Cultural Indoctrination and Its Influence on Decision-Making in the Hyper-competition Era

by

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Abstract

This research explores the connection between cultural indoctrination and its implications for rational decision making in the context of global firms in emerging markets and developing countries. As organizations are confronted with the need to engage with stakeholders and local managers from different cultural backgrounds, understanding cultural imperatives into individual and collective approaches to making a decision will help in anticipating decisions and their implications and also avoid flaws and deviations in the process. Based on an integrated literature review, this thesis examines the following factors included in cultural indoctrination: *Religion, Nationalism, Cultural Institutionalization, Cultural Intelligence* and *the Values Orientation Theory* on the decision-making process of global firms in emerging markets.

Keywords: Culture Indoctrination, Decision-making, Religion, Nationalism, Cultural Institutionalization, Cultural Intelligence, Values Orientation Theory.

Özet

Bu çalışma, gelişmekte olan ülkelerde ve gelişen pazarlarda bulunan küresel firmalar bağlamında kültürel endoktrinasyon ile bunun rasyonel karar verme sürecine etkileri arasındaki bağlantıyı araştırmaktadır. Organizasyonlar, farklı kültürel geçmişlerden gelen paydaşlarla ve yerel yöneticilerle etkileşime geçme ihtiyacı duymaktadır. Bu nedenle bireysel ve toplu yaklaşımları oluşturan bireysel gereklilikleri anlayabilmek kararları ve onların etkilerini tahmin etmede yardımcı olacak ve süreçte yaşanabilecek aksaklıkları ve sapmaları önleyecektir. Bütünsel bir literatür taramasına dayanan bu tez, gelişen pazarlarda küresel firmaların karar verme sürecine etki eden *din, milliyetçilik, kültürel kurumsallaşma*, *kültürel zeka* ve *değer yönelimleri kuramı* gibi kültürel endoktrinasyon unsurlarını incelemektedir

Anahtar Kelimeler: Kültür Endoktrinasyonu, Karar Verme, Din, Milliyetçilik, Kültürel Kurumsallaşma, Kültürel Zeka, Değer Yönelimleri Kuramı.

Dedication

I dedicate this research to my mentor and friend Bryan Christiansen, Ph.D. for his wonderful support throughout my professional life. I will never forget the fact that choosing this MBA program was his suggestion, and every day that I have enjoyed studying this course I have remembered his role in my life. Also, I would like to dedicate this research to my current fiancée and future wife Zia Foley, for her unconditional love and encouragement during the time of my studies.

Finally, I must dedicate this research to everyone who conducts business in developing nations and highlights the fact that this research can be understood as a cautionary tale for future generations of what could go wrong with globalization and international business practices in developing countries.

Acknowledgment

I would first like to thank my thesis advisor Assoc. Prof. Cinema Göl Beşer of the at Yeditepe University. The door to Prof. Beşer office was always open whenever I ran into a trouble spot or had a question about my research or writing. She consistently allowed this paper to be my work but steered me in the right the direction whenever she thought I needed it.

I would also like to acknowledge Bryan Christiansen, Ph.D. as the second reader of this thesis, and I am gratefully indebted to his for his undoubted valuable comments on this thesis.

Finally, I must express my very profound gratitude to my fiancée for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. This accomplishment would not have been possible without her.

Thank you.

Mahmoud Ahmed Gad

Biography of the writer

Gad was born in Cairo, Egypt, in 1987 on October 6th.

In 2009, he earned a bachelor of law, from Ain-shams university in Cairo. After graduation, he started working for Stream Global services, where he worked his way up from support professional to team leader over the course of 3 and half years.

In December 2013, he earned a TESOL (Teaching English for speakers of other languages) degree from King George International Business College in Canada, and began to pursue a career in English teaching. He has worked at number of universities and private language schools in Turkey and Cairo including British Side Language School and Fatih Sultan Mehmet University.

In September 2017, he started a master's degree in Business Administration at Yeditepe University. In 2018, while completing coursework and research for his masters, he co-authored published two papers: "Cultural Indoctrination and Open Innovation in International Business" and "Cultural Indoctrination and Management Education Curriculum".

Upon graduation, Gad will be moving to Canada. He looks forward to getting his degree in Business Administration starting a new life abroad. He believes that his master's degree will give him the necessary skills and knowledge to succeed and excel in his professional life.

Claim for Originality

This is the first study to explore the effects of Culture Indoctrination on the rational decision-making process in the hyper-competition era in developing countries and emerging markets.

This thesis consists of two original features:

1- Conceptual modeling of the Cultural Indoctrination effects on the rational decision-making process.

2- Future speculations and Scenarios of the future of rational decision-making under the influence of Cultural Indoctrination in developing nations and emerging markets.

These features are aimed at exploring the impacts of Cultural Indoctrination on the rationality of decision-making process in developing nations and emerging markets.

29 November 2018 Mahmoud Ahmed Abdellatif Gad Assistant Professor Dr Senem Gol.

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Chapter 1: Introduction

This chapter will introduce the "Cultural Indoctrination" concept and its components. It will also examine the decision-making process and build a foundation for the understanding of both concepts. This chapter will go on to state the research questions, research strategies and provide a brief literature review.

1.0 Background information

We live an era that is marked with rapidly growing economies and fast communication at a hyper-competitive pace. In addition, there is the need for big organizations to move into other markets, especially fast-growing markets, or what are known as emerging markets.

Emerging markets is a term coined in the 1980s to describe fast-growing countries and to act as a replacement for the term "Third World countries. At that time, only a small number of countries were referred to as such, but after the first decade of the 21st century which was accompanied by fast growth indicators, increasingly more countries were given the same title. For example, when looking at the G-20 council that consists of the biggest 20 economies in the world, many of these countries were referred to as Third World countries.

The growing need of big corporations for geographical diversification motivated by the fear of missing great opportunities of growth and prosperity drove them into emerging markets, which led to a diversification of the workforce and the decentralization or partial decentralization of decision-making processes. According to strategic management books, this has led to great results carried by the knowledge of the locals, by the norms of their own cultures, and the quick response to market changes in a time where the market can be only described by being tectonic and resilient to many changes. Recently, towards the end of the second decade of the 21st century, many of

these corporations have faced some culturally-indoctrinated traits in both the workforce and consumer behaviors that did not occur in the past and that, in addition, have affected the decision-making process in the host countries of these investments.

What we are trying to explore in this research are the cultural indoctrinated forces that might change the course of the rational decision-making process using an interpretive methodology that consists of four sections:

1- Literature review: a detailed background review that highlights the previous writings on culture in general and the explanation of the indoctrination process, accompanied by a brief on the components of the cultural indoctrination concept "Religion, Nationalism, Values orientation theory, cultural institutionalization, cultural intelligence" and their subcomponents.

2- Conceptual Modeling: By employing a qualitative and interpretive methodology and trying to draw the metaphysical relations that exist between the components of the concept and the real-life consequences that may affect the decision-making process. An illustration using collective definitions of conceptual modeling was conducted that proves a relation between the indoctrination tools of a culture and the decision-making process that occurs within it.

3- Historical data: this consists of the most relevant and available data that can highlight the effect of the components of cultural indoctrination on emerging markets and developing countries. Since the concept is new and the components of it are so diverse there has not been any research that specifies the direct effects of this concept on decision-making in the market.

4- Future scenarios: this starts with a macroeconomic view of both emerging markets and developing countries' markets that was conducted by experts and politicians which relates to the development process of these economies for the foreseeable future. This is followed by an illustration, which was conducted by the author of this research, of a single case of a decision-making conducted in two ways – one from an optimistic view and one from a pessimistic view with regard to the maximum objectivity possible and relating to the conceptual modeling that was conducted previously.

Finally, the research ends with a conclusion section that interprets the results achieved of each previous section, gives answers to the research questions, explains the managerial implications, and the limitations to conducting this research and a few suggestions for future research that can guide exploration of the concept.

1.1. Research Motivation

My initial motivation to conduct the research below on cultural indoctrination and its role in decision making sprung from the personal experiences I had during my professional life as a graduate of the faculty of law in Egypt, which is considered a developing country and an emerging market, from working in Egypt for five years in a global firm, and from ultimately moving to Turkey which also is considered a developing country and an emerging market. Working here in a reputable university, one realizes due to personal observations of local cultures in both countries that the cognitive transfer of cultural values and aspects that had been instilled in people through indoctrination process is playing a strong role in shaping the managers' decisions by modifying their views of a given problem to suit or to satisfy the local customs. By witnessing from my position in the company as a senior agent professional a fall of strong in investments in the call-

center industry in Egypt due to the constant taking of wrong decisions at critical times when a linear and rational decision-making process should have been considered in the matter.

1.1.1 Decision-making

A final decision is usually defined as a choice among two or more possibilities or options. When an individual who is responsible for decision-making at any level in any firm makes a decision, it should pass through eight steps according to (Robbins & Coulter, 2012): *a- Identifying a problem b- Identifying Decision Criteria c- Allocating Weights to the Criteria d- Developing Alternatives e-Analyzing Alternatives f- Selecting an Alternative g-Implementing the Alternative h- Evaluating decision effectiveness.*

These are all filtered through the individual's personal attributes such as education, nationalism, and so forth; in other words, "cultural indoctrination". Vocabulary.com (2018) states the definition of the word indoctrination as the acceptance of a set of beliefs without questioning them. The website also states this word is mostly used in religious contexts and in teaching religious beliefs because they are feeble to being questioned. In the 1620s, *endoctrinate* was used to mean "teach" or "to instruct", and in the mid-15th century, the word etymologically was Latin, meaning "to imbue with an idea or opinion" (Online etymology dictionary, 2018).

1.1.2 Culture

Using the pioneer Geert Hofstede's model of cultural dimensions (Hofstede, 1984) as a guide to define the implications of cultural differences on management, a great deal about how a culture can impact a manager's attitude towards a certain issue or an individual style of management can be known. Then, incorporating both "decision-making" and "cultural indoctrination" under one umbrella in order to anticipate a manger's decision in global firms in our modern times, keeping

in mind the attributes of cultural indoctrination that will be defined later, a view of the negative implications of some cultures on some managerial decisions can be achieved especially in such situations that can embed deviations from the rational decision which may lead to negative consequences.

1.1.3 The link

Linking the two concepts will require us to consider the culture acquisition concept as well, to find a moderating variable that can act as a bridge to see the direct effect of a given culture on a given decision. This is a relatively new anthropological and psychological term, which refers to the process that an individual experience that maps social complementary ways which contribute to shaping the individual life patterns (Pitman, Eisikovits, & Dobbert, 1989) focusing on the conceptualization and the transmission of cultures through different times.

1.1.4 The main purpose

The main purpose of this work is to conceptualize cultural indoctrination using "Conceptual Modelling" as a method. Additionally, I attempt to evaluate the cultural indoctrination methodologies that may affect the decision-making process which might prevent a global firm from expanding or working effectively or efficiently in a certain country. In other words, what some locals can perceive as a protection of domestic values can be destructive to the rational decision-making process. Finally, in order to explore these effects, we need to answer the following managerial question:

> **MQ: "What are the influences of cultural indoctrination on decision-making in developing nations?"**

The answer to this question can be obtained by conceptual modeling of the concept and through exploring historical data and future scenarios which can lead to a better understanding of the

impact of the concept and cover a large gap in the literature that has not examined this question as often as it should have.

1.1.5 Historical Background

In the early 1970s after Hennery Kissinger's first talks with Mao Zedong (Kissinger, 2011), American businessmen were the first to seize the opportunity of the new relationship and the open market. This meant dealing with a totally different culture and the different set of values which governs Chinese culture. There is no doubt that back then Chinese culture was vastly different from any western culture. Dealing with such a culture should be conducted in a very cautious manner or it might threaten the whole business venture. That is why we can see many discussions in the extant literature about managing diversity and about how to manage people from different nations and different cultural backgrounds in the 1970s, which was basically the most prosperous time in the human resources sciences and the development of new socio-management technical expressions. Today the world is a small village (McLuhan, 2018). Everything has become easier to reach, and all studies suggest that now in the 21st century we are living in the most peaceful time on earth (Perry, 2016).

According to the World Bank (2015), there will be no more world wars, no more great famines, and even extreme poverty is declining every day. Therefore, conducting business today is better than any other day in the past. In addition, the internet connects most of the world a level playing field in trading became possible in many ways due to the internet and the vast developments in transportation methods. The need now for theoretical frameworks of cultures and ways to deal with emerging markets and communities in developing nations has become a necessity, especially after recent generations have jumped over the language barrier by embracing the internet instant

translating apps or by using the English language as a common understandable language between people from different non-English speaking nations.

According to most of the statistics websites, twenty percent of the 7.5 billion people living on earth today speak English with 369 million of these people speaking English as a first language or a mother tongue and the remainder using the language to better communicate with the rest of the world (Lyons, 2017). One can see many examples of individuals from two different nations that both do not speak English as a mother tongue, yet they are conducting business or socializing in English. Therefore, after such a huge leap forward towards business conducting methods, we need to transcend the next barrier which is culture. The culture indoctrination conceptual model and the theoretical frame that is suggested in this research can help us define culture barriers in an easy way and define multinational management needs to perform effectively in foreign communities. In particular, the focus of this research is on emerging markets, developing nations or what is known as Third World societies, as a sufficient number of studies on their cultures and behaviors has not been conducted

When Abraham H. Maslow (1900-1970) wrote the theory of human motivation (1943), which is clarified the arrangement of the needs of individuals in any society, he did not consider the various differences between cultures as Geert Hofstede (1984) did by differentiating cultures on the basis of being collectivist versus being individualistic. It is time to realize that Maslow was shortsighted to generalize those rankings and hierarchy on all societies and cultures. In Hofstede's opinion, Maslow was wrong because he considered only individualist cultures. Hofstede claimed that self-actualization is not a priority in collectivist communities by using an example of the Buddhist communities and how the satisfaction of material needs is not perceived as a priority to those communities.

After these years we have come to understand the differences between Maslow and Hofstede. Here we can look at the example of suicide attacks also known as “Jihad”. If security is considered the highest priority to human beings by Maslow, how can we rationalize a person killing himself just to kill or injure the enemy? A “Fatwa”, which means an interpretation of a rule in Islam stated by a few Islamic figures (Munir, 2008), was issued saying that suicide attacks are a good method of self-defense against the enemy. This has driven many people to sacrifice their lives just to kill one or two enemies. In this example, the interest of the group overwhelmed the interest of the individual.

This also negates Adam Smith’s (1776) and David Hume`s (1739) theories of modern capitalist economies. In this case, if an individual can sacrifice the most important thing in his/her own life, he/she can certainly sacrifice his/her belongings to the interest of the group. Some would argue that according to their beliefs they will have a second life with infinite wealth as compensation for their sacrifices which is also known as martyrdom (Ezzati & Al-Serat, 1986). However, if that explains these irrationalities from those particular individuals, it definitely cannot explain the motivation of many westerners who have joined the Islamic state in Syria and Iraq and become militants in a terrorist group (Iraq and Syria: How many foreign fighters are fighting for Isil, 2016). Those militants were well-educated and lived in modern capitalist economies; however, the negative influence of religion led them to sacrifice all their basic life needs in the pursuit of a metaphysical gain.

In summary, the collectivist communities’ un-written rules which forces any manager to consider any decision against an individual as a decision against a group because causing any harm to an individual in these communities is considered the same as causing harm to the group; therefore,

any attempt to bluntly apply the individualistic presumptions in these communities will be confronted with a great deal of resistance.

1.2 Research Gap

1.2.0 Existing Studies on Cultural Indoctrination

On one hand, the scarcity of resources that discuss Culture Indoctrination (CI) as a concept is significant. The earliest mentions of it is in a research paper entitled "The Property Right Paradigm" (Alchian & Demsetz, 1973) published by the *International Journal of Economic History*, and secondly, a book that was written by Bryan Christensen titled, "Nationalism, Cultural Indoctrination, and Economic prosperity in the Digital Age", published by IGI Global in 2015. That is the extent of the research thus far on the subject. On the other hand, there are infinite resources that discuss "culture" and its managerial implications in addition to the resources that explore and explain the meaning of the word "culture" in different areas of the world.

1.2.1 Existing studies on Decision-making

"*The job of a manager is, above all, to make decisions*"

(Brousseau, Driver, Hourihan, & Larsson, 2006)

Managerial decision-making is the most important task a manager should do on a daily basis. The studies on decision-making that attempt to explore the causes and roots of decision-making, the timing of the decision and consequences of each decision are abundant. The earliest mention of the term "Decision-making" is in Chester Barnard's book, "The Functions of the Executive" 1938 (Buchanan & O'Connell, 2006) following a great number of books and articles have been used to describe the decision-making process.

1.2.2 Research Problem

The research problem lies in the gap that should be filled with additional research on the concept of "*cultural indoctrination*" and start linking it to managerial implications like innovation or education curriculum design (Christensen & Gad, 2018) and this research is an attempt to view the consequences of this concept on decision-making in emerging markets in the era of global hyper-competition in which we now live.

1.3 Research Scope, Aim, Objectives, and Questions

1.3.0 Research Scope

Examining the "Future Scenarios Implications Industry Report 2018" developed by the World Economic Forum (WEF), Schwab, Buehler, WenHsiu, and Castilla are encouraging the agility of decision-making during the change of management with the increasing need to engage in cross-cultural management and the consideration of cultural differences during the decision-making process.

The scope of this research is fundamentally concerned with the same issue - a conceptual model of an existing concept that affects the future of management, linking its implications to the deviations in the decision-making process in the pursuit of avoiding indoctrinated culturally values that can affect the rationality of a manager's decision. In addition, I investigate the influence of cultural differences on individuals and their impact on the decision-making process which enables managers from all levels to deal with decision consequences that might stem from the cultural differences between the various elements of global industries and businesses, especially during critical phases.

1.3.1 Research Aim

The anticipation of individual behaviors can stem from cultural backgrounds (Trompenaars & Turner, 2010) and (Hofstede, 1984), and as communication and interrelations between global organizations and stakeholders become more complicated, the need to speculate as precisely as possible about managerial actions has become a prerequisite for competitiveness in the modern era (Hannah, 2013). The research aims to conceptually model cultural indoctrination, and the attempt to link the possible consequences of the components of cultural indoctrination to decision-making is of great importance for international firms in their engagement with stakeholders from different cultural backgrounds; in particular, those from emerging markets.

1.3.2 Research Objectives

As stated earlier, the conceptual modeling of cultural indoctrination is the main focus of this research. Second is the attempt to understand the consequences of cultural indoctrination on decision-making by analyzing historical data that explores some the macro influences of cultural indoctrination components on societies. Finally, exploring some future scenarios of that influence global businesses performance is attempted.

1.3.3 Research Questions

1- What is cultural indoctrination?

Cultural Indoctrination as a concept has not been defined sufficiently in the extant literature. As previously mentioned, “Indoctrination” in the past was defined as education and instilling a set of beliefs without questioning them. With the exception of the paper as written by Bryan Christensen and co-authored by myself entitled, “Cultural Indoctrination and Open Innovation in International Business” in 2018, there is no modern research on the matter and no literature has developed a definition and conceptualization of the term. This research is an attempt to conceptualize and

operationalize the term using conceptual modeling, historical data, and future scenarios and open the doors for future research to be conducted based on the conceptualization and the suggested theoretical framework to help explore more about it and it influences on the current business environment. Therefore, the aim of this question will be met by conceptually modeling cultural indoctrination and by exploring a theoretical framework, conceptualization, and operationalization of the concept.

2- ***How can rational decision-making be negatively impacted by cultural indoctrination?***

Indoctrination varies according to the local culture (Christiansen, 2012). Factors of cultural indoctrination such as "religion, nationalism, culture institutionalization, cultural intelligence, and values orientation theory" can be seen to have direct negative influences on linear and rational decision-making processes in global firms, including the ability to localize businesses through a multi-domestic strategy in order to fit in the local culture or to bend the rules to obtain approval by the locals to its existing products. All of these can have a complex negative impact on the corporate culture itself. In short, any global firm that begins to modify its internal policies or to pursue unethical procedures to fit into a host country is destroying its investment beforehand. To answer this research question, a demonstration of historical data accompanied by the conceptual modeling of the concept will be followed by future scenarios and a conclusion

3- ***How can localization and decentralization of decision-making policies of multi-national businesses in emerging economies have a negative impact on investment in the future?***

Styhre et al. (2010) argue that uncertainty in industries is leading to higher levels of risk-taking in companies which, in turn, is affecting decision-making quality, cost, and speed. As good and as economic as the localization of staff, policies, and strategies of a global firm may seem, following the local standards to meet buyer needs or cultural requirements can be destructive to a firm's

reputation and internal cultural. This is especially true if these requirements are rooted in unethical aspects of a certain culture. This is what we can apparently witness in emerging markets and developing countries that have a higher need for investment than do developed countries.

However, when a global firm begins a long-term project in these countries, it can be halted or disrupted by local customs and cultural aspects that are perceived as values and protected by the locals. Finally, this question can be seen as a warning to global firms that are conducting business in developing nations or emerging markets, in particular to their human resources recruitment departments. The question will be answered by the historical data and future scenarios.

1.4 Significance of the Research

Cultural indoctrination as a concept has not been researched enough in academic literature as previously mentioned. While conducting this research, it became apparent there is a scarcity of resources that define or explore this concept and that there is a need for a conceptual model of cultural indoctrination. This research will be the first detailed paper that has been conducted on this concept and the probable consequences of it on decision-making in a hyper-competitive era using concrete data and speculative scenarios.

1.5 Research Justification

“Few companies have the size or management capabilities to make a success of going overseas and for most, it may well be more profitable to look closer to home” (Stadler, Mayer, & Hautz, 2015). According to the article “going global”, being able to afford the extension financially is not the only requirement. Successful cross-cultural management also matters when considering cultural differences between employees and various management levels. Business dictionary.com defines decision making as “the thought process of selecting a logical choice from the available

options" (2018). The word "thought" is defined by Cambridge dictionary (2018) as "an idea or opinion produced by thinking" (PHYS.ORG). Zyga (2008) argues that an opinion is formed through political, religious and ethical beliefs and the tolerance for diversification. Religion, Nationalism, Values Orientation Theory, Culture institutionalization, and Cultural intelligence are the components of cultural indoctrination which we will be examining in this research.

This thesis is intended to be an interpretive study. According to Meredith et al. (1989), the interpretive perspective includes the context of a given phenomenon, which means studying an event or a concept without disregarding the facts and attempting to illustrate a behavior by placing it in a broader and more relevant context where it can be explained logically. This approach serves the purposes of this study because if cultural indoctrination was explained by the examination of individual cases or even a single community, it would not provide a holistic view that this research provides.

However, by applying and examining it in the context of multilateral phenomenon with multiple aspects that are explained individually as opposed to collectively, and by trying to conceptualize the phenomenon and attempting to construct a theoretical framework for it, we can open the door for many researchers to build on our work and to interpret more phenomena that can affect any rational, linear, or ethical decision-making process The tools that will be exploited to conduct this research are *historical analysis*, *future scenarios,* and *conceptual modeling* which can be seen as perception of objective reality and as an artificial construction of objective reality (Meredith, et al., 1989).

These are the best tools that can be employed in research discussing the relatively new concept of "cultural indoctrination" which is new to the extant literature. Additionally, historical analysis accompanied by future scenarios will be good tools to provide an answer to the research questions.

In the future scenarios section, there will be evidence which stems from the historical analysis section in addition to careful speculations that are conducted by experts and the author.

Table 1 adopted (Meredith, Raturi, Amoako-Gyampah, & Kaplan, 1989)

	NATURAL ⟷ ARTIFICIAL		
RATIONAL ↑	DIRECT OBSERVATION OF OBJECT REALITY	PEOPLE'S PERCEPTIONS OF OBJECT REALITY	ARTIFICIAL RECONSTRUCTION OF OBJECT REALITY
AXIOMATIC			• REASON/LOGIC/ THEOREMS • NORMATIVE MODELING • DESCRIPTIVE MODELING
LOGICAL POSITIVIST/ EMPIRICIST	• FIELD STUDIES • FIELD EXPERIMENTS	• STRUCTURED INTERVIEWING • SURVEY RESEARCH	• PROTOTYPING • PHYSICAL MODELING • LABORATORY EXPERIMENTATION • SIMULATION
INTERPRETIVE	• ACTION RESEARCH • CASE STUDIES	• HISTORICAL ANALYSIS • DELPHI • INTENSIVE INTERVIEWING • EXPERT PANELS • FUTURES/ SCENARIOS	• CONCEPTUAL MODELING • HERMENEUTICS
CRITICAL THEORY		• INTROSPECTIVE REFLECTION	
↓ EXISTENTIAL			

1.6 Research Outline

This study was conducted in an interpretive manner, and the collection of data and the actual writing of the research required a total of six months. After validating the validity of the research idea for three months and working in collaboration with Bryan Christiansen, we were able to publish two papers, "Cultural Indoctrination and Open Innovation in International Business, 2018", and "Cultural Indoctrination and Management Education, 2018" in the *International*

Journal of Management Education. In addition, but Chapters 5 and 6 in a book titled, "Applied Psycholinguistics and Multilingual Cognition in Human Creativity", are in the press by IGI Global in Pennsylvania, USA.

Chapter 2: Literature Review

This chapter will focus on a literature review of past and current theories and literature relating to both variables.

