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Measurements of International and Global exposure: meta-analysis and review of the research of the last decade

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Introduction

The term globalization is now used throughout every discipline and field of study, but its meaning, implications and consequences are not distinctly clarified and explained.

Globalization is perceived as the force that is shaping the modern world, it is neither static nor constant, and the underlying changes in the nature of the phenomenon have been transpiring on the background throughout the last decades. Globalization became the axiom of the last and present decades, a word that is regarded as being established, accepted or self-evidently true.

At the center of the concept of globalization we encounter the interconnectedness of economies, investments, movement of people, goods and services, features pertaining to a wide scope of disciplines ranging from politics, social theories, international relations, law and economics.

Globalization turns out to be a contentious subject and some critics also defined it as a myth. In order to attempt to capture its essence and have a clearer depiction of its nature, the focus should be narrowed on its invisible hand: Multinational Corporations.

What is the main paradigm of globalization? Are corporations global because the market indicates so? Are they global because they outsource and because they are registered and operate in more than one country at the same time? Are they global due to the variety of its human resources? This is what this dissertation attempts to answer.

The dissertation is divided into three main chapters.

In the first chapter it will be exposed the multivariate definitions of the term globalization and how its nature changes based on the field of study to which it belongs. Since there is no homogenization relating to its innumerable definitions, it is exceptionally intricate to conceptualize the subject of our study. We enclosed historical insights in order to have a clear representation of its inception and evolution. To emphasize the convolution of the topic and the dissenting opinions regarding its nature and consequences, we reported two contrasting ideologies from two economists. One believes that the global field is becoming equable, while the other believes that his assertions are an exaggerated vision of what is actually occurring in the world. From these conflicting ideologies we developed the continuum, in search of a tangible way, primarily through measurements, to give a concrete representation of the phenomenon.

The following chapter evolves focusing on the measurements of this complex societal phenomenon. The measurement used, because of the nature of the phenomenon, should fulfill certain characteristics: they must be viable, perceptive and timely. An initial awareness will be constructed on preliminary measurements, which solely focus on one or two features such as: FDI, Openness and International migration. The emphasis will be subsequently shifted on wide-ranging instruments comprised by multiple dimensions, sub-dimensions, weights and indicators. The included indexes will be: A.T Kearney Globalization Index, CSGR globalization index, KOF index of globalization, Maastricht Globalization Index, NGI globalization index and one-dimensional indexes. After having examined the aforementioned indexes we are confident that one could acquire a higher awareness.

In the third and last chapter a narrowed focus on multinational corporations and their degree of international exposure is conveyed. Multinational corporations are viewed as international entities, but despite their nature numerous problems have been encountered in measuring their degree of international and global exposure. To have tangible statistically significant results we will employ a meta-analysis. By exploiting certain features of MNCs, which are widely recognized as indicators of their degree of international exposure, we will develop hypotheses and observe if they can be accepted or rejected as a result of our meta-analysis. Once our results will be achieved we will employ our findings on the Ferrero Group, which is the company subject of this study. Such company was selected as case study for the purpose of demonstrating that, despite its first place on the global top companies ranking, there is questionable evidence in support of this claim.

Chapter 1. The Inception of Globalization

1.1. Multiple facets in the definition of globalization

Even though many individuals might think that the concept of globalization is a rather current one, the term "globalization" had its first appearance in the Webster Dictionary in 1961. Despite its long existence the term is strongly ubiquitous and it would be indomitable to wholly apprehend the array of implications connoted by the term "globalization". Globalization is undoubtedly at the center of attention and debate of the 21st century, as Douglas Keller stated: "There is no doubt about it: Globalization is the buzz word of the decade. Journalists, politicians, business executives, academics, and others are using the word to signify that something profound is happening, that the world is changing, that a new world economic, political and cultural order is emerging."[1]

