence from Chinese manufacturing firms. *Management & Organization Review*, 16(1), 69-106. doi:10.1017/mor.2019.4318

Annex - Questionnaire

City	Indicate the city in which this research is being carried out
Age	a) less than 23 y/o d) 36-45 y/o b) 24-30 y/o e) 46-55 y/o c) 31-35 y/o f) 56 y/o or more
Gender	Please enter your gender: a) Male b) Female
Educational	Enter your education level: a) Elementary Education c) Incomplete Higher Education b) High School d) Higher Education e) Other (specify): _____
Organization	Type of organization where you work: a) Manufacturing f) Government b) Education (All levels) g) Technological c) Non-profit h) Financial d) Medical i) Services / Retail e) Tourism / Food services j) Others (specify):
Situation	Please inform your situation in terms of employment or professional activity: a) Unemployed e) Manager / Supervisor b) Student f) Director / senior manager / executive manager c) Part-time employee g) Other (specify): d) Full-time employee
Income	Enter your monthly income: Up to R$ 649 From R$ 2050 to R$ 3049 From R$ 650 to R$ 1049 From R$ 3050 to R$ 4099 From R$ 1050 to R$ 1449 From R$ 4100 to R$ 6099 From R$ 1450 to R$ 2049 From R$ 6100 to R$ 8149 Above R$ 8150

Please indicate the correct option, according to the importance you attach to each of these items:

1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree

I save money regularly in case of emergencies or future plans
I look for investment opportunities for my financial resources so that I can save them for the future
I think knowing when I step beyond the limits of naturalness is important (doing things to get the attention of others, not always in a positive way)
Status and power are important
The reciprocity of greetings, favors and gifts is important
Protecting my reputation is important
Personal balance and stability are important
Respect for traditions is important
I have long-term goals
Family heritage is important
I value a strong connection with tradition and my past
I work hard to succeed in the future
I don't mind giving up on the fun of now to succeed 5 years from now
Effort and persistence are the safest ways to succeed
If there is something expensive that I really want, but I don't have enough money to pay for it, I prefer to buy it now and pay for it later
I pay attention to TV and / or social media ads and follow what is offered
I like to spend my money on products I see on commercials that I think are cool
I prefer to know the end and the beginning of time
I like to know how long it will take before I start doing something
I plan every day
People should not waste time