2.1 Theoretical Framework

Previous theories have defined the role of culture in influencing behavior in decision-making as a multivariate and difficult aim that can be vastly impacted by cultural behavior and is a critical business activity in today's global hyper-competition because of the recent technological advances and the shortage of time factor in decision-making process (Ang et al., 2007; Gates & Hemingway, 1999; Drucker, 2002).

Decision-making models that only rely on mathematical and economic theories and equations are unfair and inaccurate in regards to human nature that sometimes seeks randomness and in other times follows the beaten track to avoid taking risks. According to Le, Sargent, and Koo (2013), globalization and cross-national investment are not successful without the complete absorption of the culture of the host country. Linking the two concepts together, we realize the big role of culture in decision-making, which becomes clear when one considers the cultural acquisition process, which stemmed largely from the cultural indoctrination concept that was defined by Christiansen and Gad (2018) as *the process of inculcating ideas, attitudes, beliefs, and cognitive strategies during the transfer of cultural traditions from one generation to the next with the expectation that such traditions will not be questioned but practiced in the future.*

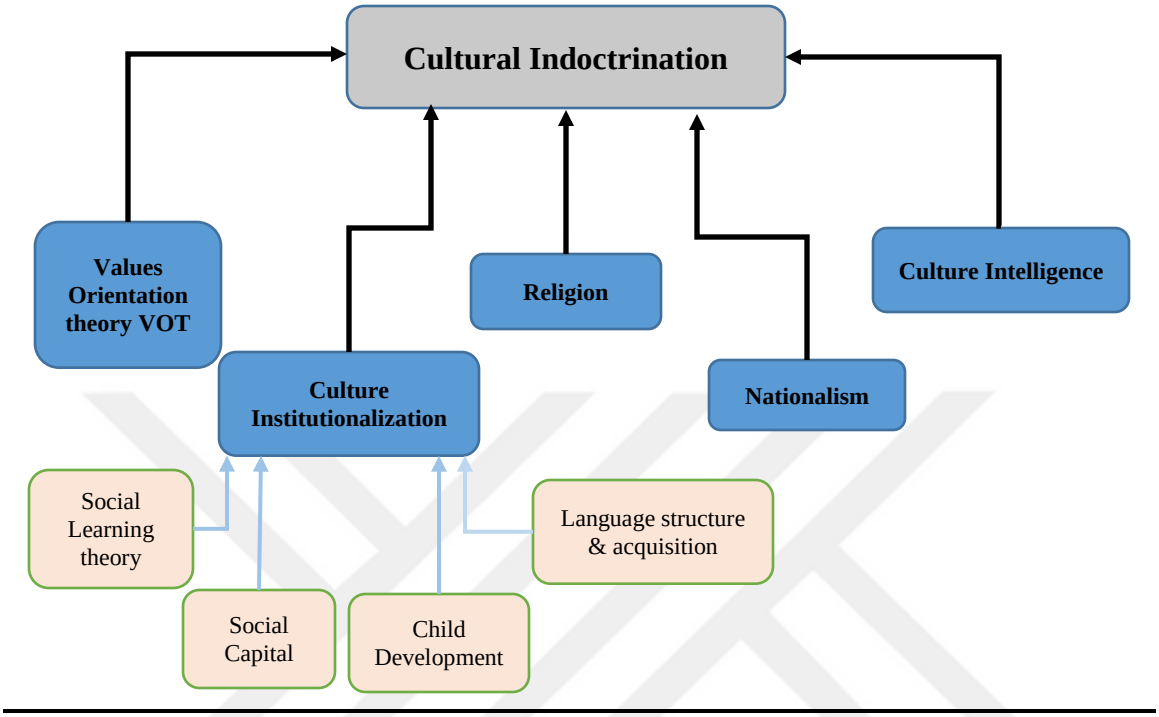

Figure 1 adopted from (Christiansen & Gad, 2018)

2.2.1 Summary of Existing Literature

Previous research has examined numerous models for cultural components; for example, Geert Hofstede's model of cultural dimensions (Hofstede, 1984). In addition, oddly enough indoctrination was defined as a synonym to education (Gatchel, 1972). Considering the paper *Dynamic Decision Making* (Meisel, 2011) as an example if human decision-making is modeled as a search for global optimization simply by using rigorous mathematical rules, it will be incomplete in terms of offering a fair representation of reality. Therefore, it is necessary to consider qualitative as well as quantitative issues regarding corporate decision-making in an era of hyper-competition (Verplanken & Holland, 2002).

The gap the author seeks to cover is the impact of cultural indoctrination on decision-making in the context of global firms in developing countries and emerging markets, particularly the deviation that occurs in the decision-making process towards satisfying the local culture disregarding the international firm's policy or what can be considered as irrational, immoral or illegal behavior.

2.2.2 Decision-making

The Markov model of dynamic decision making (Meisel, 2011), uses T as a set of possible decision times, taking into consideration that the decision is made by a human, and that such a decision cannot be definitely anticipated as long as "the decision-maker" has the freedom to take the decision or abandon it altogether. With such a model, and also keeping fuzzy statistical decision-making in mind (Kahraman et al., 2010) where it is easier to anticipate decisions based on less data, it still casts a big shadow on the role of free will or indoctrinated culture behaviors.

"When using multi-criteria decision methodologies, one must remember there are no universal best solutions, as outcomes are reached upon the personal judgment of different criteria" are the exact words written at the beginning of a paper published on "Multi-Criteria Decision Analysis (MCDA)" (Ribeiro, Ferreira, & Araújo, 2013). I previously stated there is no definite asserted way of assuming a hundred percent understanding of human behavior regarding decision-making even in professional international firms, and that cultural indoctrination has an effect on the decision-making process that can impact even the most professional decision-makers in a humanistic moment.

In a review of empirical studies assessing ethical decision-making in business (Loe, Ferrell, & Mansfield, 2000), the authors summarized a variety of empirical studies that examine the different aspects of ethical decision-making and also direct researchers for future studies on the matter. The

research examines a number of empirical studies of ethical decisions. Out of 188 studies, a total of 107 examined the individual factors that affect the ethical decision-making process including six on cognitive moral development, ten on nationality, and three on religion. The studies on gender and age, which numbered twenty-six and fifteen, respectively, could not determine that these factors made much of a difference in the ethical decision-making process.

In addition, education, work experiences and cultural climate studies suggest that education does not have a huge impact on the ethical decision-making. However, in contrast, culture and climate were found to be widely effective in the adaption of organizational ethics. Codes of ethics awareness were also found to be ineffective in many cases. At the end of the study (Loe, Ferrell, & Mansfield, 2000), a number of authors used the term, "Miscellaneous categories", to refer to areas like religion, nationalism and cognitive moral development which are difficult areas to study. Furthermore, relating their impacts to managerial actions and consequences is a very difficult task.

By considering this review, we witness the impacts of individual traits on ethical decision-making and how the three "Miscellaneous categories" mentioned above are scarcely researched because of the difficulty of the process of relating them to certain decisions at certain times.

Wong and Beckman (1992) formed a model for Integrated Moral Analysis (IMA) that is capable of providing a degree of objective quantification to the ethical analysis of an organizational decision-making process using the two ethical theories utilitarianism and Ross' prima facie duties. In this article, the authors discuss foreign bribery as a decision-making dilemma that faces international businesses that perform in developing countries. This behavior can be seen in some countries as an acceptable way of doing business is and is sometimes expected from an investor.

However, this behavior is illegal in countries like the USA where institutions are often based. If the CEO allows a bribe to take place, he/she can make personal gains and help his/her institution

grow and make a profit. In addition, if he/she does not allow it to happen, he/she will be faced with a lot of criticism for the failure of the project. By using the model, the data shows that cost of paying the bribe will be negative eight points, by factoring the benefits (e.g., employees, community, owners, CEOs, and bribe takers) against the drawbacks (e.g., competitors, company noninjury, company fidelity, consumers, and populace costs). In the conclusion, the authors stress that using this model with each action the institution takes is not cost-effective and that the profitability of the action will dominate the decision-making process most of the time.

This also proves the point of this research that ethics are considered after factors such as achieving profitability and avoiding local corrupt values might be a hard task to be performed. It also suggests that the local culture with all its traits will dominate the localization process and the performance of multinational institutes in their foreign branches.

Even on the battlefield, researchers have found that the uncertainty factor is a key part of the decision-making process. Research conducted by the Adali at Rensselaer Polytechnic Institute (2018) has shown that even small contradictions in information can have an impact on the decision maker and their ability to form "subjective opinions and beliefs as well as their decision-making performance". However, this study still encourages decision-makers to be more unbiased and to examine all of the details because uncertainty in this situation might help to accomplish the mission at hand.

In conclusion, despite the large body of research on the decision-making process, the implications of local culturally indoctrinated values on the decision-making process are still ambiguous. Hence, the purpose of this research is to highlight these implications and show that they can have tremendous effects on the decision-making process.

2.2.3 Culture Acquisition

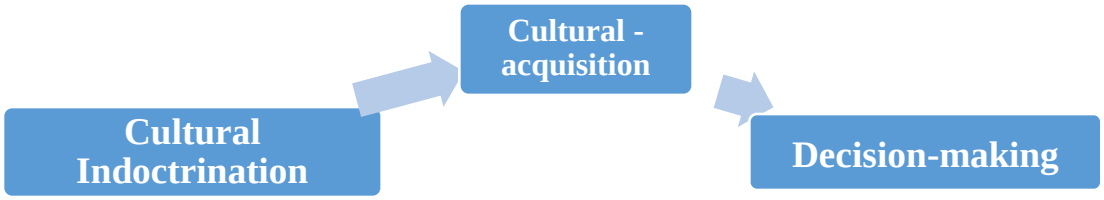

Figure 2 (Created by the Author)

Theodore Schwartz (1981) in his paper on conceptualizing the acquisition of culture tries to call researchers' attention to cultural-acquisition. In his research, he defines the term acquisition as "enculturation" as opposed to what psychologists have known it is as which is "socialization". He criticizes them for ignoring or overlooking the role of cultural-acquisition in youth, and arguing they are still "pre-social animals" or an "asocial humans". He also discusses further research on the cultural-acquisition concept in childhood, referring to studies that were performed on 3-year old children. These studies showed that children not only have the ability to understand things quickly while learning languages but that they also adopt local culture and ideology. In summary, cultural-acquisition is the perfect tool to connect the blind transmission of culture or indoctrination to the decision-making process because enculturation is the perfect depiction of the way that individuals shape their behavior according to a group's culture. (dictionary.com, 2018).

2.2.3 Culture Indoctrination

Geert Hofstede once stated the nature of management skills is such that they are culturally specific. He also defined culture as the collective programming of the mind which distinguishes the members of one group of society from those of another, stressing that management is constrained by the cultural context of its local society. He also defined cultural dimensions as the following: 1) power distance; 2) individualism vs. collectivism; 3) masculinity vs. femininity 4) uncertainty

avoidance 5) long-term vs. short-term orientation (Hofstede, 1984). Hofstede's work continues to be the foundation of cultural studies or dimensions as it remains the most highly cited in the extant literature, which encourages any researcher to use his definition and dimensions their studies.

A critical look at this paper indicates that Hofstede did not incorporate a theoretical framework into his definition of culture and that he only "used the best definition that he preferred" for culture as a starting point. He defined culture as a collective community tool to segregate members of one society or community from the others. Also, he failed to highlight how unethical this definition can be if it was adopted in all communities, and how it encourages segregation among individuals of different communities. However, it might be that he was working from an assumption of his time without realizing how biased and unjust it seemed.

Hofstede was one of the pioneers that started defining differences among communities into terms such as "Individualism versus Collectivism", "Large versus Small Power Distance" "Strong versus Weak Uncertainty Avoidance", and "Masculinity versus Femininity". He also was one of the first scientists to form a solid link between culture and management and to point out the different measurements that should be taken when a manager is dealing with a different culture and a different community. His arguments are summarized in the following tables.

Table 2 adopted from Hofstede (1984)

	Individualism	**Collectivism**
Definitions	Individuals prioritize themselves and their immediate families only in a loose social framework.	Individuals expect unconditional loyalty from relative's next of kin and acquaintances in a very socially tight framework.
Differences	The individual is motivated by self-interest.	The individual is motivated by group-interest.
	Self-actualization is the priority.	Actualizing in the group is the priority.

	Employee-employer relationship is based on mutual advantage.	Employee-employer relationship is based on mutual traditional obligations like a family.
	Priority in business is to the task.	Priority in business is to the relationship.
	Nepotism is objectionable and forbidden.	Nepotism is the norm because the priority is to the family.
	Openness and directness in business relations are preferable.	Lots of social and behavioral traits are expectable and the care of the social framework is prioritized.

Table 3 adopted from Hofstede 1984

	Large Power Distance	**Small Power Distance**
Definitions	People in this society accept large differences in power between individuals in the same society.	People in this society do not accept large differences in power and always demand just and equality.
Differences	Encourages loyalty.	Encourages independency.
	The employee-employer relationship is paternalistic.	The employee-employer relationship includes consultancy and democracy.
	Visible differences in status between superiors and subordinates.	Differences in status between superiors and subordinates are not visible.
	The high status is achieved through rank, ancestry and wealth.	The high status is achieved through achievements.
	The respect for the old is expected.	The respect for the old is not expected.
	The superior power is absolute and complaining is condemned with an expectation of retaliation against the complaining employee.	Power abuse is not expected and channels of complaints and redress are established.
	Management by Objectives is not feasible.	Management by Objectives is feasible.
	Appraisal system is not feasible.	Appraisal system is feasible.

Table 4 adopted from Hofstede 1984

	Strong Uncertainty Avoidance	**Weak Uncertainty Avoidance**
Definitions	These societies maintain stagnant & strong beliefs and it is not easy for them to accept any vague or uncertain principles, institutions or people.	These societies are resilient, flexible and more accepting of new principles people and institutions.
Differences	There is a strong need for rules.	More comfortable in dealing with situations where there are no rules.
	A preference for the formalization of structure, standardization of procedures, and "ritualization" of behavior.	More of a common understanding of the organizational harmony with vague rules is expected.
	Less centralized management.	Centralized management.
	Short-and medium-term scheduling and planning get more attention from management.	Strategic planning and altering fundamental goals and activities of an organization is popular.
	Time is valuable.	Time is not valuable.
	Precision and punctuality are very important.	Precision and punctuality depend on the social relationship between the superior and subordinate.
	Expressing emotions is encouraged and tolerated.	Expressing emotions is not encouraged and not tolerated and may cause loss of respect.
	Deviants are not tolerated.	Deviants are less rejected or may be ignored.

Table 5 adopted from Hofstede 1984

	Masculinity	Femininity
Definitions	In these societies there is more tendency for strength, achievements, heroism and, assertiveness.	In these societies there is more tendency for relationships, helping of the weak and modesty.
Differences	Pursue large differentiation between men and women	Pursue equality between men and women
	Competitiveness is regarded as a good thing and encouraged.	Solidarity is regarded as a good thing and the help of the weak is encouraged.
	Sympathy for the strong	Sympathy for the weak
	Stress on performance	Stress on relationships.
	An increased challenge is considered more important.	The quality of life is considered more important.
	The symbolic meaning of a career is greater.	The general ambition is high.
	Masculine, aggressive and superhuman qualities of a manager with the fast ability to take decisions are admired.	The same qualities will disqualify a manager and make him/her not be taken seriously.

2.2.3.1 Nationalism

Even though Bryan Christensen's (2016) theoretical framework on cultural indoctrination is very considerate, adding **nationalism** as a strong factor if we are talking about developing countries and emerging markets must be considered. Balabanis et al. (2001) suggest that nationalism has an indirect impact on managerial decisions in marketing products in both Turkey and the Czech Republic in their research "The Impact of Nationalism, Patriotism and Internationalism on Consumer Ethnocentric Tendencies". He suggests that when managers in these countries make decisions and take actions, they consider the fact that they have to avoid triggering a sense of nationalism and ethnocentric tendency. **Ernest Gellner,** in 1983 in his book, "Nations and

Nationalism", defines nationalism as a political principle, which holds that the political and national unit should be congruent (Gellner, 2006). **Thomas Eriksen** from the "International Peace Research Institute, Oslo" in his research "Ethnicity and Nationalism" (Eriksen, 1992) states that the initial purpose of nationalism is to guarantee justice and equality for its citizens (unlike the feudal system which it replaced in Europe).

However, it proved that in the most cases capability of inspiring oppression and is brutality directed against foreigners or citizens who do not seem to belong to its theoretical community. In conclusion, adding "Nationalism" as a component in the cultural indoctrination process is a necessity considering the literature and the current elections in the recent years that promoted nationalism even in most developed countries, which will be discussed later.

2.2.3.2 Culture Intelligence

Cultural intelligence CQ refers to a person's capability to adapt effectively to new cultural contexts (Early & Ang, 2003). This definition has been criticized in many studies in contemporary literature. For instance, in a quantitative study by Matthewsa et al. (2018) on multinational military leadership and decision-making, the author proved that CQ has harmful effects such as over-confidence and that it is negatively associated with situation judgment test performance "perceived self-efficacy in cross-cultural situations did not translate into better decisions". Nonetheless, it is still important to be considered as CQ a factor in cultural indoctrination because of its effect on individual behavior.

2.2.3.2 Religion

Webster's Third New International Dictionary defines **Religion** as "the personal commitment to and serving of God or a god with worshipful adoration." or "one of the systems of faith and

worship". Both of these definitions closely coincide with definitions used in nursing textbooks and journals from 1963 to 1989 (Emblen, 1992). By examining the same dictionary online today, it shows the definition of religion as "a personal set or institutionalized system of religious attitudes, beliefs, and practices" (2018). With these definitions in mind, the apparent and clear change in the definition of the term "Religion" can be understood.

Another source that provides an illustration of the evolution of the definition of religion is the study by Julia D. Emblen (Religion and Spirituality Defined According to Current Use in Nursing Literature, 1992) which illustrates the differences between the definition of the word religion between 1963 and 1989.

Emilio Gentile (Fascism, totalitarianism and political religion: definitions and critical reflections on criticism of an interpretation, Totalitarian Movements, and Political Religions, 2004) interprets fascism as a kind of a religion and links it to political religion in particular. The research of Robert J. Barro and Rachel M. McCleary from Harvard University (2003) examines the impact of religion on economic growth across a number of countries in their work they examine a massive amount of data from 59 countries on the state religion, state regulation of religion, and religious pluralism. They follow with six international surveys in the same countries which consider people's beliefs surrounding three things: 1- the belief in hell 2- the belief in heaven 3- church attendance.

By analyzing the findings, it is obvious that church attendance plays an important role in economic regression. However, the belief in heaven plays a role in economic growth and the belief in hell plays an even stronger role. Later in Chapter 6 (Historical data), this research will be discussed in detail. Keeping this research in mind, it only can be useful to prove this research argument, that the indoctrinated cultural components can negatively affect individuals. In summary, as much as this research could continue outlining the benefits of religion in business practice or in the help of

the economic growth, that is the best piece of literature that was found, and it still links church attendance to regression in the economy.

2.2.3.3 Values Orientation Theory (V.O.T)

Kluckhohn and **Strodtbeck's Values Orientation Theory (VOT)** can be considered one of the most influential theories on human values. The theory is based on a theoretical concept proposed by Florence Kluckhohn's husband Clyde Kluckhohn, who argues that humans share biological traits and characteristics which form the basis for the development of culture, and that people typically feel that their own cultural beliefs and practices are normal and natural and that those of others are strange, or even inferior or abnormal. He also defined a value as "a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means, and ends of action" (1961).

The theory assumes that: 1- A limitation of human problems and the consistent attempt of finding solutions to them should be pursued. 2- Despite the variability of solutions, the limitless and randomness of them should not be assumed. 3- Ways to solve the problems do exist in different shapes at different times in different societies yet preferences differ. (Hills, 2002). These assumptions formed the foundation of the Values Orientation Theory which is incorporated into the proposed framework above because VOT is a combination of the other factors involved in cultural indoctrination.

2.2.3.4 Culture Institutionalization

Finally, cultural institutionalization can be defined ethnomethodologically as acts which are both objective (potentially repeatable by other actors without changing the meaning) and exterior (inter-subjectively defined so that they can be viewed as part of external reality) as highly

institutionalized (Zucker, 1977). Research conducted by Lynne G. Zucker in 1977 from the University of California examines the effects of institutionalization on three aspects of cultural persistence: 1- Generational uniformity of cultural understandings 2- Maintenance of these understandings 3- Resistance of these understandings to change. By conducting three auto-kinetic experiments in experimental venues and on average of 180 people per experiment, the results showed that the persistence of cultural understandings varied directly with institutionalization.

The degree of institutionalization depending on personal influence, organizational context or office directly affected three major aspects of persistence: generational uniformity, maintenance, and resistance to change. Thus, a theory which explains highly institutionalized action also permits more accurate and complete predictions of cultural persistence. In conclusion, the findings reported in the three experiments provide strong and consistent support for the predicted relationship between the degree of institutionalization and cultural persistence. As predicted, it was found that the greater the degree of institutionalization, the greater the generational uniformity of cultural understandings, the greater the maintenance without direct social control, and the greater the resistance to change through personal influence (Zucker, 1977).

I- Language structure

"All linguistic forms constitute a subclass of cultural forms." (Bock, 1986).

Much research was conducted to establish the link between language structures and human social behaviors following the pioneer, Benjamin Lee Wharf, in his book, "Language, thought and reality" that establishes the first link between the language and human behavior (Christiansen & Gad, 2018)

In a research paper written by Berman et al. (2017) on the relation between language structure and innovation, an analysis between the language structure and the gender differentiation

"individualism versus collectivism and hierarchy differentiation" indicated an association between language structure and innovation. It also suggested incorporating native language structure into child education policies. In conclusion, even though language structure has been researched often, there remains potential for more discoveries around the interaction between language structure and management.

II- Social learning theory

Bandura (1969) developed a theory that learning does not come by reward and punishment, but rather that it develops through emulating the behavior of socially competent models who can show the culturally acceptable repertoires in their behavior. When considering the fact that childhood upbringing comes with one model that is the parental figure and suggesting that all these complicated cultural patterns of behavior are assembled and transmitted via the social-systems level, the latter point just affirms and demonstrates the purpose of this research by linking culture transmitting models to behavior.

III- Social Capital

Bourdieu's and Coleman's notions of social capital are considered the basis of the concept and the divergence between them has been well studied (Coradini, 2010). If we consider the similarities between the two concepts we can explain them as the conversion of particular social attributes of individuals into what can be known as an economic gain. When Woolcock (1998) compared Singapore and Madras in terms of social capital, he found great differences in what can be conceived as social capital with the variance of culture and community nature. Therefore, it is easy to say that social capital varies between communities. In addition, what can be connected here to this research is the aspect that social capital is an indicator of wealth in cultural contexts that can be an influencing aspect in the cultural indoctrination concept.

IV- Child Development

Bronfenbrenner's Ecological Systems Theory states that five layers that constitute child development are respectively microsystem, mesosystem, exosystem, macrosystem, and chronosystem. The theory also argues that these layers are connected and have a great impact and influence on a child's growth and development (Paquette & Ryan, 2001). Urie Bronfenbrenner concludes that human beings' behavior is a result of multi-cultural aspects with a great ability to tolerate and adapt to the nature of these ecological systems (1993), which is why child development theories can be considered a great influence on culture indoctrination as the transmission of ideologies and cultures is indoctrinated especially during this time period of the individual's life

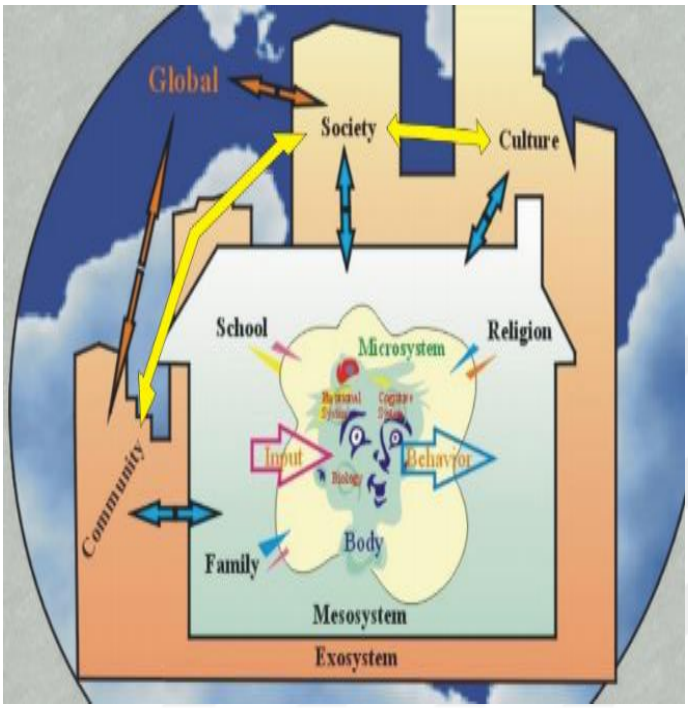

Figure 3 adopted from (Paquette & Ryan, 2001)

2.3 Conclusion

In conclusion, by looking at the factors that form cultural indoctrination and their direct and indirect effect on the human behavior, one comes to realize that the greater the Indoctrination of a given culture the greater the impact on human behavior and consequently on the individual's the ability to make linear and rational decisions. In our era of globalization, hyper-competition and artificial intelligence, and considering the high degree of diversification that global firms are acting in, a qualified manager in global firm, who is in a decision-making position, is expected to take in

consideration all the cultural differences while making any decision that can impact a wide range of employees or customers of different backgrounds. In addition, this is considered to have a negative impact because it requires the manager not to comply with the company's policies and sometimes it violates some moral and/or legal rules and the rational basis of the taken decision.

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Chapter 3: Methodology

After theoretically framing cultural indoctrination in the last chapter using literature review to view the theories that were conducted on the concept, this chapter discusses the research designs and paradigms and a justification of adapting certain methods through this research.

3.1 Research in Operations

During the 1960s there was extensive discussion of the operations management research methodologies (Mayer, 1962; Meredith, 1989; Mariano Nieto et al., 1999). Some traditional research argues that operation management research should be direct, statistical, and quantitative so that it may benefit operations in industries. Operation managers have no role in production and managers will play a relatively minor role in these areas of decision-making" (Mayer, 1962). However, the interconnected modern global business world has forced business and operation research to take a qualitative, descriptive, and interpretive approach. In a review of research on operations, it was criticized with many factors such as being insufficient and narrow and not knowledgeable and explanatory enough (Buffa, 1980), very technical with no regards to the reasoning and knowledge behind it and finally for being abstract with no regard to real life practicing (Chase, 1980).

3.1.1 Research Cycles

Emory in 1985 describes research tasks as 1- Description 2- Prediction 3- Explanation (Emory, 1985). In addition, it is to be formed as a cycle (Meredith et al., 1989) depicted it as a repetitive cycle that allows research to be self-explanatory and self-fixing of errors. The steps proposed by Meredith are as follows.

Step one: Description, arguing that it will lead to reporting long-term events and alternations in operations that need to be characterized through frameworks, testing theories and concepts. (Chapter 2, “Literature review; Chapter 5, “Conceptual Modelling”)

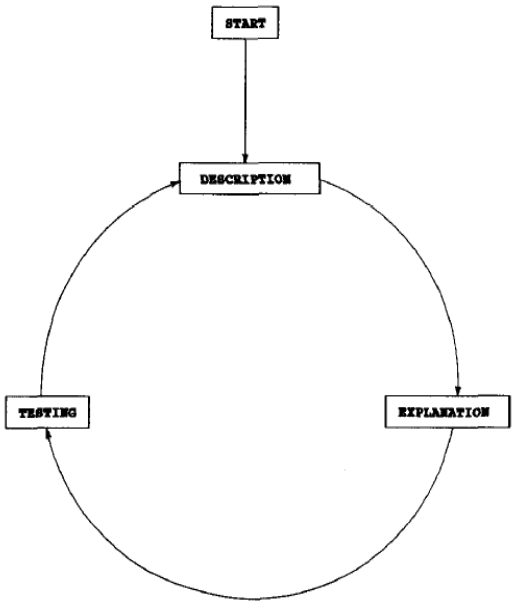

Figure 4 adopted from (Meredith, Raturi, Amoako-Gyampah, & Kaplan, 1989)

Step two: Explanation that could be descriptive of these direct and indirect relationships that happen between concepts and results, or theoretical frameworks that can be explained by the phenomenon characterization. (Chapter 2, “Literature review”; Chapter 5, “Conceptual Modelling”)

Step three: Testing, to check the validity and correctness of the explanation and the results that came out of the research (Chapter 4, “operationalization of the variables”; Chapter 6, “Historical data”)

Hospers (1956) exposits that an explanation can be summed up in three steps: 1- Stating the purpose or the goal of a certain phenomenon 2- Demonstrating the resemblance of the phenomenon to familiar ones as an instance 3- Forming a law that governs this phenomenon.

3.2 Research Design “Quantitative or Qualitative”

Due to globalization and the current worldwide competitive challenges, many operations managements research has moved from being only quantitative and statistical to being qualitative (Meredith et al., 1989).

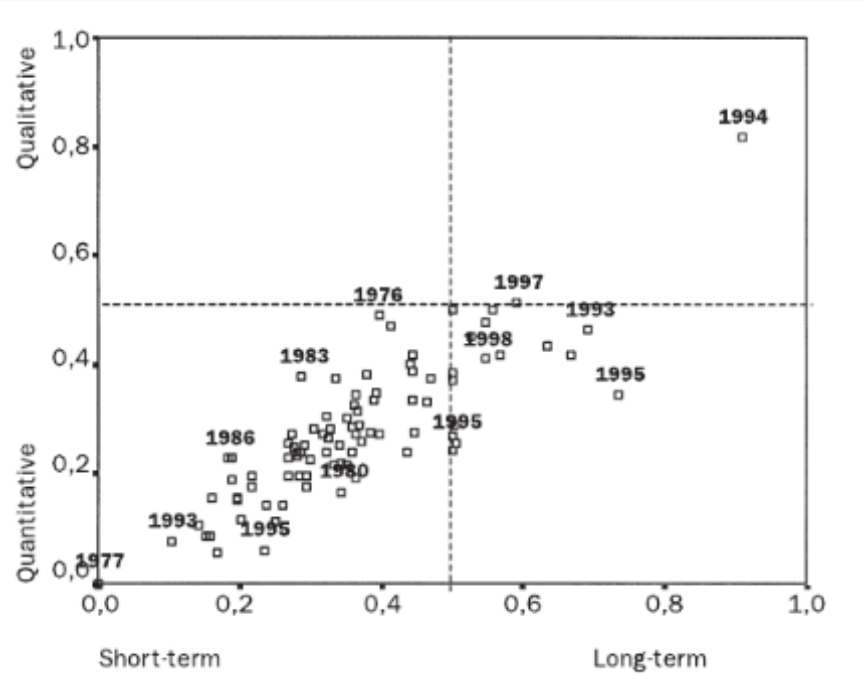

Figure 5 (Nieto, Arias, Minguela, & Rodriguez, 1999)

Understanding a phenomenon like cultural indoctrination and its effects on decision-making process is qualified to be a qualitative study. Conducting a qualitative study provides a rich and thick description of any research findings.

The main research focus, the implications of cultural indoctrination on decision-making, cannot be answered in a quantitative study because the measures which are used to identify cultural indoctrination; namely, "Nationalism, Religion, Cultural institutionalization, Culture Intelligence and Values Orientation theory" are difficult to be quantified statistically. On the other hand, the rationality of a given decision and the linearity of it also cannot be quantified.

However, one can argue that the implications of any decision can be quantified in the corporate world in financial terms, but the complexity of the aspects of one decision cannot be still quantified. An evidence to this is the infinite number of scientific journals, books, and online articles that focus on the decision-making process and the endless attempts to model it or to define it in a precise manner.

For example, in this research, especially in the literature review section, the discussion of Geert Hofstede's model of defining culture and Markov's Model of dynamic decision-making is an

attempt to examine the development of both concepts in a precise manner in order to investigate the implications of the phenomenon in a thorough and detailed way, using what and how questions, the use of historical data will be required. Historical data is relevant to both culture and business decisions. Chandler (1977) argued that one of the reasons for not understanding decision-making in businesses is the focus on quantitative studies in the decision-making process and how that might impede us from understanding the implications of the human behavior side of any decision.

3.3 Paradigms of Research Methods

Research paradigms are particular methods with a common pattern or element. The paradigms also classify research activities into techniques of gathering data, methods used to analyze this data, purposes of research, and the nature of the unit analysis (Meredith, et al., 1989).

Mitroff and Mason (1982) in "Metaphysical assumptions inherent in business policy" research mentioned two key dimensions that classify the philosophical basis for research activity. This was later redefined by Meredith, Raturi, Amoako-Gyampah, and Kaplan (1989) as the "Rational/Existential Dimension" and the "Natural/Artificial Dimension".

Rational/Existential Dimension: this explains how the nature of the research can be logical and independent or dependent on individual factors.

Rationalism uses formal logic and pure knowledge as a measure. *Existentialism* states that human knowledge is acquired through interactions with the environment and that it is also the source of knowledge.

Meredith, Raturi, Amoako-Gyampah, and Kaplan (1989) distribute this dimension into four perspectives ranked by the degree of formal structure: Axiomatic, Logical positivist/empiricist, Interpretive, and Critical theory.

1. The *Axiomatic* perspective is the proven theoretical research that is knowledgeable and most of the operations research fall into this category.
2. The *Logical positivist/empiricist* separates the phenomenon from the context and the environment and studies it with theories and laws that attempt to explain it in this manner.
3. The *Interpretive* uses the context as part of the study.
4. *Critical theory* tries to synthesize both the positivist and the interpretive perspectives division to a broader perspective to increase knowledge of the phenomenon

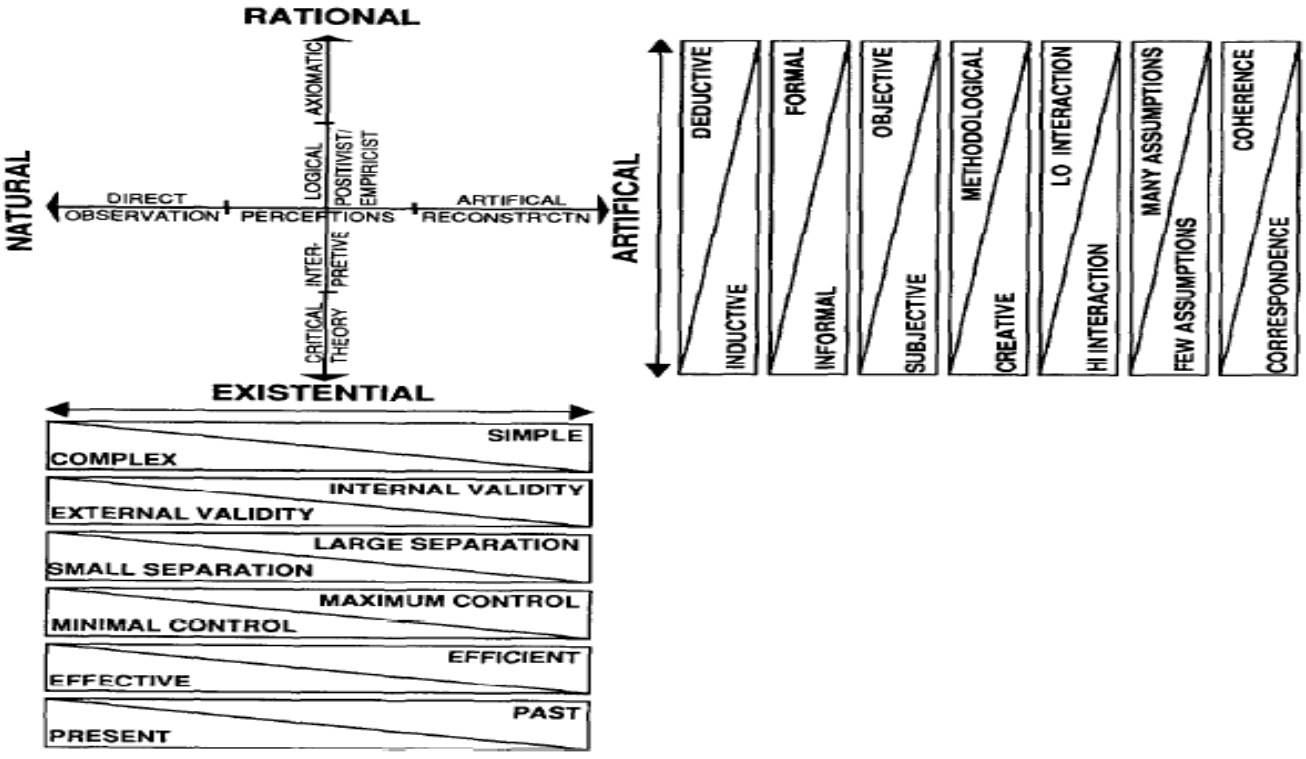

Figure 6 (Meredith, Raturi, Amoako-Gyampah, & Kaplan, 1989)

3.4 Measures of the Dimensions

The research will start with the conceptualization of the cultural indoctrination concept. Conceptualization is an attempt to define a concept and state as precisely as possible what it can

mean, and the definition of a certain concept can include other concepts that should be later defined (Sequeira, 2014). Historical analysis of data is regarded as a subjective tool (Scriven, 1972) because of the subjectivity of choosing the data. However, it is still a very valuable tool to logically analyze some aspects of a certain phenomenon and their direct and indirect results. Then the last step will be Future scenarios, which require generating a set of plausible results of one action and judging it with plenty of speculations and examine the influence of each stage, or a certain stage (Wright & Ayton, 1986).

3.5 Conceptual Modelling

As aforementioned, the main focus of this research will be on the conceptual modeling of cultural indoctrination. Conceptual modeling is the best way to understand and explore a concept (Axelsson, 2013). According to Business Dictionary.com (2018), the definition of a conceptual model is "A descriptive model of a system based on qualitative assumptions about its elements, their interrelationships, and system boundaries". Considering this definition in addition to the definition of Cultural indoctrination and its contents, we realize that the relationship between the elements of cultural indoctrination are complex and interrelated and the need to conceptually model the managerial implications on the decision-making process in managing individuals from different cultures is urging in an era of interrelated communities that are interdependent.

3.6 Historical data

One of the perks of writing a qualitative study is the ability to collect data from various resources interviews, surveys, primary data, secondary data, and so forth (Gopaldas, 2015).

Characteristics of qualitative research in the process of collecting data compared:

Characteristics	Le Compte & Schensul (1999)	Marshall &Rossman (2006)	Hatch (2002)
Natural field	Yes	Yes	Yes
Research is the key to data			Yes
Multiple data sources	Yes	Yes	
Analysis of data inductively	Yes	Yes	Yes
Focus on participants' perspectives.	Yes		Yes
The framing of human behavior and the belief within a social-political/historical context or through a cultural lens	Yes		
Emergent		Yes	Yes
Fundamentally interpretive inquiry		Yes	
The holistic view of social phenomena		Yes	Yes

Table 6 adopted from (Creswell, 2007)

This comparison in Table 6 is a comparison of the views of three major publications on qualitative research **(Schensul, Schensul, & LeCompte, 1999)**, **(Marshall & Rossman, 2006)**, and **(Hatch, 2002)**. The analysis of data inductively and the natural field research is the two characteristics that all writers agree on. Additionally, the use of multiple data sources that vary in kind and formation is encouraged. In addition, the process of this research will conceptualize or frame some behavior and beliefs in a cultural phenomenon called Cultural Indoctrination. Finally, a holistic account of the whole phenomenon will be attempted in this research. In summary, the historical data used in this research are considered variable data (surveys, interviews, and reports) that provide a holistic view of the phenomenon.

3.7 Futures/ Scenarios

Using this method in research can be highly questionable, but it still provides the authors perspective on the issue, and it can be a used as practical application tool of the theoretical framework and conclusion section of the historical data.

Relying only on history is questionable, and psychologically extreme confidence in reciting an incident without assuming any interference is un-acceptable (Fischhoff et al., 1977). Judgmental forecasting is a 3–step method that requires historical data that can be used to prepare for the forecast. (Wright & Ayton, 1986). Luckily, the author has had the opportunity to collect a fair amount of it.

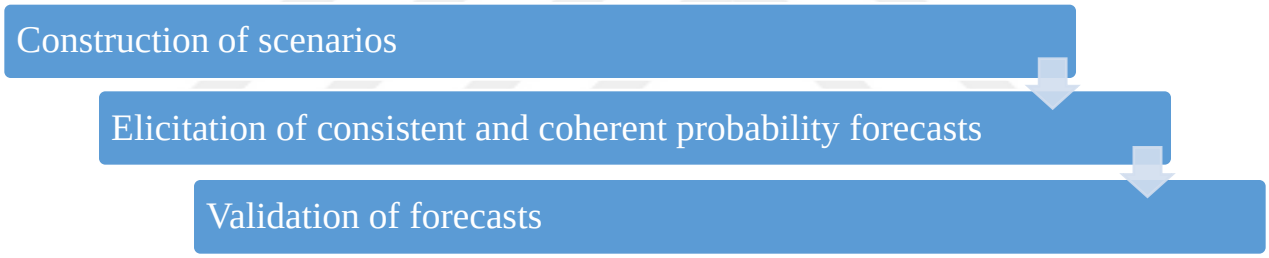

Figure 7 adopted from (Wright & Ayton, 1986)

In the end, in this part in chapter 7 the summary of the author's perspective on Cultural Indoctrination and the purpose of writing this research can be obtained from both of the two scenarios provided as Optimistic and Pessimistic.

3.8 Conclusion

The research methods used in this study were carefully selected to fit the purpose, time limitation, and financial limitations of the project. In the beginning, conceptual Modelling was used to explore the concept. This will be followed by simulation of its implications on stages of the decision-making process, and a display of variously collected data from different resources that proves the points discussed earlier in the literature review and conceptual modeling section. The next section will feature futures and scenarios that shape the previously given opinions in addition to the authors' opinion. The concluding section will deliver answers to the research questions, reveal the limitations of conducting the research and the authors' opinion. It is also important to highlight that at each stage of this research there is a paragraph that justifies or explains its methodology.

Chapter 4: Conceptualization and Operationalization of the Variables

After justifying the methodologies that are used in this research, this chapter will provide a conceptual definition of the variables and check the quality of each variable through a validity check. Then, the following chapter will be a presentation of the conceptual modeling of cultural indoctrination concept and a simulation of the probable influences on the decision-making process.

4.0 An Introduction to the methodology:

Firstly, in order to understand conceptualization, in most of the dictionary's definitions, the definition of a concept is an idea or a principle (Cambridge & Collins dictionaries, 2018).

Secondly, the vast new advances in technology and internationalization of the 21st century will dictate new concepts and expressions for a lot of phenomena that will be conceptualized and defined throughout this century. The most common definition of the conceptualization process is a process that forms a concept or idea (Business and Oxford dictionaries, 2018).

It is also helpful to define conceptual mapping here because the way conceptualization and conceptual modeling work can benefit from conceptual mapping:

Conceptual Mapping: is used to clarify interrelated concepts and brings up measurements to the operationalization of the concept (Trochim, 1999). This is clearly used in this chapter and the following chapter (Chapter 5, Conceptual modeling).

Finally, the last term we deal with in this chapter is operationalization, in order to define operationalization, the word operational has to be defined, and the most common definition is "the ability to be functional or being used" (dictionary.com, 2018)

This means that operationalization is the process by which a concept is measured, observed or manipulated (research, 2018). Operationalizing a concept will mean breaking it up into measurable elements and if needed breaking those elements into more elements to be measured and so on (Sekaran, 2003). However, due to this research limitation, only the Cultural Indoctrination and the Rational decision-making process concepts will be broken down.

4.1 Conceptual definitions

4.1.1 The conceptual definition of the independent variable

Cultural Indoctrination is the *process of inculcating ideas, attitudes, beliefs, and cognitive strategies during the transfer of cultural traditions from one generation to the next with the expectation that such traditions will not be questioned but practiced in the future* (Christiansen & Gad, 2018).

4.1.2 The conceptual definition of the dependent variable

Rational decision-making *describes choices that are logical and consistent and maximize value* (Robbins & Coulter, 2012).

4.2 Operational definitions

4.2.1 The operational definition of the independent variable

Cultural indoctrination is a set of complex values that affect any individual cognitively in each aspect of his/her life and that result in changes in ways of dealing with the day-to-day decisions and problems. Additionally, these values are cognitively transferrable without being questioned from a generation to the other. Due to this unquestionable transferring process, these values affect many aspects of human lives, and respectively any aspect of a manager's decision and way of management as a consequence to these values being indoctrinated unimpeachably, heedlessness can be anticipated in that manager's decision-making process and obvious mistakes are committed.

4.2.2 The operational definition of the dependent variable

The rational decision-making process is a multivariable complex process that has many steps and yet often occurs in a matter of a second or two. However, paradoxically, it depends altogether on logical explanations of the current situation which stem from many experiences both personal and professional. The definition of this term is unclear because it can be on some level a subjective definition when judged only by the consequences of that decision, considering the term "Rational" which has been exploited many times in many articles as a synonym for "Linear". When it comes to the decision-making process, it makes the process look like a straight line; however, in fact, it is a circular process with many components that starts with recognizing the problem itself and ends with evaluating the decision's consequences and because of this the evaluation the process might restart itself or not being recognized after evaluation and stops at the decision-maker.

4.3 The components of the independent variable

Cultural indoctrination is basically stemmed from different roots altogether that created it (Christiansen & Gad, 2018):

1. **Values orientation theory VOT**
2. **Nationalism**
3. **Religion**
4. **Cultural Intelligence**
5. **Cultural Institutionalization**
   i. Social capital
   ii. Social learning theory

iii. Child development

iv. Language structure and acquisition

4.4 The components of the dependent variable (Robbins & Coulter, 2012)

1- Identifying a problem 2- Identifying decision 3- Allocating weights to the criteria

4- Developing alternatives 5- Analyzing alternatives 6- Selecting an Alternative

7- Implementing the alternative 8- Evaluating Decision Effectiveness

Figure 8 adopted from (Robbins & Coulter, 2012)

4.5 Validity check:

The validity of a concept is the credibility and the correctness of the concept's attributes and the measures (Borsboom, Mellenbergh, & Heerden, 2004). In this part, only two indicators of validity will be utilized (Face validity and content validity) due to the contemporary nature of the concept.

The Indicators of Validity:

1- Face Validity indicates what items are intended to be measured *(Sekaran, 2003)*

a- Decision-making is the most critical component of management in general and it reflects many aspects of the manager's professionalism and his/her ability to deal with problems. One of the most important aspects of the validity of the decision is its speed and rationality in the hypercompetitive contemporary environment that we are facing. What is intended to be measured here is the rationality of the managerial decision-making process by considering the previously mentioned steps to achieve a rational decision.

b- Cultural Indoctrination is a set of rules, values, and concepts that are transmitted through the culture without being questioned or simply be being indoctrinated. The components of the concept have been defined (Chapter 2, Literature Review) and previously mentioned in this chapter. So, in order not to repeat the same information again it is advised to look at the previous chapters for more information.

2- Content Validity: it ensures that the measures contain a sufficient set of items that shape the concept.

A - Cultural Indoctrination:

I- Definition of culture: a customary set of beliefs like religion and social forms that have been agreed upon by the group as a way of life (Merriam-Webster & Dictionary C. B, 2018).

II- Definition of indoctrination: means to often repeat an idea or a belief to someone in order to teach or doctrine it unquestionably without a view (Oxford Dictionary & Dictionary R. H, 2018).

III- The most common definition of cultural indoctrination: is the process of inculcating a person with ideas, attitudes, cognitive strategies or professional methodologies (Christensen & Gad, 2018). Humans are a social animal inescapably shaped by their cultural context, and thus some degree of indoctrination is implicit in the parent-child relationship and has an essential function in forming stable communities of shared values.

IV- Contents of the concept: Previously mentioned in item number 4.5. The concept is relatively new and the items forming the concept are referred to in the literature as components of local cultures (see Chapter 2, Literature Review).

B- Rational decision-making process:

I- The definition of a decision: It is the choice between two or more choices (collinsdictionary.com &businessdictionary.com, 2018).

II- The Definition of the decision-making process: the steps taken starting with the rise of a problem and ending with the taking of the decision (Dartmouth, 2018).

III- The definition of a rational decision-making process: the process that starts by identifying a problem and ends with a logical decision followed by an evaluation of that decision (businessdictionary.com, 2018).

IV- Contents of the concept: the contents of the rational decision-making process are previously mentioned in item number 4.6, and the theoretical background of the concept is all discussed in Chapter 2 (Literature Review).

4.6 Conclusion

This Chapter was an attempt to lay the ground for the subsequent chapter, Conceptual Modelling. The overall purpose of this chapter was to construct a view of the variables that this research is dealing with (Cultural Indoctrination and Decision-making). In addition, this section also validated the components of each variable or concept.

Chapter 5: Conceptual Modelling

The previous chapter checked the validity of the variables. This chapter will model the Cultural Indoctrination Concept which will help understand the concept. This is also the main purpose of the thesis. In the next chapter, we will view the historical data that proves the effectiveness of the concept of decision-making.

5.1 What is Conceptual Modeling?

Doorewaard's (2018) book regarding a conceptual model in a qualitative research project refers to the aim of any qualitative research as the task of thorough research on the meaning of concepts. Since this is a qualitative study, at first the introduction of the Conceptual Modeling methodology is needed.

In the proceedings of the 2015 Winter Simulation Conference in Huntington Beach, California, a panel was held by five professors discussed their respective views on the conceptual modeling. Table numbered 7 compares their views.

Table 7 adopted from (Robinson, Arbez, Birta, Tolk, & Wagner, 2015)

Conceptual model	Arbez and Birta	Robinson	Tolk	Wagner
Definition	The Conceptual Model is a detailed and accurate integration of all the related structural and behavioral features of the system under investigation, presented in the format that was defined in advance.	The Conceptual Model describes the objectives, inputs, outputs, content, assumptions, and simplifications of the model.	The Conceptual Model is the last step in the conceptualization of the metaphysical structure of the issue, creating assumptions and limitations on all relevant modeling decisions.	The Conceptual Model is a sole solution for a real-world problem, from which a simulation design model can be derived from a given set of research questions.
Purpose	It should be understandable to all stakeholders to discuss the system under investigation's behavior and it must be specific enough so it can be turned into a computer program.	It is the basis for any simulation model. A documented conceptual model is for communication.	It is necessary to apprehend the conceptualization with an intentional simulation embedded.	Its main purpose is to comprehend a real-world problem as much as possible. Also, the created simulation study can help to study all kinds of research questions that concern the subject.
Benefits	It ensures that the system under investigation is discussed fairly among all stakeholders.	A documented Conceptual Model is the guide for all simulation model developments.	It clarifies a model by documenting it, which is considered the basis for the resulting simulation that is the essence in case of reuse of the composition	It is the clarification of the purpose and scope of a simulation project, and it can be reused in creating different solutions for a different research question

5.2 Cultural Indoctrination Model

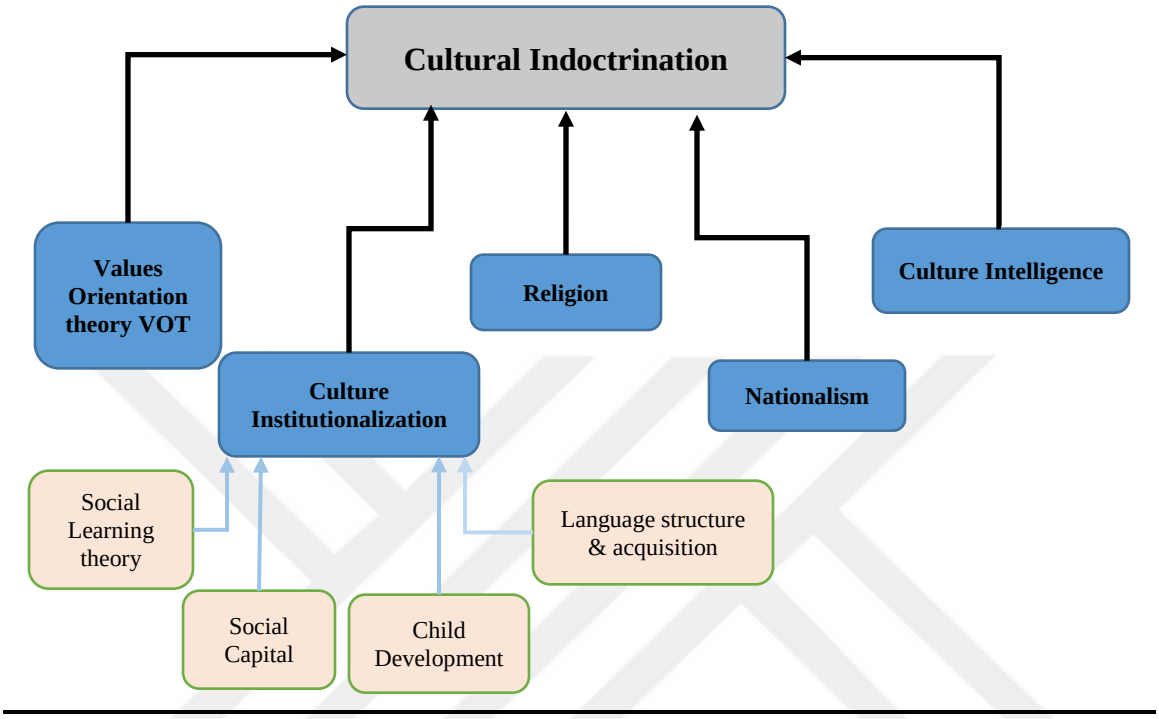

Figure 9 adopted from Christiansen and Gad 2018

As mentioned in recent chapters, Cultural Indoctrination is a set of complex beliefs that are the tools of the non-questionable transmission of the culture process. Guided by many definitions of the word “Culture” and the word “Indoctrination”, a model of the cultural indoctrination concept was created that includes the main components of the undisputable acquisition components of any culture, especially in developing nations and emerging markets, where the indoctrination process flourishes due to the lack of critical education and the increase of the collective thinking that was previously mentioned as Hofstede dimension of these cultures.

Religion, Nationalism, Cultural Intelligence, Values and institutionalization are considered by all means the strongest tools in the indoctrination process that occurs starting from childhood.

Previously, a theoretical framework was derived from a detailed literature review in Chapter 2 that discussed all the theories that relate to the indoctrination process and its relevance to culture. This

framework was published before after being reviewed in a paper titled, “Cultural Indoctrination and Management Education Curriculum” (2018) by Bryan Christiansen and the author, but without nationalism as a factor in the indoctrination of culture. However, the justification of that factor can be found in many literature resources some of which are presented in the Literature Review section.

5.3 Culture Indoctrination Conceptual Framework

Cultural origins can permit the prediction of individual behavior in an organizational environment under various situations (Trompenaars & Hampden-Turner, 2010; Hofstede, 1985, 2001; Hall, 1976). Therefore, for international organizations to be sustainable and make profits from direct foreign investments, they must understand the features and complexity of the host country’s culture. The suggested conceptual model is meant to help understand the components of the cultural indoctrination concept and the effect of its components individually and collectively on the managerial decision-making process in the international organizations in the current hyper-competitive era.

Culture has many definitions, as an example on Cambridge online dictionary “the way of life, especially the general customs andhttps://dictionary.cambridge.org/dictionary/english/belief of a particular group of people at a particular time”, on Oxford online dictionary “The arts and other manifestations of human intellectual achievement regarded collectively”. On the other hand, Hofstede defines culture as “the collective programming of the mind which distinguishes the members of one group or society from those of another.”. The common factor in all these definitions is the agreement on the existence of common collective ideas and how they affect the beliefs of the group and might direct individuals while simultaneously creating restraints on the ideology of the individuals that live within that group.

Indoctrination in the Cambridge online dictionary is defined under the verb indoctrinate which can be defined as “to often repeat an idea or belief to someone in order to persuade them to accept it”, but the Oxford online dictionary has the same verb defined as “teach (a person or group) to accept a set of beliefs uncritically”. Ivan A. Snook in the book “Concepts of Indoctrination” from 1972 mentions the importance of the concept to the educational philosophy and its essential role to the different aspects of religion and morals formation and defines Indoctrination as “to teach a set of beliefs or a point of view in such a manner as to create the impression openly or subtly that what is taught is so true and important to the individual or social well-being that, by contrast, all possible alternatives are false and dangerous”.

The common factor in all these definitions is the coercive and immune nature of the indoctrination phenomenon. By looking at the etymological roots of indoctrination, we can see that it stemmed from “doctrine” that rooted in the word “doctor” which was considered to be the “church father” in the 13th century (etymonline.com) (The Observatory).

As a result of reviewing the definitions of these two words, the new concept of cultural indoctrination can be defined as the process of inculcating ideas, attitudes, beliefs, and cognitive strategies during the transfer of cultural traditions from one generation to the next with the expectation that such traditions will not be questioned but practiced in the future (Christiansen & Gad, 2018). This definition is described as a process because of the on-going process of inoculating and transmitting these ideas that take place starting in childhood with the beginning of the formation of cognition in children’s’ minds and continues until the end of their lives.

At each level, the individual that is being exposed to these ways of transmitting ideas is definitely affected by it. The tools that are used to carry those ideologies are divinely unquestionable, which is shown in the definitions of the components of the concept.

5.4 Conceptual Modelling of the impacts of Cultural Indoctrination on Decision-Making Process

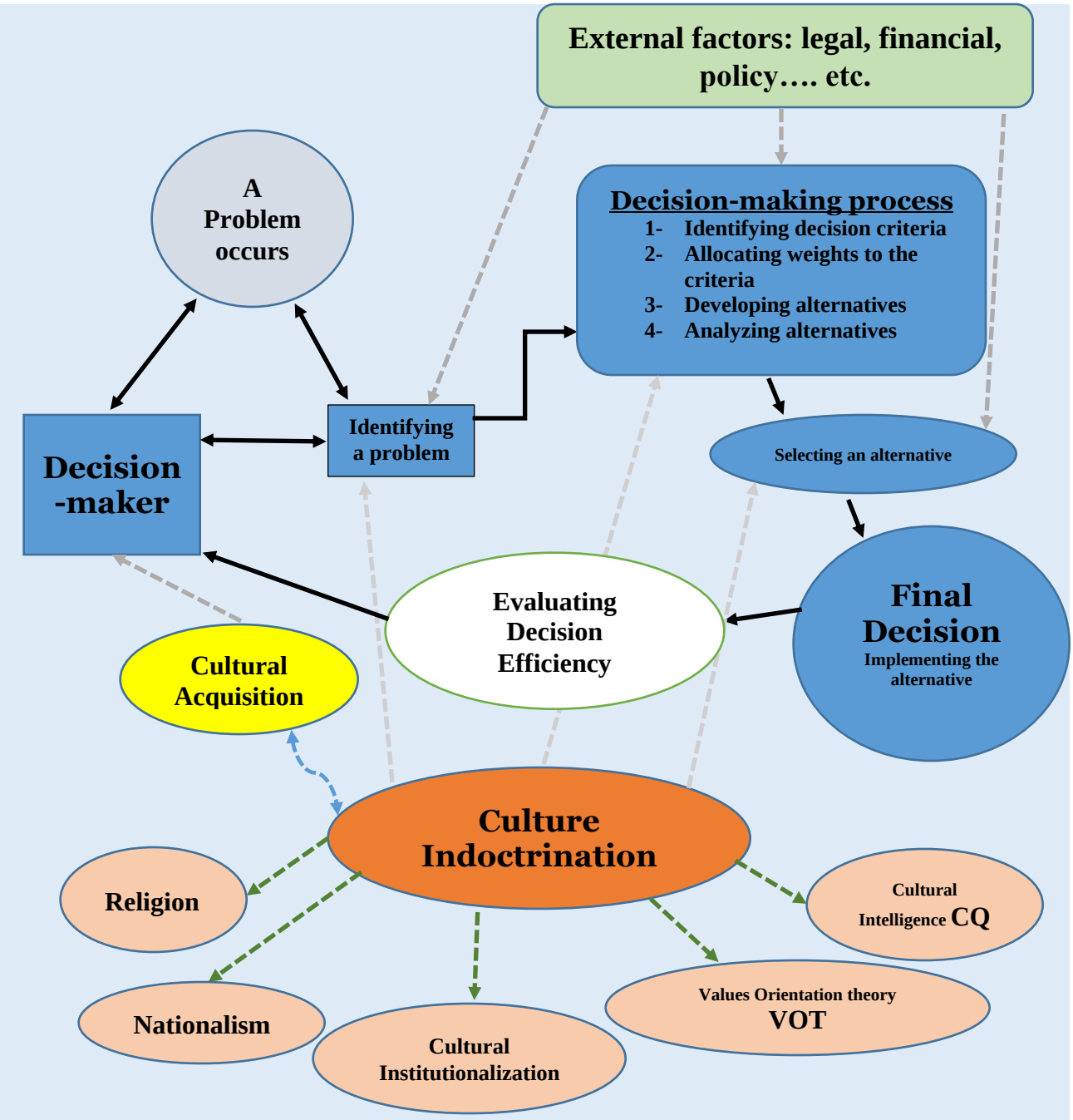

Figure 10 "created by the author using the rational decision-making process model (ROBBINS & COULTER, 2010). In addition to, the conceptualization model and the theoretical framework of Cultural Indoctrination (Christiansen & Gad, 2018)"

Key:

1- Decision-maker: is an individual that is responsible for decision-making at any level of management.

2- A problem occurs: is a day to day dilemmas that face a decision-maker at any point during practicing his job.

3- External factors: refer to other factors that affect the decision-making process (other than Cultural Indoctrination) that are not the focus of this research study yet still can alter the decision-making process.

4- Solid one-sided arrows refer to the flow of the process towards one direction during the decision-making process or in the culture indoctrination part, at the bottom, refer to the components of the concept.

5- Solid two-sided arrows refer to a reciprocal relationship between the two sides of the arrow that are affected by each other.

6- Doted one-sided arrow refers to a factor that affects the part the arrow is pointing at.

7- Doted two sides arrow refers to a reciprocal factor that affects both the sides that the arrow is appointing at.

5.4.1 An Explanation of the Rational Decision-Making Process

We have mentioned before some definitions of decision-making; however, decision-making has an abundance of definitions as an abstract term and its process. Nonetheless, in this context decision theory should also be mentioned which can be defined as the means to study models of judgment that are cognitively and intentionally applied aiming a rational decision or choice

(French, 2001) and the decision models according to Nick French can be divided into three categories:

I- Descriptive analysis: talks about the process of deciding in general.

II- Normative analysis: recommends ways of making decisions.

III- Prescriptive analysis: using normative models to direct the decision-maker into a decision through other curbing cognitive parameters.

The Model we exploited in this research can be described as a prescriptive analysis of the decision-making process because it mentions certain actions that should be taken once the problem is identified up until and after the final decision is made. Although these models theoretically can act sufficiently to produce the rational decision, the decision-maker personal traits, the environment where the decision was taken, and the culture of the community that surrounds both the decision and the decision-maker are strong factors in changing the decision taken. The reason for adopting (Robbins & Coulter, 2012) decision-making model is the deluge similarities between it and other models (Heizer & Render, 2011; Team, 2017; Gray, 2018).

An expansion in a developing country should be minded carefully and a lot of the companies' strategies and business management models should be modified to fit into the local culture (Thompson, Peteraf, Gamble, & Strickland III, 2016) In addition, since this study's main concern is the impacts that occurs due to a certain culture indoctrination process, how it will be transferred through generations, and how local managers through certain aspects of their culture will indoctrinate their own values and why we integrated them in the Cultural Indoctrination conceptual framework. This research aims to integrate the effects of the indoctrination of the culture process in the rational decision-making process, in a common model to further the knowledge and the anticipation of the indoctrinated cultural aspects on the rationality of the decision-making process.

Here are detailed steps of the decision-making process that are mentioned in the model:

1- A problem occurs.

2- The "identification" of the problem is up to the decision-maker, which is obviously affected by "Cultural Indoctrination" and the external factors (legal, financial, company's policy…. etc.) because without both of these frames a problem cannot be identified as a problem unless it violates the norm.

3- The decision-maker is affected by "Cultural Indoctrination" through "Cultural Acquisition".

4- After the decision-maker identifies the problem, s/he moves to the decision-making process which includes three steps (1- Allocating weights to the criteria 2- Developing alternatives 3- Analyzing alternatives). However, it must be remembered those three consecutive steps include a lot of the decision-maker personal judgment that is affected by the indoctrinated cultural ideas that surrounded him/her since birth.

5- The next step for the decision-maker is "Selecting an alternative" which definitely has a lesser effect of the indoctrinated culture, yet the tilting towards a decision that satisfies the norm of the local society whilst viewing and selecting the alternatives can be considered the default case.

6- Then the before the last step is "Implementing the decision" which is an executive order that the decision-maker does, which is affected by the other limitations and factors that cannot be indoctrinated in a culture.

7- The last step is "Evaluating decision efficiency" and it is not affected by any of the factors because in the business world that only can be weighed on "win and loss" basis.

8- Then, it goes back to the decision-maker after evaluating the decision efficiency to take another decision based on the evaluation of the decision-efficiency or to close the case with no more actions.

5.4.2 Definitions of criteria in the model

- **A problem:** A realized gap between a state and another one that the business wants to be or a deviation from the norm. (Dictionary, 2018)
- **Decision-maker:** a person who has the responsibility of taking decisions at an organization at any level of management. (Collins English Dictionary, 2018)
- **Identifying a Problem**: the first step in the decision-making process. This is a subjective step, which means it is up to the manager at this point to choose to recognize the problem or not. (Robbins et al., 2010)
- **Decision-making process:** a complex process that includes choosing among two or more alternatives. (Robbins et al., 2010)
- **Identifying decision criteria:** a process of choosing rules or standards that are used to evaluate and rand alternatives (Glossary, 2018)
- **Allocating weights to the criteria:** the opposite of intuitive or emotional decision making and it includes converting criteria according to importance into numbers and evaluating them in a mathematical and objective way (Martino et al., 2006; Maggino et al., 2009)
- **Developing alternatives:** a creative step that the decision-maker has to go through and it also includes a lot of emotional aspects (Robbins et al., 2010; Partners, 2016).

- **Analyzing alternatives:** the result of the last two steps of allocating weights and developing alternatives which means the success of this step is built on how subjective the decision-maker was while taking the last two steps. (Robbins et al., 2010; Maggino et al., 2009)
- **Selecting an alternative:** a step that is built on consistent judgments that if they went wrong the whole selection process would go wrong (Pekala, 2017)
- **Final Decision "implementing the alternative":** the final step of putting the selected alternative into action. Also, implementation is defined as process building rather than designing (Robbins et al., 2010; Dictionary Y., 2018)
- **Evaluating Decision efficiency:** the process of investigating errors or irrationalities in any of the past steps of decision-making or defining the problem (Deeb, 2018).
- **Culture acquisition:** a subjective view of the world and its contents that each human develops out of personal experience" (Goodenough, 1957)
- **Cultural Indoctrination: "**the process of inculcating ideas, attitudes, beliefs, and cognitive strategies during the transfer of cultural traditions from one generation to the next with the expectation that such traditions will not be questioned but practiced in the future". (Christiansen & Gad, 2018)
- **Religion:** the belief in and worship of a metaphysical person or power (Dictionary O., 2018).
- **Nationalism:** a devotion, love, and loyalty towards a nation accompanied with feelings of excessive patriotism supported by culture and history (Collins and Oxford dictionaries, 2018)

- **Cultural Institutionalization:** an act of establishing or transforming a norm, a procedure, a rule or a convention in a culture. (Keman, 2017; Oxford dictionary, 2018)
- **Values Orientation theory VOT:** a cross-culture psychological theory that was developed by Florence Kluckhohn and Fred Strodtbeck in 1961 which is concerned with the roots of values in any community and classifies them into five categories (humanity and natural environment, time, relating to other people, motives for behaving and nature of human nature) (Gallagher, 2001; Hill, 2002)
- **Cultural Intelligence:** is a measure that of how effective an employee can act in multi-cultural environments (Dictionary B., 2018)

5.5 Conclusion

In this chapter, a conceptual model for the theoretical framework of Culture Indoctrination concept was built. This was followed by a simulation of the impacts of the factors of Cultural Indoctrination on the rational decision-making process. Finally, a description of these impacts on the rationality of the decision was discussed.

As previously mentioned, this chapter is the main purpose of this research and it creates a view of the probable impacts of the indoctrination of culture process on the irrationalities of the individuals decision-making process that certainly affect managers in the developing nations or emerging markets where these indoctrination tools are considered an effective aspect of the transmission of the culture.

In addition, this chapter and the previous (Chapter 4, Conceptualization and Operationalization of the Variables) are considered an answer to the first research question: What is Cultural Indoctrination?

Chapter 6: Historical Data

After conceptually modeling the indoctrination process in the last chapter, this chapter is a presentation of the possibly collected data which demonstrates the variables from emerging economies. It also looks at indices that show where these economies lie in the modern era. This is followed by a description of the data collection methods and a brief analysis of the data.

6.0 Overview

This chapter will discuss some historical data that has been collected in order to give an answer to the research questions. It will be divided into three sets of data. The first set will be on the reasons for the failure of renewable energy projects in sub-Saharan Africa. The aim of these data obtained from a two-part research process is to examine the social reasons beyond technicalities that rendered those projects as failures.

The second set will be on the Hofstede cultural dimensions, a Globe study on detailed social dimensions and, a comparison of three innovation indices in three different years from two different resources. The aims of the presentation of this data is to prove the direct impact of the social dimensions on the performance of businesses and innovation in general in those countries.

The third set are adopted from research that studied the effect of religion on economic growth in over 50 countries. The aim of the presentation of this data is to demonstrate the direct effect of three measures (the belief in hell, the belief in heaven, and church attendance) on economic growth in those countries.

In summary, there are limitations to collecting trusted data and viewing them, yet the few examples that are given in those three sets of data are sufficient for an overall view of the concept.

6.1 Data collection methods

As previously mentioned, this research will be qualitative in nature using historical data, future scenarios, and conceptualization as tools to answer the research questions. We have previously discussed the possibility of using historical data which is collected to prove a theory. The obstacle that most researchers face with historical data analysis other than the collection methods is the subjectivity of some data according to its context. As an example, in this research, the data on cultural indoctrination is aimed at the impact of its contents on the rationality of the decision-making process that led to either the failure of the project or affected the outcomes of the investment.

6.1.1 The prospect resources for collecting data for this research are:

a- Global firms' records: including instruction manuals, codes of ethics and companies' decisions records.

b- Public reports: including newspapers and economic and business-oriented magazines such as the *Wall Street Journal* and the *Financial Times*.

c- Government records: including financial analysis, regulations, and investor relations records.

d- Opinions: including editorials, speeches, and online blogs.

e- Databanks: including ongoing and historical data on global firms.

6.2 Data on the Reasons for the Failure of Renewable Energy Projects in Sub-Saharan Africa

Research conducted by Ikejemba, Mpuan, Schuur, and Hillegersberg (2017) on the reasons for the failure of renewable energy projects in sub-Saharan Africa indicates that projects do not normally fail due to technical reasons, but other than the common reasons for failure are due to seven factors, one of which is "public acceptance and inclusion, "Here we can take a minute to ponder these cases which have been collected from 29 publicly funded projects in 10 countries "Nigeria, Ghana, Kenya, Gabon, South Africa, Tanzania, Mozambique, Ethiopia, Malawi and Uganda" and thoroughly analyzed. What are the reasons that can lead to the failure of publicly funded projects that will clearly positively impact those countries that suffer from a huge deficiency of energy resources from being successful?

Clearly, the answer to this question stems from management issues and styles in these countries. When further analyzing this data in the research that was conducted exploiting a variety of interviewing methods, it appears that the severe existence of corruption in those countries and the obvious lack of planning are apparent as the primary reasons for the failure of these projects. The author also alludes to the envious characteristic of the culture that appears when the locals from the neighboring villages learn what is happening and try to ruin the project or at the very least do not contribute positively to the construction and development process that occurs not far away from them This is an aspect of culture that is destructive to development, new construction projects and any kind of direct foreign investment that could eventually benefit these communities in general if it were implemented particularly in some areas.

6.2.1 Data Collection Methods

The following data was collected ethnographically by physically interviewing the stakeholders and visually inspecting the installations involved. The analysis, coding, quantification and statistical analysis were later conducted by the researchers themselves.

Key

Public infrastructure	Methods	Code
Borehole	Informal Interviews	II
Water Heater	Formal Interviews	FI
Minor Connections	Telephone Conversation	TC
	Group Dialogue	GD

Table 8 adopted from (Ikejemba, Mpuan, Schuur, & Hillegersberg, 2017)

Project number	Project location	Project type	Physical analysis	Method	Timeline
N1	Nigeria	Street Light	Yes	II, FI, GD	Dec 2015 - Jan 2016
N2	Nigeria	Public Hospital	Yes	FI, TC	Feb 2016 - Mar 2016
N3	Nigeria	Public Office	Yes	FI	Mar-16
N4	Nigeria	Street Light	Yes	II, GD	Dec 2015 - Jan 2016
N5	Nigeria	Street Light	Yes	II	Dec 2015 - Jan 2016
N6	Nigeria	Public School	Yes	II, GD	Jan 2016
N7	Nigeria	Public Infrastructure	Yes	II, FI	Jan 2016
N8	Nigeria	Public Infrastructure	Yes	FI, TC	Mar-16
N9	Nigeria	Street Light	Yes	II, GD	Dec 2015 - Jan 2016
N10	Nigeria	Public Hospital	Yes	II, FI, GD	Feb 2016 - Mar 2016
G1	Ghana	Public Office	Yes	FI	Feb-16
G2	Ghana	Street Light	Yes	FI, GD	Mar-16
G3	Ghana	Remote village off-grid	Yes	II, GD	Dec 2015 - Jan 2016

G4	Ghana	Public Infrastructure	Yes	II, TC	Mar-16
K1	Kenya	Remote village off-grid	Yes	II, FI, GD	Mar-16
K2	Kenya	Public Infrastructure	Yes	FI, GD	Feb 2016 - Mar 2016
K3	Kenya	Street Light	Yes	GD	Mar 2016 - Apr 2016
GA1	Gabon	Street Light	Yes	II, GD	Feb 2016 - Mar 2016
GA2	Gabon	Public Office	Yes	FI, TC	Feb 2016 - Mar 2016
S1	South Africa	Public Infrastructure	Yes	FI	Mar 2016-
T1	Tanzania	Remote village off-grid	Yes	II, GD	Jan 2016
T2	Tanzania	Public Infrastructure	Yes	FI, GD	Jan 2016
M1	Mozambique	Public Infrastructure	Yes	II, Fi, TC	Mar 2016 - Apr 2016
M2	Mozambique	Street Light	Yes	TC, GD	Apr-16
E1	Ethiopia	Public Infrastructure	Yes	II, FI	Feb 2016 - Apr 2016
E2	Ethiopia	Public Infrastructure	Yes	II, GD, TC	Feb 2016 - Apr 2016
E3	Ethiopia	Street Light	Yes	TC, GD	Feb 2016 - Apr 2016
MA1	Malawi	Street Light	Yes	TC, GD	Mar-16
MA2	Malawi	Remote village off-grid	Yes	II, TC	Mar-16

6.2.2 Data Analysis

This data was collected in a special way due to the political unrest in most of these 29 countries.

The interviews were conducted with the three sides that are concerned with these projects

1- First group: The locals who are benefiting from these projects.

2- Second group: Some developers or implementers who worked on these projects.

3- Third group: Government officials who were willing to talk.

The main purpose of interviewing these three groups was to understand the reasons for these failures and try to curb it in order to help the management of the sustainable projects in these areas.

The interviews with the first group (the locals) were conducted on a one-on-one basis and the group interviews within the researched community. The reasons for failure in their opinion included:

1- Public acceptance.

2- Sabotage (envy).

3- Maintenance after implementation.

For the second group (the implementors), a total of 15 interviews were conducted on a one-on-one basis. Due to some of the developers and implementers' refusal to participate in these interviews, it was highlighted that it was "some" of them. The reasons for failure in their opinion were:

1- Lack of planning by local government.

2- Lack of cooperation of local government due to mis-communicating the roles of the implementers and the maintenance departments.

3- The lack of the sustainability vision in the local governments.

The third group of interviews (with government officials) was conducted in a very cautious manner due to the sensitivity of these official positions, keeping in mind the massive level of corruption that was revealed by many audit reports in those countries. The government officials denied that the way the projects were awarded to those companies was a reason for its failures, despite how vague and non-transparent this way could be in their opinion the reasons for failure were:

1- Political agendas.

2- Inadequacy of planning.

6.2.3 Conclusion

In Part 2 of the study (Failures & generic recommendations towards the sustainable management of renewable energy projects in Sub-Saharan Africa (Part 2 of 2)), a conclusion was drawn from the analysis of the given data that highlighted the following reasons: the political agenda, the process of awarding the projects referred to as "nepotism", stakeholder's cooperation, planning and implementation, maintenance and public inclusion.

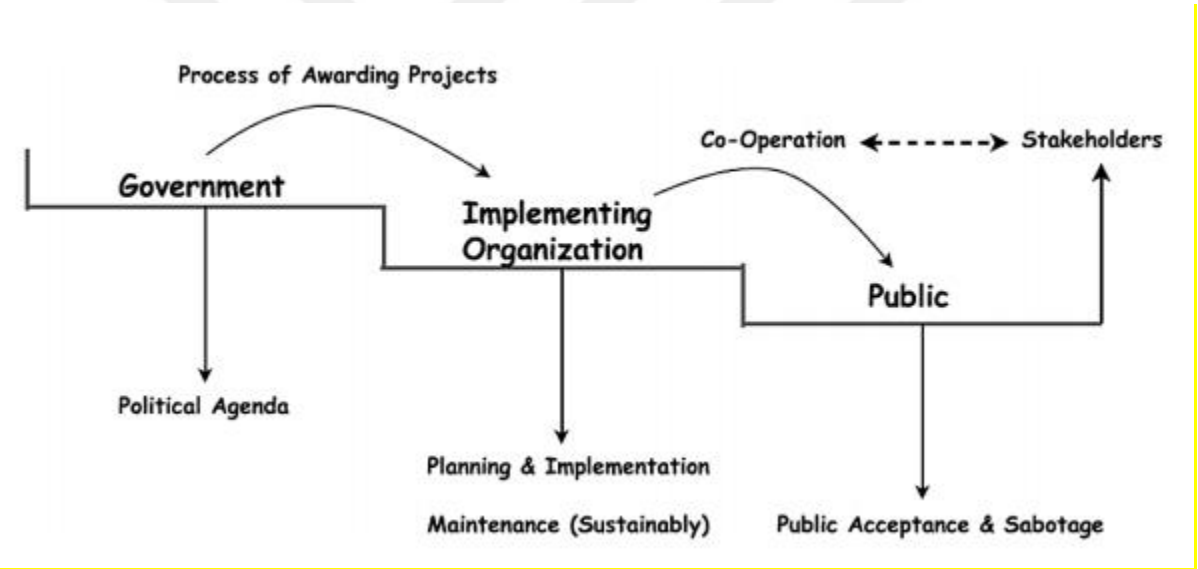

Figure 11 adopted from (Ikejemba, Schuur, Hillegersberg, & Mpuan, 2017)

The following solutions were provided:

1- Community involvement.

2- Shared responsibility.

3- Ownership and transparency.

6.2.4 Linking the Data to Our Research

If we try to link this data to our research here we find the following:

1- One of the biggest reasons for the failures was nepotism, which is defined as "the act of using power or influence to get unfair advantages for members of your own family" (Dictionary C. A., 2018). These same communities that Hofstede describes as collectivist often commit nepotism, which draws attention to the aspect of values which was mentioned in values orientation theory VOT that forms an essential part of a culture that has been indoctrinated in these communities' individuals.

2- Another reason that also can be utilized in our research is public acceptance. It was mentioned before how the locals were envious if the project was implemented in another area and not their area which led to vandalism of some of the projects and in the suggested solutions part it refers to the "education" and training part of these communities and the necessity of building communal trust between all stakeholders. Here the cultural part is very obvious as culture was defined previously in this research as the "collective ideology of a group of people" which by looking at this case, the conclusion that the collective envious emotion was a common feeling that falls under the culture definition and can be realized through the actions towards the projects.

6.3 Data on social dimensions and Its relation with Innovation

This part demonstrates the link between cultural indoctrination (CI) and open innovation in international business and its importance in an era of global hyper-competition.

In research on cultural indoctrination and its effect on open innovation, it is stressed that scientific productivity correlates most with Gross National Income (GNI), the indicator of how wealthy countries are (Christiansen & Gad, 2018). As mentioned by Hofstede (1985) and Hall (1976), Cultural origins can help with the anticipation of a person's behavior in an organizational environment within different contexts. In addition, with the need to engage with various stakeholders from different cultural backgrounds the need to understand cultural necessities and obligations has become essential.

Expressing emotions is more likely to be tolerated in "the less uncertainty avoiding cultures", however, it can result in a total loss of respect in "the more uncertainty avoiding cultures". In addition, such an aspect should be considered carefully in the interaction between cultures (Hofstede, 1984).

In "the less-uncertainty avoiding cultures", innovative ideas will be welcomed, but it is less likely that they will be embraced by the society.

6.3.1 The classification of countries around the world according to their economies

The United Nations Department of Economic and social affairs have classified countries according to various dimensions of the world economy into developed and developing countries (2014).

Examples of developed countries are Austria, France, Finland, Denmark and the United States of America. (The full list is provided in the Appendices)

Examples of developed countries are Austria, France, Finland, Denmark and the United States of America. (The full list is provided in the Appendices)

Examples of developing countries are Arabic speaking countries (Algeria, Egypt, Libya, Morocco, Sudan, Tunisia, Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, and Yemen), Venezuela, Argentina, Mexico, and Indonesia. (The full list is mentioned in the appendices)

The expression 'emerging markets' is relatively new. It was coined by Antoine van Agtmael in 1981 and defined as the countries in which investments would expect a higher return with higher fluctuation arising from digitalization, deregulation, globalization, and open standards. (Economist, 2017; financial times, 2018; and Business dictionary.com, 2018) According to those resources' countries like Brazil, Russia, Turkey, China, and India fall under this category.

6.3.2 Hofstede's Cultural Dimensions

In this part of the research, three tables will be shown that will demonstrate macro-views of cultural dimensions worldwide. Tables 9, 10, and 11 show a comparison of cultural dimensions that was conducted by Geert Hofstede in 1984 and confirmed by a www.hofstede-insights.com in 2018 on a few randomly selected countries. Tables 12, 13, and 14 present a comparison of the different dimensions that was conducted by a Globe study after being updated.

Table 9 Developed Countries

Countries	Power Distance	Uncertainty Avoidance	Individualism (vs. Collectivism)	Masculinity (vs. Femininity)
Austria	11	70	55	79
France	68	86	71	43
Finland	33	59	63	26

United States	40	46	91	62
Denmark	18	23	74	16

Table 10 Emerging Markets

Countries	Power Distance	Uncertainty Avoidance	Individualism (vs. Collectivism)	Masculinity (vs. Femininity)
Brazil	69	76	38	49
Russia	93	95	39	36
Turkey	66	85	37	45
China	80	30	20	66
India	77	40	48	56

Table 11 Developing countries

Countries	Power Distance	Uncertainty Avoidance	Individualism (vs. Collectivism)	Masculinity (vs. Femininity)
Arabic countries	85	30	55	75
Venezuela	81	76	12	73
Argentina	49	86	46	56
Mexico	81	82	30	69
Indonesia	78	48	14	46

6.3.3 Tables 9,10 and 11 methodology

The original table includes 50 countries and three multi-countries, regions “East Africa, West Africa and Arab countries”. Only five countries in each group of countries were randomly selected. Additionally, the four dimensions are compared according to the local employees’ value data, groups of students, random samples of entire national populations, and statistics compiled by international bodies like the World Health Organization (WHO) and by multinational corporations.

We must ultimately note that the scores are relative and the lowest countries score is zero and the highest is 100.

6.3.4 The Relationship Between National Culture, Societal Effectiveness and Desirable Leadership Attributes

A study conducted by Globe in 2004 (an organization dedicated to studying the culture, leadership and organizational effectiveness that was founded by Robert House in 1991) examined the management of organizational culture in 62 societies (House et al., 2004). The study compares societies on nine dimensions which are defined by the website http://globeproject.com as follows:

1- Assertiveness: The degree to which individuals are confrontational and aggressive in their relationships with others.

2- Institutional collectivism: The degree to which organizational societal, and institutional practices encourage and reward the collective distribution of resources and collective action.

3- In-Group Collectivism: The degree to which individuals express (and should express) pride, loyalty, and cohesiveness in their organizations or families.

4- Future Orientation: The extent to which individuals engage (and should engage) in future-oriented behaviors such as planning, investing in the future, and delaying gratification.

5- Gender Egalitarianism: The degree to which a collective minimizes (and should minimize) gender inequality.

6- Humane Orientation: The degree to which a collective encourages and rewards (and should encourage and reward) individuals for being fair, altruistic, generous, caring, and kind to others.

7- Performance Orientation: The degree to which a collective encourages and rewards (and should encourage and reward) group members for performance improvement and excellence.

8- Power Distance: The extent to which the community accepts and endorses authority, power differences, and status privileges.

9- Uncertainty Avoidance: The extent to which a society, organization, or group relies on (and should rely on) on social norms, rules, and procedures to alleviate the unpredictability of future events. The greater the desire to avoid uncertainty the more people seek orderliness, consistency, structure, formal procedures, and laws to cover situations in their daily lives.

Presented in this part (Tables 12, 13, and 14) is a comparison between the same countries that were mentioned in the previous section in order to further our views of the cultural dimensions of these specific societies.

Table 12 Developed countries adopted from (House et al, 2004)

Countries	Assertiveness		Institutional Collectivism		In-Group Collectivism		Future Orientation	
	Practices	Values	Practices	Values	Practices	Values	Practices	Values
Austria	4.59	2.85	4.34	4.78	4.89	5.32	4.47	5.15
France	4.44	3.57	4.2	5.27	4.66	5.88	3.74	5.35
Finland	4.05	3.91	4.77	4.34	4.23	5.6	4.39	5.24
United States	4.5	4.36	4.21	4.2	4.22	5.79	4.13	5.34
Denmark	4.04	3.59	4.93	4.41	3.63	5.71	4.59	4.49

Table 12 Developed countries continued

Countries	Gender Egalitarianism		Humane Orientation		Performance Orientation		Power Distance		Uncertainty Avoidance	
	Practices	Values	Practices	Values	Practices	Values	Practices	Values	Practices	Values
Austria	3.18	4.83	3.77	5.68	4.47	6.12	5	2.52	5.1	3.65
France	3.81	4.71	3.6	5.91	4.43	6.1	5.68	2.96	4.66	4.65
Finland	3.55	4.47	4.19	5.8	4.02	6.23	5.08	2.46	5.11	4.04
United States	3.36	5.03	4.18	5.51	4.45	6.14	4.92	2.88	4.15	3.99
Denmark	4.02	5.2	4.67	5.59	4.4	5.82	4.14	2.96	5.32	4.01

Table 13 Emerging markets adopted from (House et al, 2004)

Countries	Assertiveness		Institutional Collectivism		In-Group Collectivism		Future Orientation	
	Practices	Values	Practices	Values	Practices	Values	Practices	Values
Brazil	4.25	3.06	3.94	5.57	5.16	5.17	3.9	5.6
Russia	3.86	2.9	4.57	4.01	5.83	5.9	3.06	5.6
Turkey	4.42	2.68	4.02	5.18	5.79	5.63	3.74	5.71
China	3.77	5.52	4.67	4.52	5.86	5.12	3.68	4.7
India	3.7	4.65	4.25	4.59	5.81	5.22	4.04	5.43

Table 13 Emerging markets continued

Countries	Gender Egalitarianism		Humane Orientation		Performance Orientation		Power Distance		Uncertainty Avoidance	
	Practices	Values	Practices	Values	Practices	Values	Practices	Values	Practices	Values
Brazil	3.4	4.9	3.8	5.5	4.1	6	5.2	2.6	3.7	5
Russia	4.1	4.3	4	5.6	3.5	5.7	5.6	2.7	3.1	5.3
Turkey	3	4.5	3.9	5.4	3.8	5.3	5.4	2.5	3.7	4.6
China	3	3.7	4.3	5.3	4.4	5.7	5	3	4.8	5.3
India	2.9	4.4	4.5	5.2	4.1	5.9	5.3	2.6	4	4.6

Table 14 Developing countries adopted from (House et al, 2004)

Countries	Assertiveness		Institutional Collectivism		In-Group Collectivism		Future Orientation	
	Practices	Values	Practices	Values	Practices	Values	Practices	Values
Arabic countries	4.15	3.56	4.41	5.05	5.66	5.57	3.64	5.87
Venezuela	4.25	3.34	3.96	5.28	5.41	5.92	3.43	5.61
Argentina	4.18	3.18	3.66	5.29	5.51	6.07	3.10	5.73
Mexico	4.31	3.67	3.95	4.77	5.62	5.78	3.75	5.74
Indonesia	3.70	4.50	4.27	4.96	5.50	5.46	3.61	5.48

Table 14 Developing countries continued

Countries	Gender Egalitarianism		Humane Orientation		Performance Orientation		Power Distance		Uncertainty Avoidance	
	Practices	Values	Practices	Values	Practices	Values	Practices	Values	Practices	Values
Arabic countries	3.11	3.60	4.59	5.31	4.00	5.92	5.23	3.18	4.05	5.12
Venezuela	3.6	4.7	4.2	5.2	3.4	6.1	5.2	2.4	3.6	5.2
Argentina	3.44	4.89	3.94	5.50	3.63	6.28	5.56	2.30	3.63	4.62
Mexico	3.50	4.57	3.84	5.10	3.97	6.00	5.07	2.75	4.06	5.18
Indonesia	3.04	3.71	4.47	5.06	4.14	5.54	4.93	2.38	3.92	5.04

6.3.5 Tables 12,13 and 14 Methodology (Grove, n.d.)

This a study of 62 countries via data collected from 17,300 middle managers in 951 organizations. The study was conducted in a quantitative and interpretive study. For each countries' culture dimension, two scores were presented: "as is" scores which identified the present existence of the cultural dimension, and "should be" scores which indicated the values to which the country aspires. Numbers range from 1-7 "very low (1) - low (2) - relatively low (3) - medium (4) - relatively high (5) - high (6) - very high (7)".

6.3.6 Innovation index of the same countries

The next set of tables (15, 16 and 17) present a comparison of the innovation rankings of the same three selected groups of countries.

Table 15 Developing Countries

Countries	Global Innovation Index 2018 rank	Global Innovation Index 2017 rank	Bloomberg top 50 most innovative countries rank, 2015
Arabic countries	Avg 73	Avg 76	Only Morocco mentioned No. 50
Venezuela	109	106	Below Rank
Argentina	80	76	48
Mexico	54	58	Below Rank
Indonesia	90	87	Below Rank

Table 16 Developed countries

Countries	Global Innovation Index 2018 rank	Global Innovation Index 2017 rank	Bloomberg top 50 most innovative countries rank, 2015
Austria	20	20	17
France	16	15	9
Finland	5	8	4
United States	6	4	6
Denmark	7	6	11

Table 17 Emerging markets

Countries	Global Innovation Index 2018 rank	Global Innovation Index 2017 rank	Bloomberg top 50 most innovative countries rank, 2015
Brazil	58	69	Below Rank
Russia	43	45	14
Turkey	62	43	35
China	8	22	22
India	63	60	Below Rank

6.3.7 Tables 15,16 and 17 Methodologies (Dutta, Lanvin, & Wunsch-Vincen, 2018 and 2017)

These data were collected from two different resources

1- Global Innovation Index 2017 and 2018.

- measures 127 countries in sequel rank from 1-127
- uses 80 indicators into 21 sub-pillars, 7 pillars, 2 sub-indices, and, finally, an overall index.
- The seven pillars are a- Institutions b- Human capital and research
  C- Infrastructure d- Market sophistication e- Business sophistication
  F- knowledge, and technology output g- creative outputs.
- The index is created in four steps:
  Step one: Conceptual consistency.
  Step two: Data checks
  Step three: Statistical coherence
  Step four: Qualitative review

2- The Bloomberg Innovation Index 2015

- Bloomberg ranked countries and sovereigns based on their overall ability to innovate and identified the top 50. Six equally weighted metrics were considered and their scores were combined to provide an overall score for each country from zero to 100.
- The metrics are (Research & Development - Manufacturing value-added – Productivity - High-tech companies - Tertiary efficiency - Research personnel - Patents activity).

- All metrics are equally weighted. Metrics consisting of multiple factors were rescaled for the countries void of some, but not all data points. Most recent data used.

6.3.8 Linking the data to our research

Cultural dimensions were mentioned very often in this research and the effect of cultural dimensions was enormous in the literature that followed it. There are many conclusions that can be drawn from this data, and here are a few examples:

1- Table 9 shows the USA with a relatively low uncertainty avoidance index. By comparing the USA to other countries regarding the two aspects by Hofstede, the USA ranks high in the innovation index, but low on the tolerance for new ideas and cultures index. As recent numbers show (according to Global innovation index 2018 comes 6th) the tolerance of other cultures according to the Telegraph, the USA is not in the top 20 countries of that rank and more northern European countries exceed it (Meltzer, 2016). The list of the least 20 tolerant countries are:

   1-Afghanistan 2- Sudan 3- Yemen 4- Egypt 5- Iran 6- Libya 7- Mauritania 8- The Central African Republic 9- Russia 10- Democratic Republic of Congo 11- Iraq 12- China 13- Chad 14-Algeria 15-Swaziland 16- Belarus 17- Saudi Arabia 18- Pakistan 19- Comoros 20- Tajikistan. All these countries are ranked low on the uncertainty avoidance index (Hofstede, 1984) low on (The global innovation index, 2018), Bloomberg innovative index (Jamrisko & Lu, 2018) and on the social cohesion indicators (OECD, 2011).

2- Arab countries score low on uncertainty avoidance and high on power distance, tables 11 and 14, which lead to a low average on innovation index table 15.

6.3.9 Conclusion

Innovation plays a very important role in the advance of any country, and it is a cornerstone in achieving a competitive advantage today (Chatzoglo & Chatzoudes, 2018; Ionescu & Dumitru, 2015). Two of the indicators of innovation are the sophistication of businesses and markets. These two will not be achieved if the individuals in those societies do not have enough space for expressing their opinions (Low Power distance) accompanied by the pursuit of equality (High femininity). To sum up, drawing lines between the cultural dimensions and the innovation indices will always correlate and never intersect.

6.4 Religion and Economic growth across countries.

In this part of the research, an important research that was conducted by Barro and McCleary (2003) on the influence of religion on economic growth is discussed.

- **The article's main hypothesis is:** *Religion influences economic growth positively*

As per the hypothesis, it suggests that economic growth doesn't only rely on industrial numbers, but also relies on the behavior of individuals towards religion.

- **Independent variable:** *Religion*

  Sub-variable 1 - "the belief in the existence of hell"

  Sub-variable 2 - "the belief in the existence of heaven"

  Sub-variable 3 - "attendance of church"

- **Dependent variable:** *Economic Growth*
- **Concept 1:** the belief in hell, which exists in most of the religions (with the exception of Judaism) as a form of punishment, with its multiple faces either eternal or temporary, can

deter people from doing harm to the community and can contribute as a consequence of economic growth.

- **Concept 2:** the belief in heaven, which exists in all religions, as a form of encouragement and how it also can contribute positively to the economic growth.
- **Concept 3:** the attendance of church lessons, and how as it increases in the sample economic growth is negatively affected.

6.4.1 Methodology

Firstly, the research article we are looking at is a non-experimental correlational study.

- **It is non-experimental** as it does not involve a manipulation of the situation, event, circumstances or people.
- **It is a correlational** study because it examines the relationship between two variables: a human behavior "religiosity" vs. "Economic growth*".* In the writer's opinion as one goes up the other follows.

Secondly, the Timeframe: The study includes data from the past until the time of this research. The writers collected a broad cross-country data set that includes national-accounts variables and an array of other economic, political, and social indicators for more than 100 observed countries from 1960 to 2002. It also uses measures of religiosity from sources of international data on church attendance and religious beliefs (1981-1984, mostly 1981; 1990-1993, mostly 1990; and 1995-1997, mostly 1995 and 1996), and the two reports on religion by the International Social Survey Program, or ISSP (1990- 1993, mostly 1991; and 1998-2000, mostly 1998), and the Gallup Millennium Survey (1999).

Thirdly, the writer used

1- **A Hypothesis**: investigating the effects of church attendance and religious beliefs on economic growth.

2- **Historical data:** surveys since 1960 about countries' religious indicators and individual conducted surveys about church attendance and the belief in the existence of hell

3- **Sampling and findings** are recorded in three tables:

   a- Values for State Religion, State Regulation of Religion, and Religious Pluralism Index of Countries (Table 18).

   b- Means and Standard Deviations for Variables in the Analysis (Table 19).

   c- Regressions for Church Attendance and Religious Beliefs for Countries' Surveys – 1981 to 1999 (Table 20).

   d- Regressions for Economic Growth– 1965 -1975, 1975 -1985, 1985 -1995 (Table 21).

6.4.2 The data

Table 18 adopted from Barro and McCleary (2003)

State Religion, State Regulation of Religion, and Religious Pluralism							
Country	State relig.	State regulation	Plural index	Country	State relig.	State regulation	Plural index
Cameroon	0	0	0.73	Cyprus	0	0	0.36
Ghana	0	0	0.72	Denmark	1	0	0.02
S. Africa	0	0	0.63	Finland	1	1	0.03
Canada	0	0	0.56	France	0	1	0.17
Dom. Rep.	1	0	0.05	W. Germany	0	0	0.54
Mexico	0	0	0.05	Greece	1	1	0.04
U.S.	0	0	0.64	Hungary	0	1	0.47
Argentina	1	1	0.13	Iceland	1	0	0.03
Brazil	0	0	0.20	Ireland	1	0	0.08
Chile	0	0	0.22	Italy	1	1	0.01
Colombia	1	0	0.05	Netherlands	0	0	0.53
Peru	1	1	0.09	Norway	1	1	0.01
Uruguay	0	0	0.14	Poland	0	0	0.19
Venezuela	1	1	0.08	Portugal	1	0	0.02
Bangladesh	1	1	0.24	Spain	1	0	0.00
China	0	1	0.46	Sweden	1	1	0.08
Hong Kong	0	0	0.60	Switzerland	0	0	0.51
India	0	0	0.31	Turkey	0	1	0.01
Israel	1	0	0.19	U.K.	1	1	0.33
Japan	0	0	0.46	Australia	0	0	0.51
S. Korea	0	0	0.33	New Zealand	0	0	0.37
Malaysia	1	0	0.68	Bulgaria	0	0	0.28
Pakistan	1	0	0.06	Czech Rep.	0	1	0.43
Philippines	0	0	0.28	Estonia	0	1	0.48
Singapore	0	0	0.63	Latvia	0	1	0.68
Taiwan	0	0	0.58	Lithuania	0	1	0.13
Thailand	1	1	0.14	Romania	0	0	0.40
Austria	0	0	0.15	Russia	0	1	0.51
Belgium	0	0	0.05	Slovak Rep.	0	1	0.34
				Slovenia	0	0	0.12

Table 19 adopted from Barro and McCleary (2003)

Church Attendance and Religious Beliefs (cells show estimated coefficients with standard errors in parentheses)			
	dependent variable		
	(1)	(2)	(3)
explanatory variable	monthly church attendance	belief in heaven	belief in hell
Log of per capita GDP	0.04 (0.16)	-0.28 (0.21)	-0.28 (0.18)
Years of education	0.192 (.036)	0.253 (.040)	0.234 (.038)
Urbanization rate	-1.49 (0.34)	-1.65 (0.43)	-2.11 (0.41)
1/(life expectancy at age 1)	2.2 (1.2)	-3.5 (2.0)	-2.5 (1.7)
Population share > 65	0.3 (3.2)	-9.8 (4.8)	-12.5 (4.2)
Population share < 15	5.5 (2.0)	4.9 (2.9)	1.5 (2.6)
Religious pluralism	1.35 (0.32)	1.24 (0.38)	1.13 (0.37)
State religion	0.87 (0.14)	1.07 (0.18)	0.79 (0.17)
Regulation of religion	-0.64 (0.11)	-0.36 (0.13)	-0.12 (0.13)
Communist regime	-0.69 (0.21)	-0.77 (0.24)	-0.88 (0.23)
Ex-Communist (in 1995)	0.20 (0.19)	0.43 (0.23)	0.79 (0.21)
Ex-Communist (in 1998)	0.33 (0.16)	0.20 (0.16)	0.47 (0.17)
Ex-Communist (in 1999)	0.59 (0.23)	--	--
ISSP data	-0.17 (0.08)	0.10 (0.08)	0.35 (0.08)
Gallup data	-0.01 (0.11)	--	--
Eastern religion fraction	-2.53 (0.24)	-1.56 (0.30)	-0.85 (0.28)
Hindu fraction	-0.80 (0.48)	-2.05 (0.56)	-1.28 (0.50)
Jewish fraction	-2.75 (0.43)	-2.51 (0.38)	-1.20 (0.41)
Muslim fraction	0.26 (0.30)	1.94 (0.41)	2.55 (0.37)
Orthodox fraction	-1.83 (0.24)	-1.54 (0.29)	-0.95 (0.30)
Protestant fraction	-2.30 (0.19)	-1.32 (0.24)	-1.46 (0.22)
Other religion fraction	-0.61 (0.89)	3.00 (1.10)	1.43 (0.99)
No. of countries & total observations	59, 181	50, 130	50, 130
No. of observations for each equation	22, 36, 22, 32, 28, 41	21, 33, 16, 30, 30	21, 33, 16, 30, 30
R-squared for each equation	.87, .77, .80, .89, .84, .74	.69, .79, .90, .85, .84	.77, .75, .71, 86, .71

Table 20 adopted from Barro and McCleary (2003)

Means and Standard Deviations of Variables		
Variable	Mean	Standard deviation
Weekly church attendance	0.24	0.21
Monthly church attendance	0.36	0.23
Belief in heaven	0.55	0.22
Belief in hell	0.38	0.21
Belief in after-life	0.58	0.17
Belief in God in some form	0.80	0.14
Religious person	0.61	0.20
log[x/(1-x)] for:		
monthly attendance	-0.74	1.20
belief in heaven	0.33	1.15
belief in hell	-0.55	1.06
Log of per capita GDP	9.37	0.69
Years of education (years)	8.29	2.11
Urbanization rate	0.70	0.15
Life expectancy at age 1 (years)	74.1	4.1
1/(life expect. at age 1) (x 100)	1.35	0.084
Population share > 65	0.112	0.041
Population share < 15	0.238	0.073
Religious pluralism	0.29	0.23
State religion	0.33	0.47
Regulation of religion	0.37	0.48
Communist regime	0.23	0.42
Catholic fraction	0.46	0.40
Eastern religion fraction	0.073	0.240
Hindu fraction	0.012	0.086
Jewish fraction	0.015	0.099
Muslim fraction	0.043	0.147
Orthodox fraction	0.077	0.211
Protestant fraction	0.29	0.34
Other religion fraction	0.022	0.067
Non-religious fraction	0.107	0.123

Table 21 adopted from Barro and McCleary (2003)

Regressions for Economic Growth (standard errors of coefficients are in parentheses)						
	(1)	(2)	(3)	(4)	(5)	(6)
Explanatory variable:						
(a group of other variables is included but not shown)						
Monthly church attendance	-0.0095 (0.0018)	-0.0156 (0.0044)	-0.0104 (0.0023)	-0.0123 (0.0043)	-0.0092 (0.0020)	-0.0154 (0.0046)
Belief in hell	0.0094 (0.0025)	0.0140 (0.0058)	--	--	0.0104 (0.0040)	0.0174 (0.0083)
Belief in heaven	--	--	0.0069 (0.0029)	0.0076 (0.0048)	-0.0012 (0.0040)	0.0039 (0.0068)
Eastern religion share	--	-0.010 (0.011)	--	0.003 (0.009)	--	-0.013 (0.012)
Hindu share	--	-0.034 (0.016)	--	-0.030 (0.017)	--	-0.040 (0.018)
Jewish share	--	-0.004 (0.014)	--	0.006 (0.013)	--	-0.006 (0.015)
Muslim share	--	-0.032 (0.015)	--	-0.012 (0.010)	--	-0.034 (0.015)
Orthodox share	--	-0.050 (0.021)	--	-0.029 (0.017)	--	-0.051 (0.021)
Protestant share	--	-0.015 (0.007)	--	-0.018 (0.008)	--	-0.012 (0.008)
Other religion share	--	-0.001 (0.015)	--	-0.001 (0.016)	--	-0.001 (0.015)
p-value for attendance and belief(s)	0.000	0.001	0.000	0.009	0.000	0.002
p-value for religion shares	--	0.001	--	0.001	--	0.001
No. of countries and total observations	41, 118	41, 118	41, 118	41, 118	41, 118	41, 118
No. of observations for each period	38, 41, 39	38, 41, 39	38, 41, 39	38, 41, 39	38, 41, 39	38, 41, 39
R-squared values for each period	.39, .77, .36	.67, .63, .25	.36, .68, .32	.66, .60, .36	.39, .78, .35	.65, .63, .19

In summary, the results demonstrate that increases in church attendance tend to reduce economic growth. In contrast to levels of church attendance, increases in some religious beliefs, notably the belief in hell, heaven, and an afterlife tend to increase economic growth. There is some indication that the fear of hell is more potent for economic growth than the prospect of heaven because it has a punishment factor as we discussed previously in the concepts section.

6.5 Conclusion

After viewing the three sets of data on project failures in sub-Saharan Africa, cultural dimensions versus innovation and, and religion versus economic growth, it is safe to say that the direct impact of culture was seen in all of these examples, and in most of the cases the negative influence of the indoctrinated culture could be seen clearly This answers the second research question, “How can rational decision-making be negatively impacted by cultural indoctrination?”

Chapter 7: The Future of decision-making

After briefly discussing the collected historical data, analyzing, and linking them to the cultural Indoctrination concept in the last chapter. This chapter will be dedicated to the further discussion of scientific predictions on the decision-making process, what the future may hold for a decision-maker who deals with multi-cultural organizations and the implications on the decision-making process of new advancements in technology.

7.0 Overview

"Demographic and socioeconomic shifts are expected to have nearly as strong an impact on business models and organizational structures as technological change." (Schwab & Samans, 2016)

After presenting historical data in chapter six and conceptualizing the phenomena that we are dealing with at the moment (in chapters five and four), it is time to shed light on the future. By collecting many respectful views that have been discussed by experts on many events, we will add what can be understood from the historical data viewed in the last chapter and the concept that has been discussed. This method in literature is referred to as "Futures or Scenarios" (Meredith et al., 1989) and it involves assuming a variety of problems and situations and examining its results and consequences using the means of concepts, and pictorial or abstract models. We will apply the conceptual model from in chapter five to future scenarios by assuming that examining a non-existent problem can shed light on the implications of the concept.

7.1 An overview of the future by experts

In this part, some of the recent interviews and speeches about the future of the business world that have been conducted with the key members of the business-communities will be discussed, it is

the author's hope these opinions will open a new perspective for us of the future of the world, especially the future of multinational organizations that perform business in developing nations where the culture indoctrination concepts shine.

7.2 AI (artificial intelligence)

"AI and collective decision-making for 21st-century management" is a title of an article in the *Financial Times* that talks mainly about the current cognitive limitations of decision-makers and the new trend of adapting Artificial inelegance so that it can take most of the decisions and provide a list of limited options for managers to choose from. The article also encourages MBA" Masters of Business Administrations" curriculum makers to include AI "Artificial Intelligence" as a part of the decision-making process (Trevor, 2017).

Prowler. Io company is a perfect example of the future of decision-making (Prowler. Io, 2018). It is a platform of many AI applications that are being applied now in many areas. According to *Forbes* magazine, its main AI software (called VUKU platform) is being beta tested now at Paack (a courier company situated in the UK) and the initial results indicate a 15 % increase in the efficiency of the company's performance (Forbes, 2018). In the article, the author "Parmy Olson" describes it as the next "DeepMind", which is one of the world's leading companies in the area of AI. Furthermore, it is described as having great potential for another technological giant in a *New York Times* article (Metz & Satariano, 2018). The VUKU platform exploits three mechanisms to approach a decision named:

1- Probabilistic Modelling, which creates models of an uncertain, dynamic world with limited data using probability theory.

2- Reinforcement learning, which use models of the environment to make and evolve decisions using the Bayesian decision theory and Bellman optimality.

3- Multi-agent systems, which compete or collaborate to optimize decisions using game theory.

In conclusion, it is safe to say that artificial intelligence is the future of decision-making. However, some think tanks and reports are warning of the bubble in financing these agencies, and doubting the future income of these research labs (Rethink Research, 2018). Nonetheless, it will require humanity some time to adopt artificial intelligence in their day to day decisions, and later into major business decisions.

7.3 Interviews

7.3.1 Interview 1 (A glimpse into the future of financial and monetary systems, 2018)

- Presented by *Rigas Hadzilacos*: Project Leader, Future of Education, Gender and Work, World Economic Forum.
- Interviewer: *Elain Smith* "Community Leader, Banking and Capital Markets Industry, World Economic Forum".
- Interviewees are *Cecilia Skingsley*, Deputy Governor, Swedish Central Bank.

  And, *Axel P. Lehmann*, Group Chief Operating Officer, UBS Group AG.

7.3.2 Important answers that relate to our research:

1- We live in an increasingly fragmented world with a widening gap between its members. "Cecilia Skingsley"

2- The biggest danger to the international financial system is political disputes that might lead to war. “Axel P. Lehmann”

7.3.3 Interview one Conclusion

In conclusion, these answers can be used as an alarm to warn emerging markets and decision-makers in those markets. As mentioned in the interview these decision-makers should be ready to take severe measures. In addition, what Axel Lehmann meant by political disputes stem from these components of Cultural Indoctrination. For example, one of the top international political disputes in developing and developed countries is the immigration of Muslims to Europe and the USA and the implications it has on the demographics of the first world countries (2018). In addition, it also has implications for, equal pay for both sexes which also stems from a male dominance of developing countries' societies (Hofstede, 1984). Both of these points were discussed in the previous chapter (Chapter 6, Historical data).

7.3.4 Interview 2 (A glimpse into the future of cities and urbanization, 2018)

- Presented by Rigas Hadzilacos: Project Leader, Future of Education, Gender and Work, World Economic Forum.
- Interviewer: Project Leader, Cities, Global Leadership Fellow, World Economic Forum, Geneva.
- Interviewees are *Abha Joshi-Ghani*, Director for Knowledge and Learning, World Bank.

  And, *Carlo Ratti*, Director, SENSEable City Lab, MIT (Massachusetts Institute of Technology).

7.3.5 Important answers that relate to our research:

1- Open innovation is the key to the future in all markets. “Carlo Ratti”

2- Decision-makers in emerging markets are too confused to take the right decisions. “Abha Joshi-Ghani”

7.3.6 Interview two Conclusion

In conclusion, Carol Ratti has stressed the same point that was mentioned with data in this research about open innovation and how it is important as a factor in any developing community and that open innovation should be encouraged more. On the other hand, Abha Joshi-Ghani stressed on the poor ability of city developers in emerging markets to make decisions because of the fear of being blamed or the inconfidence which stems from the hierarchy of these communities that is embedded in the local culture of these countries.

7.4 Public speeches and conferences

In a speech by Professor Sherif Delwar in the economic reform, “2030 vision conference” in Egypt, he encouraged the leaders of the country to give up on jobs that will be obsolete in the incoming years and to reform the investment paradigms, despite how controversial that might look to the social patterns of securing citizens (2016).

Looking at the Saudi Arabia 2030 vision, the call for privatizing the public sector and empowering citizens (especially women) by enabling them is controversial to the religious and social indoctrinated values of that community (2018).

7.5 Scenarios

In contrast to Judgmental Forecasting that can be highly subjective, the Scenarios Technique can be informative to a current decision-maker by enlightening the future possibilities that may result from today's decisions. Furthermore, it also focuses on the most uncertain and somehow surprising decisions in order to generate action regarding future-focused risks and opportunities. Hence, "Scenarios" is a tool that can help look at the situation from a number of angles and widen our views of all possible futures. Moreover, for organizational leaders, it can give some insight for future strategic contingency planning (Nayyar, 2017).

7.5.1 Scenario Methodology, Question, and parameters

In order to build a Scenario, a question should be asked and the parameters of that question should be answered. The question here is:

"How will the decision-making process in international organizations that work in developing countries or emerging markets be influenced by cultural indoctrination in 2030?"

To answer this question the scope, future aspirations and time frame have to be identified:

- **Scope:** the geographic scope of this question will be focused on developing nations and emerging markets because they are the main focus of this particular research. In addition, we will also look at decisions that are taken by effective foreign or local organizations in developing nations or even by government bodies that act as a party in the market.
- **Future aspirations:** Since decision-making is an integral part of the management process the rationality of decision-making can be affected in any organization of any size and the increase in the complexity of the process due to local cultures can be daunting to a decision-

maker. The future ambition goes here for a decision-making process that is abstract of any of the personal factors that can affect the decision-maker before, after or during the process which leads to a rational and linear decision-making process that can benefit all the parties that are involved.

- **Timeframe:** Choosing the year 2030 is in alignment with the United Nations new agenda for sustainable development that was put forward in September 2015 (United Nations, General Assembly), especially considering that in the last three years many countries and big organizations have followed the same path.

7.5.2 Scenarios formation

In the process of forming the incoming scenarios, a great deal of literature, opinions of think tanks and editorial opinions from every available media were reviewed in order to develop logical paths and implications for the following two scenarios 1- Pessimistic Scenario 2- Optimistic Scenario.

Some would argue with the simplicity of these scenarios and the limitations of the results that can come out of only two limited visions like these. The answer to this concern will be discussed in the limitations of the research section (explained in chapter 8, Conclusion).

7.5.3 Scenarios main issue:

- In both scenarios, there is a successful, well-reputed foreign establishment that is trying to domesticate its policies and diversify its personnel, through exploiting the host country's human resources, and which is aiming for a long-term investment plan that bears the fruits of high income and helps the establishment to mingle with the local community and be an effective member of it.

I- The decision-maker in both scenarios is in a top management position and a citizen of the host country which is a developing country.

II- The issue presented occurs in the year 2030.

III- The investment belongs to a western-country such as the USA or the UK.

IV- The host country is a middle-eastern emerging economy or developing country such as Egypt or Turkey.

V- The decision-maker is faced with the following problem: in an attempt to encourage social cohesion between the personnel and the welfare of the employees, the headquarters or the mother company sends enough money to celebrate a national or a religious event that occurs in the mother company's country, to the decision maker in the host country and asks him/her to distribute the money to all the employees in the most fair way possible to celebrate that event.

7.5.4 Scenario One: Pessimistic

In this scenario, the pessimistic vision of developing countries dominates, the local cultural values of these countries have been successfully indoctrinated and the components of the concept (Religion, Nationalism, etc.) were the main motive and the work frame of these communities. This means that by the year 2030 the gap between the two members of the global markets (developed and developing countries) has increased drastically and this has led to emerging markets being left behind.

The proposed decision, according to the indoctrinated components of the local culture that the manager will make on this issue will be:

The manager will see no use in celebrating this particular event internally among the employees because it might contradict with their doctrines. Instead, the decision will go one of two ways:

1- Distribute the budget equally and fairly as an extra bonus to all employees which will lead to a very slight difference in their incoming paychecks.

2- Respect the culturally embedded value of respecting those higher in position and accordingly taking the following actions: providing a larger share for those in high positions, using some of the money to gain some personal, and social capital by giving higher shares to some specific employees who are regarded with a higher status in the community, and family members that the indoctrinated values that the culture prioritizes above anyone else.

7.5.5 The implications of the first scenario

In both applications of the decision in this scenario, the company is a loser. This is due to the fact that the budget purpose was the welfare of the employees, and often it is aimed at creating indoor activities or outdoor events that can tie the employees together and make them feel the care of the company's head. Regarding the two ways that the application went through:

In case one: The fair distribution of the money, that is usually limited, will lead to the loss of its value as it will be in small amounts which will make any difference to the employees' salaries, and the aim of the communicated message will thus not be delivered.

In case two: The choosy distribution of the money to specific members of the establishment will lead to the feelings of injustice and disloyalty towards the establishment. In this manner, the corruption that is embedded in the practices of the indoctrinated culture will lead the decision-maker to a result that negates the main purpose of the sent money.

7.5.6 Scenario Two: Optimistic

In this scenario, the optimistic vision of developing countries dominates, which means by the year 2030 the gap between the two members of the global markets (developed and developing countries) has decreased. This has led to an environment of open innovation and a level playing field that can be considered similar to what can be seen today in developed countries. Similarly, the previous corrupted components of local cultures have not been indoctrinated in the new generations and freedom of speech and thought has been given a window to grow that has led to a new culture that mixes the best of both heritage and resilience to new ideologies that have helped the foreign corporations and establishments in the developing countries to flourish.

The proposed decision in this scenario will not differ much from the current management practices that can be witnessed in the developed countries. This means the manager will creatively create an indoor or outdoor event with a theme that carries the mother country's reason for this celebration. This would result in encouraging better understanding internally between employees, and an increase in the cohesion and the social bond between employees. In turn, this would lead the workforce to feel a bigger bond to both the local establishment and the mother company and in consequence, increase their loyalty to the establishment in general.

7.5.7 Implications of the second scenario

The increase of loyalty and feelings of belonging to the establishment will increase the potential productivity of the employees, and the intended message will be communicated by this application of wise policies that are absolute of any culturally indoctrinated corrupted values that might negatively affect the reasoning of the investment.

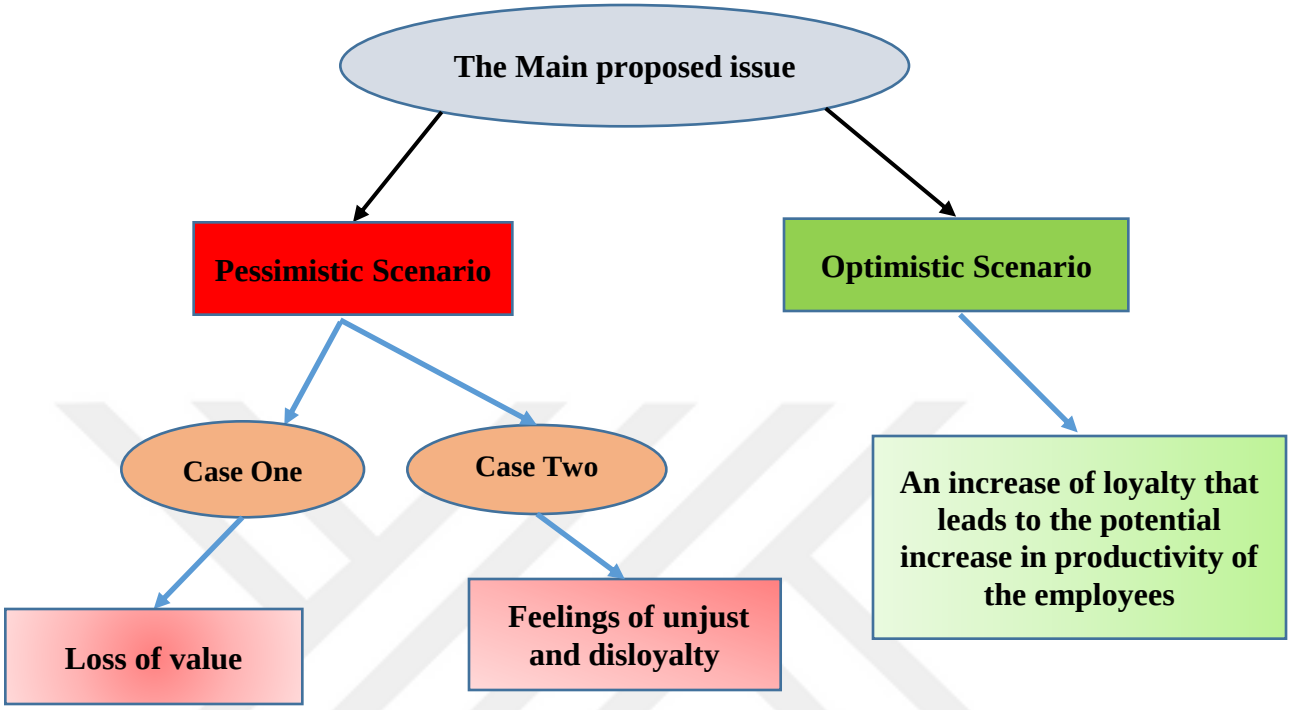

Figure 12 created by the author

7.6 Conclusion

According to the *Economist*, in the year 1820 emerging markets accounted for about 70% of the world's economy before the industrial revolutions in Europe and America left them far behind (News & Politics, 2011). In 2018, we are looking forward to a close Fourth Industrial Revolution (Schwab K., 2016) and all the indicators are signaling widening a gap between the markets of both developed and developing countries (Schaffer, 1996; Plenary, 2000; & Koch, 2018). After presenting a look at the future of decision-making in developed countries and the limited access of the emerging markets to latest advances in technology, it is fair to warn decision-makers in those economies that the gap might create the same problems that have occurred in the past.

Moreover, presenting the two previous scenarios that can be seen as a micro case in routine corporate life significantly highlights some of the dangers of indoctrinated cultural values and the overall vision of the future by various experts on different events. It is safe to say the decision-making process should be closely monitored in the corporations acting in developing nations to ensure a better delivery of the company's policies and the fair implementation of the company's targets even if it was performed in a local theme that integrates both cultures.

At the end of this chapter, we can obtain an answer to the third and last research question: "How can localization and decision-making decentralization policies of multi-national businesses in emerging economies have a negative impact on investment in the future?

Chapter 8: Findings and Discussion

After discussing the future scenarios in the last chapter, this chapter includes the findings and results of this research, a conclusion of the whole matter, the managerial implications of this research findings and finally some directions for future research.

8.0 An overview of the study goals

Considering the conducted literature review, the collected data on the implications of cultural indoctrination on decision-making and after using qualitative-interpretive methodologies, the direct impact is of the indoctrinated culture on the rationality of the decision-making process has been proved to be existent. Also, the suggested concept modeling was successful in linking cultural indoctrination to the rational decision-making process.

This arguably will be of great help to global firms that are conducting businesses in developing countries or emerging markets to correctly anticipate the rival local firms' decision basis. In the case of pursuing a localization strategy, it can help shape an internal decision-making, policy for firm managers "top, medium and low levels". Additionally, the study covers a big gap in the literature that has ignored the implications of cultural indoctrination as a factor in decision-making and it opens the door for other studies to explore and conceptualize other phenomena that may occur during the decision-making process.

8.1 Answers to the Research questions

Reviewing the research questions:

1. ***What is Cultural Indoctrination?***

By looking at the theoretical framework (Chapter 2, Literature review), the conceptualization and operationalization of the concepts (Chapter 4), and the conceptual provided model (Chapter 5,

Conceptual Modeling), it can be safely said that we have successfully interpreted the emerging concept of "Cultural Indoctrination" and conceptualized it in a qualitative-interpretive manner, which made it appropriate for the use in future researches

2. ***How can Cultural Indoctrination have a negative impact on rational decision-making?***

Reviewing the macro- and micro-historic data presented in Chapter 6 provides us with concrete evidence of the contribution of the components of cultural indoctrination to the decision-making process. Of course, due to specific research limitations that will be mentioned in a later part of this chapter, the demonstrations of collective data that include all of the components were not provided. Despite all the limitations of that research, the historical data that has been provided is enough to perform an initial investigation of an emerging concept and the future research directions which will be provided later in this chapter are helpful guidelines which provide a collective image of the impacts of the concept in general.

3. ***How can localization and decentralization of decision-making policies of multi-national businesses in emerging economies have a negative impact on investment in the future?***

Again, the historical data provided in Chapter 6 focused on multi-cultural and local businesses and the impact of the different components of cultural indoctrination on them. The literature review from various resources also provided solid evidence on the impact of localization on the decision-making process in emerging economies. Later in Chapter 7 some future visions and scenarios were provided to further our examination of the concept. Likewise, some light was shed on the implications of the indoctrination of cultures on decision-makers in markets in general and corporations in specific, by employing two possible scenarios of an issue that faces everyday

managers of local establishments that are foreign investments situated in developing countries or emerging markets now or in the future.

8.2 Managerial Implications

> **"***Today's business world revolves around making decisions, often risky ones, usually with incomplete or inadequate information, and under intense time pressure.***"**
>
> (Robbins et al., 2010)

The opposite of rational decision-making is an intuitive decision which, according to *Forbes* magazine (Chamorro-Premuzic, 2014), is made by a scarce number of managers in our modern time. The designing of programs that limits the decision-making process of intuitive managers is on course, and there will not be a place for intuitive irrational decisions in the future.

8.2.1 Foreign leadership

After examining the irrationalities that can occur because of indoctrinated cultural values in developing communities, it is time to answer the question: "Does the solution to the problem include hiring foreign managers only? Or is it putting a detailed policy by the foreign firm that governs the local managers during each step of their jobs?

There is no doubt that the localization of staff is cost-efficient (Thompson et al., 2016; Kühlmann et al., 2010). Yet the cost of unqualified leadership is higher. Embracing foreign leadership styles without considering cultural differences can be fatal to an organizational management system (Hofstede, 1984). As an example, management by objectives (MBO) has proved to be a failure in different cultures after being implemented successfully in the USA lest the feasibility of the appraisal systems in large power distance countries which refers to the inability of management teams in these countries to "keep face" during the delivery of these appraisals. Simply stated, many alternations should be done to any management plans in order to fit a certain culture.

8.2.2 Values

"*Management methods aren't value free. Management, as developed within one culture, will have absorbed the values from that culture which need not be supported by people from other cultures to which management is transferred***"** (Hofstede, 1984)**.**

Societies with low economic income suppose that "the future is in the hands of God" (Hofstede, 1984). This dominant religious conviction can be a great obstacle for planning teams. In communities with high religious beliefs, the tendency to plan or use any preventive measures is low, and the belief in luck and games of chance increases. Blaming bad luck for failures and accordingly thanking luck for success is the norm.

Likewise, time management and the appeal of precision and punctuality are two factors that are missing in traditional developing countries. Furthermore, people tend not respect time with the presumption that time goes in circles and that there will be other chances (Hofstede, 1984).

Considering the last two points as implications of the indoctrinated cultures in the developing nations while forming a company's internal policy would be very useful to managers in those nations.

8.2.3 The Gap

Recently, many sources and authors have been warning people about the growing gap between developed countries and the others (i.e., emerging and developing countries). We have discussed some interviews of remarkable economists in addition to some of the most well-known business magazines and the innovation index reports, and they all have warned of this gap which might lead to less direct investments in developing countries or emerging markets. The importance of direct foreign investments is not only in the revenue that is caused by it but also in the transmission of

expertise and technology advancements from those who can achieve it (developed nations), to those who cannot still achieve it by conventional ways. Hence, the recommendation of a review of the culturally indoctrinated values in business practicing to the decision-makers in developing nations is more crucial now than ever.

8.3 Limitations of the Research

This research has faced some limitations that have included time and finances. The time limitation was mentioned before in the Introduction and, specifically, it lies in an inadequacy of time to thoroughly research all the aspects as that would take years to be conducted in a detailed manner. The research was conducted in approximately six months, keeping in mind that the idea of the research was founded prior to that and that during the research two articles were published on the same concept and its effects on open innovation and the education curriculum (Christensen and Gad 2017, 2018) and further researches are being conducted regarding the same concept.

Regarding the financial limitations, it can be said that the lack of abundance of certain data because of the exclusive rights of certain institutions to the publication of these data does exist.

Moreover, the concepts are multilateral, the cultural indoctrination concept has five dimensions, and each one of them has its own sub-dimensions. The individual testing of each dimensional impact on the rational decision-making process seems impossible with the current tools of research. Probably in the future, with the leaps in technology and communication it will be more achievable.

Decision-making is also a complex multilateral process, and the measures of the rationality of a given decision vary according to the result of the decision. There are many steps in making a

rational decision and the psychological, social, and environmental influences on each step are too vague and hard to be collected in a one research paper.

8.4 Suggestions for Future Research

As mentioned in the previous section, there were a few limitations on conducting this research and there is a large amount of research that can be conducted on Cultural Indoctrination as a concept. Furthermore, after the conceptualization that was conducted, many windows of research on the impact of the concept on many managerial actions and social interactions have been opened. There are many aspects of the concept that can be researched both quantitatively and qualitatively. Here are some directions for future research that can be used:

1- Cultural Intelligence is a promising variable that should be investigated more thoroughly through fuzzy logic or strategic equation modeling.

2- Religion impacts on business performance have been researched enough, but after the developments of recent years the shifts in religious beliefs and the spread of new concepts and philosophies, a new window of research has opened through qualitative studies.

3- Research was already conducted on the impacts of Culture Indoctrination on Management Education curriculum (Christiansen & Gad, 2018), but there are opportunities for further research at every level of schooling, including university and graduate studies (i.e., the Masters and Ph.D. levels).

4- Developing a mathematical algorithm or fuzzy logic to quantify the impacts of Cultural indoctrination on business development or project management, especially in foreign investments in a macro context.

5- The geopolitical impacts of Cultural indoctrination.

6- The demographic impacts of Cultural Indoctrination in Europe. Especially, after the massive immigration that has taken place between the years 2014-2016 from Middle Eastern and African countries.

7- Detailed research on language structure and its influence on innovation in the context of cultural indoctrination can be conducted.

8.5 Conclusion

Critical cultural pedagogies were once described as being handicapped in the face culture (McDonough, 2011), and were described as being impossible to be achieved in others (Biesta, 1998). The need for a revolution in culturally indoctrinated values and practices, especially in developing nations is more important now than ever. Bread, Liberty, and Social Justice were the first three demands of Egyptian protesters in the uprising of 2011 (Mittermaier, 2014). The socially indoctrinated values of the Egyptian community through an example religion and nationalism were one of the first demands of the revolution to be changed.

Contemporary globalism is redefining how people work together (Thomas & Rablin, 1995); consequently, the interactions between cultures have increased massively either through business practices or business travel which in consequence increases the need for frameworks that define the different cultures in different parts of the world. The challenges of the developing communities in managing businesses are not only technical anymore, but also demographic (Drucker, 2012).

Neoteric business practices show that there are tectonic market shifts transforming the global business landscape. These changes mean that intangibilities should be embraced as a competitive source of value creation (Andersen et al., 2013). Cultural indoctrination is one of those intangibles and sheds light on the link between cultural indoctrinated values and innovation, the link between

indoctrination and decision-making (see the conceptual model in Chapter 5). Engaging both scholars and practitioners in the further development of the cultural indoctrination framework via effective collaboration is suggested as it is no secret the research-practice gap is widely recognized and lamented (Bansal et al., 2012).

Competitiveness in this era of hyper-competition depends on a sufficient understanding of cultural value differences (Vance et al., 1992; Christiansen, 2012; Vassilopoulou et al., 2013). Therefore, not only business and but also other organizations need to ensure their members have a solid understanding of the cultural influences around them. This is especially true for managers and executives because of their roles in the organization (Hirsch, 1983, 1985, 1987).

Businesses and organizations in many culturally developing economies are demanding employability skill development (Riebe & Jackson, 2014). As the world continues to become increasingly interdependent, the need for culturally aware, as well as skilled employees and owners alike also expands. Therefore, it is imperative that business and management education include core skills development as well as cultural indoctrination and cultural-related courses in their respective programs worldwide that create truly transformed students capable of working well in 21st-century realities (Burch et al., 2015).

In this study, the emergent concept of Cultural Indoctrination has been modeled through a "conceptual modeling" process and a theoretical framework has been provided. In addition, some future research directions for scholars and practitioners alike have been put forward for consideration. The primary goal of introducing this work to the academic world at this time is to demonstrate the need to have an even deeper understanding of the constituents which comprise the business world as we know it today be they executives, managers, employees, customers, or suppliers.

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Appendices:

Scores for the Hofstede IBM study (Hofstede, 2001)

Countries	Additional Notes Hofstede	Power Distance	Uncertainty Avoidance	Individualism (vs. Collectivism)
Arabic countries	(Region)	80	68	38
Argentina		49	86	46
Australia	Total (a)	36	51	90
Australia	Aborigines (e)	80	128	89
Austria	(For LTO: EMS consumer survey)	11	70	55
Bangladesh	(Estimated)	80	60	20
Belgium	Total (for LTO: EMS consumer survey) (a)	65	94	75
Belgium	Dutch speakers (a)	61	97	78
Belgium	French speakers (a)	67	93	72
Brazil		69	76	38
Bulgaria	(Estimated)	70	85	30
Canada	Total (a)	39	48	80
Canada	French speakers (d)	54	60	73
Chile		63	86	23
China	(Estimated)	80	30	20
Colombia		67	80	13
Costa Rica		35	86	15
Czechia	(Estimated)	57	74	58
Denmark	(For LTO: EMS consumer survey)	18	23	74
East Africa	(Region)	64	52	27
Ecuador		78	67	8
Estonia	(Estimated)	40	60	60
Finland	(For LTO: EMS consumer survey)	33	59	63
France	(For LTO: EMS consumer survey)	68	86	71
Germany		35	65	67
Great Britain		35	35	89
Greece		60	112	35
Guatemala		95	101	6
Hong Kong		68	29	25
Hungary	(Estimated)	46	82	80
India		77	40	48
Indonesia		78	48	14
Ireland	(For LTO: EMS consumer survey)	28	35	70
Iran		58	59	41
Israel		13	81	54
Italy	(For LTO: EMS consumer survey)	50	75	76
Jamaica		45	13	39

Japan		54	92	46
Korea (South)		60	85	18
Luxemburg	(Estimated)	40	70	60
Malaysia		104	36	26
Malta	(Estimated)	56	96	59
Mexico		81	82	30
Morocco	(Estimated)	70	68	46
Netherlands		38	53	80
New Zealand		22	49	79
Norway	(For LTO: EMS consumer survey)	31	50	69
Pakistan		55	70	14
Panama		95	86	11
Peru		64	87	16
Philippines		94	44	32
Poland	(Estimated)	68	93	60
Portugal	(For LTO: EMS consumer survey)	63	104	27
Romania	(Estimated)	90	90	30
Russia	(Estimated)	93	95	39
Singapore		74	8	20
South Africa		49	49	65
Salvador		66	94	19
Slovakia	(Estimated)	104	51	52
Spain	(For LTO: EMS consumer survey)	57	86	51
Surinam	(Estimated)	85	92	47
Sweden		31	29	71
Switzerland	Total (for LTO: EMS consumer survey) (a)	34	58	68
Switzerland	German speakers (a-b)	26	56	69
Switzerland	French speakers (a)	70	70	64
Taiwan		58	69	17
Thailand		64	64	20
Trinidad	(Estimated)	47	55	16
Turkey		66	85	37
Uruguay		61	100	36
United States		40	46	91
Venezuela		81	76	12
Vietnam	(Estimated)	70	30	20
West Africa	(Region)	77	54	2
Yugoslavia	(Total) (a)	76	88	27
Yugoslavia/Croatia	(Zagreb) (c)	73	80	33
Yugoslavia/Serbia	(Beograd) (c)	86	92	25
Yugoslavia/Slovenia	(Ljubljana) (c)	71	88	27

Scores for the Hofstede IBM study (Hofstede, 2001) continued

Countries	Masculinity (vs. Femininity)	Long/Short-term Orientation	Additional notes GLOBE
Arabic countries	53		
Argentina	56		
Australia	61	31	
Australia	22	-10	
Austria	79	31	
Bangladesh	55	40	
Belgium	54	38	
Belgium	43		
Belgium	60		(French speakers)
Brazil	49	65	
Bulgaria	40		
Canada	52	23	
Canada	45	30	
Chile	28		
China	66	118	
Colombia	64		
Costa Rica	21		
Czechia	57	13	
Denmark	16	46	
East Africa	53		
Ecuador	63		
Estonia	30		
Finland	26	41	
France	43	39	
Germany	66	31	
Great Britain	66	25	
Greece	57		
Guatemala	37		
Hong Kong	57	96	
Hungary	88	50	
India	56	61	
Indonesia	46		
Ireland	68	43	
Iran	43		
Israel	47		
Italy	70	34	

Jamaica	68		
Japan	95	80	
Korea (South)	39	75	
Luxemburg	50		
Malaysia	50		
Malta	47		
Mexico	69		
Morocco	53		
Netherlands	14	44	
New Zealand	58	30	
Norway	8	44	
Pakistan	50	0	
Panama	44		
Peru	42		
Philippines	64	19	
Poland	64	32	
Portugal	31	30	
Romania	42		
Russia	36		
Singapore	48	48	
South Africa	63		
Salvador	40		
Slovakia	110	38	
Spain	42	19	
Surinam	37		
Sweden	5	33	
Switzerland	70	40	
Switzerland	72		
Switzerland	58		French speakers
Taiwan	45	87	
Thailand	34	56	
Trinidad	58		
Turkey	45		
Uruguay	38		
United States	62	29	
Venezuela	73		
Vietnam	40	80	
West Africa	46	16	
Yugoslavia	21		
Yugoslavia/Croatia	40		
Yugoslavia/Serbia	43		
Yugoslavia/Slovenia	19		

Scores for the GLOBE Study (House et. al., 2004)

		Assertiveness		Institutional Collectivism	
Countries	**Additional notes Hofstede**	**Practices**	**Values**	**Practices**	**Values**
Albania		4.57	4.39	4.28	4.3
Argentina		4.18	3.18	3.66	5.29
Australia		4.29	3.83	4.31	4.47
Austria	(For LTO: EMS consumer survey)	4.59	2.85	4.34	4.78
Bolivia		3.78	3.68	3.96	5.03
Brazil		4.25	3.06	3.94	5.57
Canada	English speakers	4.09	4.15	4.36	4.2
China	(Estimated)	3.77	5.52	4.67	4.52
Colombia		4.16	3.45	3.84	5.27
Costa Rica		3.83	4.04	3.95	5.14
Denmark	(For LTO: EMS consumer survey)	4.04	3.59	4.93	4.41
Ecuador		3.98	3.57	3.82	5.19
Egypt		3.91	3.22	4.36	4.72
El Salvador		4.49	3.67	3.74	5.6
England		4.23	3.76	4.31	4.39
Finland	(For LTO: EMS consumer survey)	4.05	3.91	4.77	4.34
France	(For LTO: EMS consumer survey)	4.44	3.57	4.2	5.27
Georgia		4.15	4.29	4.03	3.79
Germany	East	4.77	3.24	3.67	4.86
Germany	West	4.66	3.21	3.97	5.07
Greece		4.55	3.05	3.41	5.41
Guatemala		3.96	3.65	3.78	5.16
Hong Kong		4.53	4.8	4.03	4.35
Hungary	(Estimated)	4.71	3.42	3.63	4.57
India		3.7	4.65	4.25	4.59
Indonesia		3.7	4.5	4.27	4.96
Ireland	(For LTO: EMS consumer survey)	3.93	4	4.57	4.55
Israel		4.19	3.74	4.4	4.25
Italy	(For LTO: EMS consumer survey)	4.12	3.87	3.75	5.2
Japan		3.69	5.84	5.23	4.01
Kazakhstan		4.51	3.88	4.38	4.16

Korea (South)		4.36	3.69	5.2	3.84
Kuwait		3.56	3.61	4.32	5.04
Malaysia		3.77	4.73	4.45	4.78
Mexico		4.31	3.67	3.95	4.77
Morocco	(Estimated)	4.72	3.68	4.18	5.34
Namibia		3.81	3.76	4.02	4.26
Netherlands		4.46	3.13	4.62	4.76
New Zealand		3.47	3.52	4.96	4.31
Nigeria		4.53	3.14	4	4.86
Philippines		3.85	4.93	4.37	4.55
Poland	(Estimated)	4.11	3.95	4.51	4.24
Portugal	(For LTO: EMS consumer survey)	3.75	3.61	4.02	5.4
Qatar		4.39	3.72	4.78	5.1
Russia	(Estimated)	3.86	2.9	4.57	4.01
Singapore		4.06	4.28	4.77	4.42
Slovenia		4.01	4.61	4.09	4.36
South Africa	Black	4.43	3.97	4.47	4.46
South Africa	White	4.49	3.65	4.54	4.36
Spain	(For LTO: EMS consumer survey)	4.39	4.01	3.87	5.25
Sweden		3.41	3.49	5.26	3.91
Switzerland	Total (For LTO: EMS consumer survey) (a)	4.58	3.31	4.2	4.87
Switzerland	French speakers (a)	3.61	3.83	4.31	4.42
Taiwan		3.7	2.91	4.3	4.95
Thailand		3.58	3.43	3.88	5.08
Turkey		4.42	2.68	4.02	5.18
United States		4.5	4.36	4.21	4.2
Venezuela		4.25	3.34	3.96	5.28
Zambia		4	4.24	4.41	4.55
Zimbabwe		4.04	4.6	4.08	4.84

Scores for the GLOBE Study (House et. al., 2004) continued

		In-Group Collectivism		Future Orientation	
Countries	**Additional notes Hofstede**	**Practices**	**Values**	**Practices**	**Values**
Albania		5.51	4.98	3.69	5.17
Argentina		5.51	6.07	3.1	5.73
Australia		4.14	5.82	4.09	5.21
Austria	(For LTO: EMS consumer survey)	4.89	5.32	4.47	5.15
Bolivia		5.44	5.91	3.55	5.56
Brazil		5.16	5.17	3.9	5.6
Canada	English speakers	4.22	5.94	4.4	5.34
China	(Estimated)	5.86	5.12	3.68	4.7
Colombia		5.59	5.99	3.35	5.52
Costa Rica		5.26	5.94	3.64	5.1
Denmark	(For LTO: EMS consumer survey)	3.63	5.71	4.59	4.49
Ecuador		5.55	5.81	3.66	5.62
Egypt		5.49	5.39	3.8	5.6
El Salvador		5.22	6.28	3.73	5.89
England		4.08	5.66	4.31	5.15
Finland	(For LTO: EMS consumer survey)	4.23	5.6	4.39	5.24
France	(For LTO: EMS consumer survey)	4.66	5.88	3.74	5.35
Georgia		6.18	5.58	3.45	5.45
Germany	East	4.59	5.38	4.04	5.36
Germany	West	4.16	5.46	4.41	5.06
Greece		5.28	5.47	3.53	5.17
Guatemala		5.54	5.95	3.35	5.78
Hong Kong		5.33	5.11	3.88	5.52
Hungary	(Estimated)	5.31	5.58	3.31	5.74
India		5.81	5.22	4.04	5.43
Indonesia		5.5	5.46	3.61	5.48
Ireland	(For LTO: EMS consumer survey)	5.12	5.72	3.93	5.18
Israel		4.63	5.69	3.82	5.17
Italy	(For LTO: EMS consumer survey)	4.99	5.76	3.34	6.01
Japan		4.72	5.44	4.29	5.42
Kazakhstan		5.5	5.62	3.72	5.22
Korea (South)		5.71	5.5	3.9	5.83
Kuwait		5.7	5.32	3.18	5.62
Malaysia		5.47	5.77	4.39	5.84
Mexico		5.62	5.78	3.75	5.74

Morocco	(Estimated)	6.37	6.03	3.5	6.33
Namibia		4.39	6.13	3.32	6.3
Netherlands		3.79	5.39	4.72	5.24
New Zealand		3.58	6.54	3.46	5.9
Nigeria		5.34	5.31	3.95	5.8
Philippines		6.14	5.86	3.92	5.66
Poland	(Estimated)	5.55	5.69	3.23	5.17
Portugal	(For LTO: EMS consumer survey)	5.64	5.97	3.77	5.5
Qatar		5.07	5.55	4.08	5.92
Russia	(Estimated)	5.83	5.9	3.06	5.6
Singapore		5.66	5.46	4.88	5.46
Slovenia		5.49	5.71	3.56	5.43
South Africa	Black	5.18	5.14	4.66	5.25
South Africa	White	4.42	5.82	4.08	5.59
Spain	(For LTO: EMS consumer survey)	5.53	5.82	3.52	5.66
Sweden		3.46	6.25	4.37	4.96
Switzerland	Total (for LTO: EMS consumer survey) (a)	4.04	5.16	4.8	4.93
Switzerland	French speakers (a)	3.82	5.54	4.36	4.89
Taiwan		5.45	5.3	3.65	4.94
Thailand		5.72	5.73	3.27	6.26
Turkey		5.79	5.63	3.74	5.71
United States		4.22	5.79	4.13	5.34
Venezuela		5.41	5.92	3.43	5.61
Zambia		5.72	5.64	3.55	5.76
Zimbabwe		5.53	5.74	3.76	6.01

Scores for the GLOBE Study (House et. al., 2004) continued

Countries	Additional notes Hofstede	Gender Egalitarianism		Humane Orientation	
		Practices	Values	Practices	Values
Albania		3.48	4.04	4.4	5.16
Argentina		3.44	4.89	3.94	5.5
Australia		3.41	5.02	4.32	5.6
Austria	(For LTO: EMS consumer survey)	3.18	4.83	3.77	5.68
Bolivia		3.45	4.65	3.99	5.11
Brazil		3.44	4.91	3.76	5.52
Canada	English speakers	3.66	5.04	4.51	5.58
China	(Estimated)	3.03	3.73	4.29	5.34
Colombia		3.64	4.85	3.72	5.43
Costa Rica		3.56	4.59	4.38	5.08
Denmark	(For LTO: EMS consumer survey)	4.02	5.2	4.67	5.59
Ecuador		3.09	4.42	4.45	5.13
Egypt		2.9	3.34	4.6	5.13
El Salvador		3.23	4.66	3.69	5.38
England		3.67	5.2	3.74	5.52
Finland	(For LTO: EMS consumer survey)	3.55	4.47	4.19	5.8
France	(For LTO: EMS consumer survey)	3.81	4.71	3.6	5.91
Georgia		3.52	3.83	4.17	5.48
Germany	East	3.17	4.97	3.45	5.56
Germany	West	3.25	5.06	3.3	5.63
Greece		3.53	4.84	3.44	5.28
Guatemala		3.14	4.49	3.91	5.24
Hong Kong		3.26	4.27	3.72	5.38
Hungary	(Estimated)	4.02	4.65	3.39	5.48
India		2.89	4.4	4.45	5.2
Indonesia		3.04	3.71	4.47	5.06
Ireland	(For LTO: EMS consumer survey)	3.19	5.07	4.96	5.45
Israel		3.21	4.66	4.07	5.51
Italy	(For LTO: EMS consumer survey)	3.3	4.88	3.66	5.57
Japan		3.17	4.41	4.34	5.53
Kazakhstan		3.87	4.85	4.44	5.66
Korea (South)		2.45	4.23	3.73	5.61
Kuwait		2.59	3.5	4.44	5.06
Malaysia		3.31	3.72	4.76	5.43
Mexico		3.5	4.57	3.84	5.1
Morocco	(Estimated)	3.08	4.07	4.52	5.73

Namibia		3.69	4.2	3.83	5.47
Netherlands		3.62	5.1	4.02	5.41
New Zealand		3.18	4.32	4.43	4.85
Nigeria		3.04	4.16	3.96	5.71
Philippines		3.42	4.36	4.88	5.19
Poland	(Estimated)	3.94	4.53	3.67	5.32
Portugal	(For LTO: EMS consumer survey)	3.69	5.12	3.96	5.4
Qatar		3.86	3.49	4.79	5.31
Russia	(Estimated)	4.07	4.34	4.04	5.62
Singapore		3.52	4.43	3.29	5.66
Slovenia		3.84	4.78	3.75	5.31
South Africa	Black	3.78	4.43	4.46	5.23
South Africa	White	3.25	4.54	3.45	5.53
Spain	(For LTO: EMS consumer survey)	3.06	4.82	3.29	5.63
Sweden		3.72	5.19	4.09	5.72
Switzerland	Total (For LTO: EMS consumer survey) (a)	3.12	5.01	3.73	5.63
Switzerland	French speakers (a)	3.46	4.77	3.98	5.68
Taiwan		2.92	3.88	3.82	5.15
Thailand		3.26	4.12	4.87	5.05
Turkey		3.02	4.46	3.92	5.4
United States		3.36	5.03	4.18	5.51
Venezuela		3.6	4.7	4.19	5.24
Zambia		2.88	4.27	5.12	5.37
Zimbabwe		3.09	4.4	4.38	5.2

Scores for the GLOBE Study (House et. al., 2004) continued

Countries	Additional notes Hofstede	Performance Orientation		Power Distance		Uncertainty Avoidance	
		Practices	Values	Practices	Values	Practices	Values
Albania		4.57	5.47	4.44	3.47	4.5	5.2
Argentina		3.63	6.28	5.56	2.3	3.6	4.6
Australia		4.37	5.99	4.81	2.77	4.4	4
Austria	(For LTO: EMS consumer survey)	4.47	6.12	5	2.52	5.1	3.7
Bolivia		3.57	5.98	4.46	3.31	3.3	4.6
Brazil		4.11	5.98	5.24	2.59	3.7	5
Canada	English speakers	4.46	6.13	4.85	2.73	4.5	3.7
China	(Estimated)	4.37	5.72	5.02	3.01	4.8	5.3
Colombia		3.93	6.15	5.37	2.21	3.6	4.9
Costa Rica		4.1	5.78	4.7	2.66	3.8	4.6
Denmark	(For LTO: EMS consumer survey)	4.4	5.82	4.14	2.96	5.3	4
Ecuador		4.06	5.95	5.29	2.36	3.6	5
Egypt		4.15	5.71	4.76	3.2	4	5.2
El Salvador		3.72	6.37	5.56	2.76	3.7	5.3
England		4.16	6.03	5.26	2.82	4.7	4.2
Finland	(For LTO: EMS consumer survey)	4.02	6.23	5.08	2.46	5.1	4
France	(For LTO: EMS consumer survey)	4.43	6.1	5.68	2.96	4.7	4.7
Georgia		3.85	5.63	5.15	2.86	3.5	5.2
Germany	East	4.16	6.24	5.7	2.74	5.2	4
Germany	West	4.42	6.27	5.48	2.66	5.4	3.4
Greece		3.34	5.79	5.35	2.57	3.5	5.2
Guatemala		3.85	5.96	5.47	2.49	3.4	4.9
Hong Kong		4.69	5.71	4.94	3	4.2	4.5
Hungary	(Estimated)	3.5	5.97	5.57	2.59	3.3	4.7
India		4.11	5.87	5.29	2.58	4	4.6
Indonesia		4.14	5.54	4.93	2.38	3.9	5
Ireland	(For LTO: EMS consumer survey)	4.3	5.99	5.13	2.66	4.3	3.9
Israel		4.03	5.71	4.71	2.72	4	4.3
Italy	(For LTO: EMS consumer survey)	3.66	6.11	5.45	2.51	3.9	4.5
Japan		4.22	5.37	5.23	2.76	4.1	4.4
Kazakhstan		3.72	5.57	5.4	3.19	3.8	4.5
Korea (South)		4.53	5.41	5.69	2.39	3.5	4.7

Kuwait		3.79	5.89	4.97	3.02	4	4.7
Malaysia		4.16	5.96	5.09	2.75	4.6	4.8
Mexico		3.97	6	5.07	2.75	4.1	5.2
Morocco	(Estimated)	4.31	6.12	6.14	3.3	4	5.8
Namibia		3.52	6.52	5.29	2.59	4.1	5.2
Netherlands		4.46	5.71	4.32	2.61	4.8	3.3
New Zealand		4.86	6.24	5.12	3.56	4.9	4.2
Nigeria		3.79	5.99	5.32	2.66	4.1	5.5
Philippines		4.21	6	5.15	2.54	3.7	4.9
Poland	(Estimated)	3.96	6.06	5.09	3.19	3.7	4.8
Portugal	(For LTO: EMS consumer survey)	3.65	6.41	5.5	2.45	4	4.5
Qatar		3.76	5.94	5.05	3.18	4.3	4.8
Russia	(Estimated)	3.53	5.68	5.61	2.73	3.1	5.3
Singapore		4.81	5.7	4.92	2.84	5.2	4.1
Slovenia		3.62	6.41	5.32	2.5	3.8	5
South Africa	Black	4.72	5.09	4.31	3.8	4.6	4.9
South Africa	White	4.07	6.13	5.1	2.67	4.1	4.7
Spain	(For LTO: EMS consumer survey)	4	5.85	5.53	2.23	4	4.8
Sweden		3.67	6.01	4.94	2.49	5.4	3.5
Switzerland	(For LTO: EMS consumer survey)	5.04	6	5.05	2.54	5.4	3.2
Switzerland	French speakers (a)	4.36	6.17	5	2.8	5.1	3.8
Taiwan		4.27	5.58	5	2.77	4	5.1
Thailand		3.84	5.76	5.62	2.74	3.8	5.7
Turkey		3.82	5.34	5.43	2.52	3.7	4.6
United States		4.45	6.14	4.92	2.88	4.2	4
Venezuela		3.41	6.11	5.22	2.43	3.6	5.2
Zambia		4.01	6.08	5.23	2.37	3.9	4.5
Zimbabwe		4.2	6.33	5.54	2.65	4.1	4.7

Global Innovation Index 2018 rankings

Country/Economy	Score (0–100)	Rank	Income	Rank	Region	Rank	Efficiency Ratio	Rank	Median: 0.61
Switzerland	68.40	1	HI	1	EUR	1	0.96	1	
Netherlands	63.32	2	HI	2	EUR	2	0.91	4	
Sweden	63.08	3	HI	3	EUR	3	0.82	10	
United Kingdom	60.13	4	HI	4	EUR	4	0.77	21	
Singapore	59.83	5	HI	5	SEAO	1	0.61	63	
United States of America	59.81	6	HI	6	NAC	1	0.76	22	
Finland	59.63	7	HI	7	EUR	5	0.76	24	
Denmark	58.39	8	HI	8	EUR	6	0.73	29	
Germany	58.03	9	HI	9	EUR	7	0.83	9	
Ireland	57.19	10	HI	10	EUR	8	0.81	13	
Israel	56.79	11	HI	11	NAWA	1	0.81	14	
Korea, Republic of	56.63	12	HI	12	SEAO	2	0.79	20	
Japan	54.95	13	HI	13	SEAO	3	0.68	44	
Hong Kong (China)	54.62	14	HI	14	SEAO	4	0.64	54	
Luxembourg	54.53	15	HI	15	EUR	9	0.94	2	
France	54.36	16	HI	16	EUR	10	0.72	32	
China	53.06	17	UM	1	SEAO	5	0.92	3	
Canada	52.98	18	HI	17	NAC	2	0.61	61	
Norway	52.63	19	HI	18	EUR	11	0.64	52	
Australia	51.98	20	HI	19	SEAO	6	0.58	76	
Austria	51.32	21	HI	20	EUR	12	0.64	53	
New Zealand	51.29	22	HI	21	SEAO	7	0.62	59	
Iceland	51.24	23	HI	22	EUR	13	0.76	23	
Estonia	50.51	24	HI	23	EUR	14	0.82	12	
Belgium	50.50	25	HI	24	EUR	15	0.70	38	
Malta	50.29	26	HI	25	EUR	16	0.84	7	
Czech Republic	48.75	27	HI	26	EUR	17	0.80	17	
Spain	48.68	28	HI	27	EUR	18	0.70	36	
Cyprus	47.83	29	HI	28	NAWA	2	0.79	18	
Slovenia	46.87	30	HI	29	EUR	19	0.74	27	

Global Innovation Index 2018 rankings continued

Italy	46.32	31	HI	30	EUR	20	0.70	35	
Portugal	45.71	32	HI	31	EUR	21	0.71	34	
Hungary	44.94	33	HI	32	EUR	22	0.84	8	
Latvia	43.18	34	HI	33	EUR	23	0.69	39	
Malaysia	43.16	35	UM	2	SEAO	8	0.66	48	
Slovakia	42.88	36	HI	34	EUR	24	0.74	28	
Bulgaria	42.65	37	UM	3	EUR	25	0.79	19	
United Arab Emirates	42.58	38	HI	35	NAWA	3	0.50	95	
Poland	41.67	39	HI	36	EUR	26	0.69	42	
Lithuania	41.19	40	HI	37	EUR	27	0.63	58	
Croatia	40.73	41	UM	4	EUR	28	0.70	37	
Greece	38.93	42	HI	38	EUR	29	0.59	74	
Ukraine	38.52	43	LM	1	EUR	30	0.90	5	
Thailand	38.00	44	UM	5	SEAO	9	0.71	33	
Viet Nam	37.94	45	LM	2	SEAO	10	0.80	16	
Russian Federation	37.90	46	UM	6	EUR	31	0.58	77	
Chile	37.79	47	HI	39	LCN	1	0.60	68	
Moldova, Republic of	37.63	48	LM	3	EUR	32	0.89	6	
Romania	37.59	49	UM	7	EUR	33	0.66	47	
Turkey	37.42	50	UM	8	NAWA	4	0.75	25	
Qatar	36.56	51	HI	40	NAWA	5	0.57	81	
Montenegro	36.49	52	UM	9	EUR	34	0.63	56	
Mongolia	35.90	53	LM	4	SEAO	11	0.72	30	
Costa Rica	35.72	54	UM	10	LCN	2	0.68	43	
Serbia	35.46	55	UM	11	EUR	35	0.63	57	
Mexico	35.34	56	UM	12	LCN	3	0.59	72	
India	35.18	57	LM	5	CSA	1	0.65	49	
South Africa	35.13	58	UM	13	SSF	1	0.55	83	
Georgia	35.05	59	LM	6	NAWA	6	0.58	79	
Kuwait	34.43	60	HI	41	NAWA	7	0.74	26	
Saudi Arabia	34.27	61	HI	42	NAWA	8	0.47	104	
Uruguay	34.20	62	HI	43	LCN	4	0.64	51	
Colombia	33.78	63	UM	14	LCN	5	0.50	94	

Global Innovation Index 2018 rankings continued

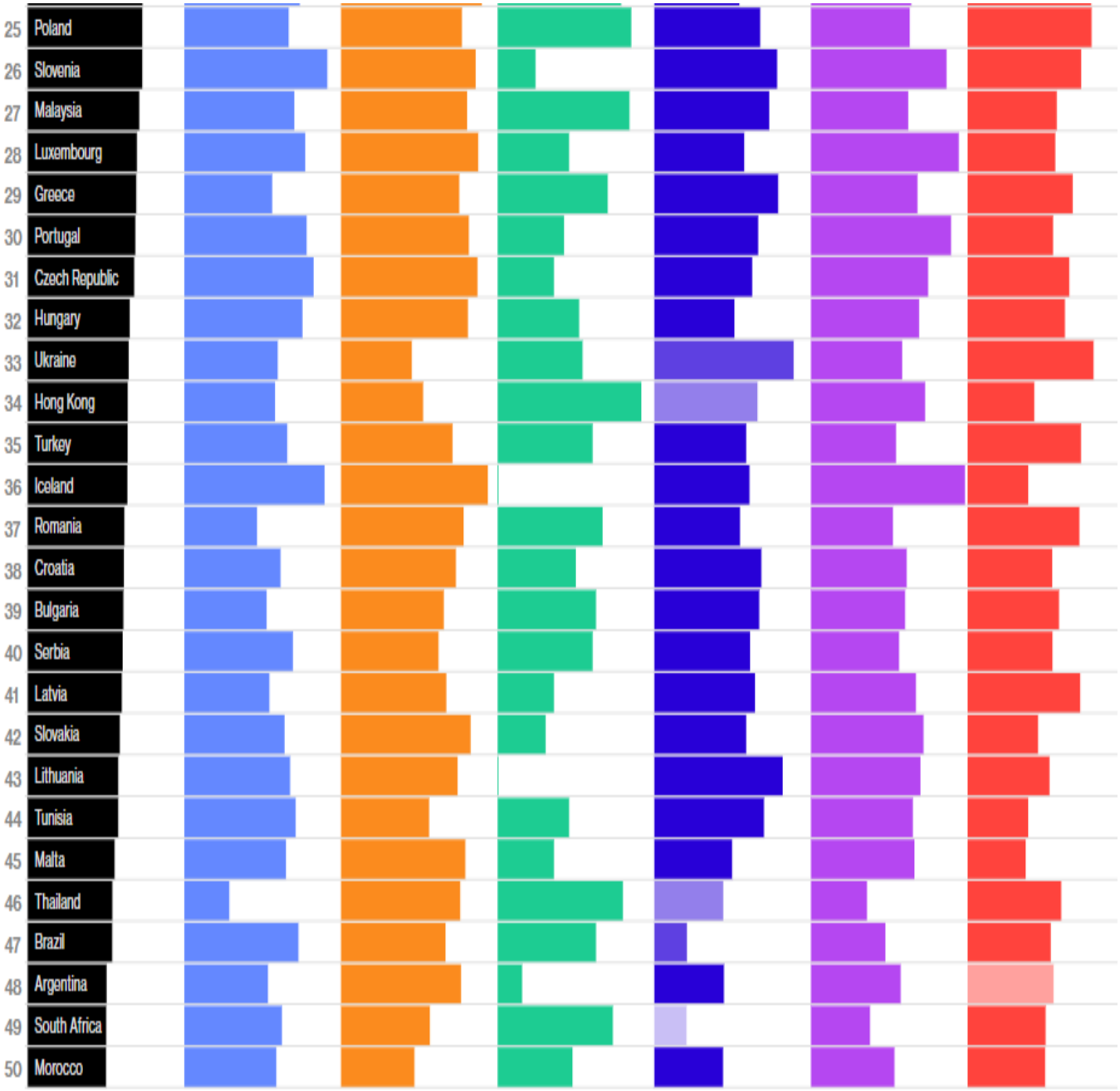
Country/Economy	Score (0–100)	Rank	Income	Rank	Region	Rank	Efficiency Ratio	Rank	Median: 0.6
Brazil	33.44	64	UM	15	LCN	6	0.54	85	
Iran, Islamic Republic of	33.44	65	UM	16	CSA	2	0.82	11	
Tunisia	32.86	66	LM	7	NAWA	9	0.63	55	
Brunei Darussalam	32.84	67	HI	44	SEAO	12	0.31	124	
Armenia	32.81	68	LM	8	NAWA	10	0.80	15	
Oman	32.80	69	HI	45	NAWA	11	0.51	92	
Panama	32.37	70	UM	17	LCN	7	0.61	64	
Peru	31.80	71	UM	18	LCN	8	0.47	100	
Bahrain	31.73	72	HI	46	NAWA	12	0.55	84	
Philippines	31.56	73	LM	9	SEAO	13	0.61	62	
Kazakhstan	31.42	74	UM	19	CSA	3	0.44	111	
Mauritius	31.31	75	UM	20	SSF	2	0.47	105	
Morocco	31.09	76	LM	10	NAWA	13	0.61	65	
Bosnia and Herzegovina	31.09	77	UM	21	EUR	36	0.50	97	
Kenya	31.07	78	LM	11	SSF	3	0.69	41	
Jordan	30.77	79	LM	12	NAWA	14	0.65	50	
Argentina	30.65	80	UM	22	LCN	9	0.51	91	
Jamaica	30.39	81	UM	23	LCN	10	0.57	80	
Azerbaijan	30.20	82	UM	24	NAWA	15	0.49	99	
Albania	29.98	83	UM	25	EUR	37	0.44	110	
The former Yugoslav Republic of Macedonia	29.91	84	UM	26	EUR	38	0.47	103	
Indonesia	29.80	85	LM	13	SEAO	14	0.61	66	
Belarus	29.35	86	UM	27	EUR	39	0.37	119	
Dominican Republic	29.33	87	UM	28	LCN	11	0.60	71	
Sri Lanka	28.66	88	LM	14	CSA	4	0.58	78	
Paraguay	28.66	89	UM	29	LCN	12	0.54	86	
Lebanon	28.22	90	UM	30	NAWA	16	0.50	98	
Botswana	28.16	91	UM	31	SSF	4	0.39	118	
Tanzania, United Republic of	28.07	92	LI	1	SSF	5	0.72	31	
Namibia	28.03	93	UM	32	SSF	6	0.41	116	
Kyrgyzstan	27.56	94	LM	15	CSA	5	0.45	106	
Egypt	27.16	95	LM	16	NAWA	17	0.66	45	

Global Innovation Index 2018 rankings continued

Trinidad and Tobago	26.95	96	HI	47	LCN	13	0.43	114	
Ecuador	26.80	97	UM	33	LCN	14	0.51	93	
Cambodia	26.69	98	LM	17	SEAO	15	0.61	60	
Rwanda	26.54	99	LI	2	SSF	7	0.31	125	
Senegal	26.53	100	LI	3	SSF	8	0.60	70	
Tajikistan	26.51	101	LM	18	CSA	6	0.60	67	
Guatemala	25.51	102	LM	19	LCN	15	0.56	82	
Uganda	25.32	103	LI	4	SSF	9	0.45	108	
El Salvador	25.11	104	LM	20	LCN	16	0.43	112	
Honduras	24.95	105	LM	21	LCN	17	0.47	101	
Madagascar	24.75	106	LI	5	SSF	10	0.69	40	
Ghana	24.52	107	LM	22	SSF	11	0.51	90	
Nepal	24.17	108	LI	6	CSA	7	0.45	107	
Pakistan	24.12	109	LM	23	CSA	8	0.66	46	
Algeria	23.87	110	UM	34	NAWA	18	0.42	115	
Cameroon	23.85	111	LM	24	SSF	12	0.58	75	
Mali	23.32	112	LI	7	SSF	13	0.59	73	
Zimbabwe	23.15	113	LI	8	SSF	14	0.60	69	
Malawi	23.09	114	LI	9	SSF	15	0.52	89	
Mozambique	23.06	115	LI	10	SSF	16	0.52	88	
Bangladesh	23.06	116	LM	25	CSA	9	0.53	87	
Bolivia, Plurinational State of	22.88	117	LM	26	LCN	18	0.43	113	
Nigeria	22.37	118	LM	27	SSF	17	0.50	96	
Guinea	20.71	119	LI	11	SSF	18	0.47	102	
Zambia	20.66	120	LM	28	SSF	19	0.45	109	
Benin	20.61	121	LI	12	SSF	20	0.35	123	
Niger	20.57	122	LI	13	SSF	21	0.36	120	
Côte d'Ivoire	19.96	123	LM	29	SSF	22	0.40	117	
Burkina Faso	18.95	124	LI	14	SSF	23	0.28	126	
Togo	18.91	125	LI	15	SSF	24	0.36	121	
Yemen	15.04	126	LM	30	NAWA	19	0.36	122	

The Blomberg innovation index 2015

The Blomberg innovation index 2015, continued



Global Innovation Index 2017 rankings

Country/Economy	Score (0–100)	Rank	Income	Rank	Region	Rank	Efficiency Ratio	Rank	Median: 0.62
Switzerland	67.69	1	HI	1	EUR	1	0.95	2	
Sweden	63.82	2	HI	2	EUR	2	0.83	12	
Netherlands	63.36	3	HI	3	EUR	3	0.93	4	
United States of America	61.40	4	HI	4	NAC	1	0.78	21	
United Kingdom	60.89	5	HI	5	EUR	4	0.78	20	
Denmark	58.70	6	HI	6	EUR	5	0.71	34	
Singapore	58.69	7	HI	7	SEAO	1	0.62	63	
Finland	58.49	8	HI	8	EUR	6	0.70	37	
Germany	58.39	9	HI	9	EUR	7	0.84	7	
Ireland	58.13	10	HI	10	EUR	8	0.85	6	
Korea, Rep.	57.70	11	HI	11	SEAO	2	0.82	14	
Luxembourg	56.40	12	HI	12	EUR	9	0.97	1	
Iceland	55.76	13	HI	13	EUR	10	0.86	5	
Japan	54.72	14	HI	14	SEAO	3	0.67	49	
France	54.18	15	HI	15	EUR	11	0.71	35	
Hong Kong (China)	53.88	16	HI	16	SEAO	4	0.61	73	
Israel	53.88	17	HI	17	NAWA	1	0.77	23	
Canada	53.65	18	HI	18	NAC	2	0.64	59	
Norway	53.14	19	HI	19	EUR	12	0.66	51	
Austria	53.10	20	HI	20	EUR	13	0.69	41	
New Zealand	52.87	21	HI	21	SEAO	5	0.65	56	
China	52.54	22	UM	1	SEAO	6	0.94	3	
Australia	51.83	23	HI	22	SEAO	7	0.60	76	
Czech Republic	50.98	24	HI	23	EUR	14	0.83	13	
Estonia	50.93	25	HI	24	EUR	15	0.79	19	
Malta	50.60	26	HI	25	EUR	16	0.84	8	
Belgium	49.85	27	HI	26	EUR	17	0.67	47	
Spain	48.81	28	HI	27	EUR	18	0.70	36	
Italy	46.96	29	HI	28	EUR	19	0.73	31	
Cyprus	46.84	30	HI	29	NAWA	2	0.74	28	
Portugal	46.05	31	HI	30	EUR	20	0.71	33	

Global Innovation Index 2017 rankings continued

Slovenia	45.80	32	HI	31	EUR	21	0.68	44
Latvia	44.61	33	HI	32	EUR	22	0.74	26
Slovakia	43.43	34	HI	33	EUR	23	0.75	25
United Arab Emirates	43.24	35	HI	34	NAWA	3	0.49	104
Bulgaria	42.84	36	UM	2	EUR	24	0.80	15
Malaysia	42.72	37	UM	3	SEAO	8	0.68	46
Poland	41.99	38	HI	35	EUR	25	0.67	48
Hungary	41.74	39	HI	36	EUR	26	0.73	30
Lithuania	41.17	40	HI	37	EUR	27	0.59	84
Croatia	39.80	41	HI	38	EUR	28	0.66	52
Romania	39.16	42	UM	4	EUR	29	0.69	39
Turkey	38.90	43	UM	5	NAWA	4	0.84	9
Greece	38.85	44	HI	39	EUR	30	0.56	87
Russian Federation	38.76	45	UM	6	EUR	31	0.61	75
Chile	38.70	46	HI	40	LCN	1	0.60	77
Viet Nam	38.34	47	LM	1	SEAO	9	0.84	10
Montenegro	38.07	48	UM	7	EUR	32	0.63	62
Qatar	37.90	49	HI	41	NAWA	5	0.61	68
Ukraine	37.62	50	LM	2	EUR	33	0.83	11
Thailand	37.57	51	UM	8	SEAO	10	0.75	24
Mongolia	37.13	52	LM	3	SEAO	11	0.74	27
Costa Rica	37.09	53	UM	9	LCN	2	0.69	43
Moldova, Rep.	36.84	54	LM	4	EUR	34	0.78	22
Saudi Arabia	36.17	55	HI	42	NAWA	6	0.53	96
Kuwait	36.10	56	HI	43	NAWA	7	0.79	18
South Africa	35.80	57	UM	10	SSF	1	0.53	97
Mexico	35.79	58	UM	11	LCN	3	0.61	74
Armenia	35.65	59	LM	5	NAWA	8	0.80	17
India	35.47	60	LM	6	CSA	1	0.66	53
TFYR of Macedonia	35.43	61	UM	12	EUR	35	0.59	80
Serbia	35.34	62	UM	13	EUR	36	0.61	67
Panama	34.98	63	UM	14	LCN	4	0.69	38
Mauritius	34.82	64	UM	15	SSF	2	0.48	109

Global Innovation Index 2017 rankings continued

Country/Economy	Score (0–100)	Rank	Income	Rank	Region	Rank	Efficiency Ratio	Rank	Median: 0.62
Colombia	34.78	65	UM	16	LCN	5	0.52	100	
Bahrain	34.67	66	HI	44	NAWA	9	0.56	88	
Uruguay	34.53	67	HI	45	LCN	6	0.59	82	
Georgia	34.39	68	UM	17	NAWA	10	0.63	60	
Brazil	33.10	69	UM	18	LCN	7	0.52	99	
Peru	32.90	70	UM	19	LCN	8	0.49	106	
Brunei Darussalam	32.89	71	HI	46	SEAO	12	0.34	124	
Morocco	32.72	72	LM	7	NAWA	11	0.61	71	
Philippines	32.48	73	LM	8	SEAO	13	0.65	55	
Tunisia	32.30	74	LM	9	NAWA	12	0.62	65	
Iran, Islamic Rep.	32.09	75	UM	20	CSA	2	0.80	16	
Argentina	32.00	76	UM	21	LCN	9	0.55	94	
Oman	31.83	77	HI	47	NAWA	13	0.46	115	
Kazakhstan	31.50	78	UM	22	CSA	3	0.46	116	
Dominican Republic	31.17	79	UM	23	LCN	10	0.65	54	
Kenya	30.95	80	LM	10	SSF	3	0.66	50	
Lebanon	30.64	81	UM	24	NAWA	14	0.61	69	
Azerbaijan	30.58	82	UM	25	NAWA	15	0.50	103	
Jordan	30.52	83	UM	26	NAWA	16	0.65	57	
Jamaica	30.36	84	UM	27	LCN	11	0.57	86	
Paraguay	30.30	85	UM	28	LCN	12	0.61	72	
Bosnia and Herzegovina	30.23	86	UM	29	EUR	37	0.47	112	
Indonesia	30.10	87	LM	11	SEAO	14	0.69	42	
Belarus	29.98	88	UM	30	EUR	38	0.39	120	
Botswana	29.97	89	UM	31	SSF	4	0.38	121	
Sri Lanka	29.85	90	LM	12	CSA	4	0.65	58	
Trinidad and Tobago	29.75	91	HI	48	LCN	13	0.56	90	
Ecuador	29.14	92	UM	32	LCN	14	0.62	66	
Albania	28.86	93	UM	33	EUR	39	0.37	122	
Tajikistan	28.16	94	LM	13	CSA	5	0.59	83	
Kyrgyzstan	28.01	95	LM	14	CSA	6	0.47	114	

Global Innovation Index 2017 rankings continued

Tanzania, United Rep.	27.97	96	LI	1	SSF	5	0.73	29	
Namibia	27.94	97	UM	34	SSF	6	0.48	108	
Guatemala	27.90	98	LM	15	LCN	15	0.56	91	
Rwanda	27.36	99	LI	2	SSF	7	0.33	125	
Senegal	27.11	100	LI	3	SSF	8	0.54	95	
Cambodia	27.05	101	LM	16	SEAO	15	0.63	61	
Uganda	26.97	102	LI	4	SSF	9	0.47	113	
El Salvador	26.68	103	LM	17	LCN	16	0.48	107	
Honduras	26.36	104	LM	18	LCN	17	0.52	101	
Egypt	26.00	105	LM	19	NAWA	17	0.59	81	
Bolivia, Plurinational St.	25.64	106	LM	20	LCN	18	0.57	85	
Mozambique	24.55	107	LI	5	SSF	10	0.61	70	
Algeria	24.34	108	UM	35	NAWA	18	0.47	111	
Nepal	24.20	109	LI	6	CSA	7	0.49	105	
Ethiopia	24.16	110	LI	7	SSF	11	0.72	32	
Madagascar	24.15	111	LI	8	SSF	12	0.68	45	
Côte d'Ivoire	23.96	112	LM	21	SSF	13	0.69	40	
Pakistan	23.80	113	LM	22	CSA	8	0.62	64	
Bangladesh	23.72	114	LM	23	CSA	9	0.55	93	
Malawi	23.45	115	LI	9	SSF	14	0.53	98	
Benin	23.04	116	LI	10	SSF	15	0.47	110	
Cameroon	22.58	117	LM	24	SSF	16	0.56	92	
Mali	22.48	118	LI	11	SSF	17	0.60	78	
Nigeria	21.92	119	LM	25	SSF	18	0.52	102	
Burkina Faso	21.86	120	LI	12	SSF	19	0.24	127	
Zimbabwe	21.80	121	LI	13	SSF	20	0.56	89	
Burundi	21.31	122	LI	14	SSF	21	0.41	117	
Niger	21.18	123	LI	15	SSF	22	0.36	123	
Zambia	20.83	124	LM	26	SSF	23	0.59	79	
Togo	18.41	125	LI	16	SSF	24	0.28	126	
Guinea	17.41	126	LI	17	SSF	25	0.40	118	
Yemen	15.64	127	LM	27	NAWA	19	0.40	119	