In attempting to define globalization, theorists actually create globalization; they play a fundamental role in the construction of social understanding and specifics regarding globalization. Defining globalization is an extremely convoluted and challenging task: "There are today so many definitions of globalization that one would think that defining it is an easy task. In fact, this is not the case"[2], for this reason there is no unique, comprehensive, acknowledged definition and there is no consensus on a collective elucidation of its nature. The current definitions of globalization can be observed as being sometimes contradictory, there can be substantial incongruity, the nature of globalization is reliant upon one's theoretical perception and contingent upon the witness's preferences, globalization is comprehended and construed differently. To emphasize what has been above stated we report what the sociologist Cesare Poppi noted: "The literature stemming from the debate on globalization has grown in the last decade beyond any individual's capability of extracting a workable definition of the concept. In a sense the meaning of the concept is self evident, in another, it is very

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[1] Kellner, D. (1998). Globalization and the Postmodern Turn. *Globalization and Europe: Theoretical and Empirical Investigation,*23.

[2] Kumar. (2003). A Critical Methodology of Globalization: Politics of the 21st Century? *Indiana Journal of Global Legal Studies,10*(2), 87. doi:10.2979/gls.2003.10.2.87

vague and obscure as its reaches are wide and constantly shifting. Perhaps, more than any other concept, globalization is the debate about it."[3]

Globalization is a notion that lacks of accuracy, it has been characterized by a number of dissimilar adjectives such as: "stage", "condition", "phenomenon", "ideology", "phase" and "processes". Moreover it has been defined in different ways amongst different disciplines, as it will be subsequently shown.

The sociologist Richard Kilminster defines globalization as a change in the pace and nature of social integration within nation-states and the increasing governance of this integration by autonomous transnational processes. For Poppi the definition of globalization "can't be accepted or rejected: it is a historical development, which is also the precondition for it becoming the subject of sociological investigation."[4] The last sociological characterization is specified by Roland Robertson who states that globalization: "refers both to the compression of the world and the intensification of consciousness of the world as a whole."[5] To conclude, the sociological focus on globalization regards miscellaneous social processes such as: culture, capitalism, social integration and economics.

Focusing on economics, the economist A.S Bhalla considers that globalization is composed of five economic characters and two non-economic characters. The economic characteristics of globalization embrace: a growth in Foreign Direct Investment (FDI) and a growth in capital flows, a growth in global trade, a growth in global production and consumption, the advent of global competition and lastly the propagation of trade and investment liberalization procedures.[6] On the other hand the two non-economic characters entail the loss of national sovereignty and standardization of values and culture.[7] In contrast the economist Gijsbert Van Liemt defines globalization as: "the growing interdependence of national economies."[8] For the latter economist

[3] Pioppi, C. (1993). *Wider Horizons With Larger Details: Subjectivity, Ethnicity and Globalization in: The Limits of Globalization* (Pp. 284 - 305). London: Alan Scott.

[4] *Ivi*

[5] Kumar. (2003). A Critical Methodology of Globalization: Politics of the 21st Century? *Indiana Journal of Global Legal Studies,10*(2), 87. doi:10.2979/gls.2003.10.2.87

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[7] *Ivi*

[8] *Ivi*

globalization results from faster paced and more consistent telecommunications and internal transport, by government policies promoting trade liberalization and lastly by corporate strategies (exporting and importing from abroad). Here it is evident how the two economists view the relationship between globalization and the state in a strongly different manner.

Focusing on the legal definitions of globalization we encounter the legal scholar James Boyer that defined globalization by stating: "Globalization denotes a process of denationalization of clusters of political, economic, and social activities."[9] On the other hand Anthony G. McGrew's legal analysis of globalization states: "We can begin to conceive of globalization as a process which generates flows and connections, not simply across nation-states and national territorial boundaries, but between global regions, continents and civilizations. It is an historical process which engenders a significant shift in the spatial reach of networks and system of social relations to transcontinental or interregional patterns of human organization, activity and the exercise of power."[10]

From the viewpoint of political science and international relations we conceive a different point of view regarding the concept of globalization. Here John Baylis and Steve Smith stated that: "By globalization we simply mean the process of increasing interconnectedness between societies such that events in one part of the world more and more have effects on peoples and societies far away."[11] Moreover they added: "Globalization is thus an ongoing trend whereby the world has in many respects and at a generally accelerating rate become one relatively borderless sphere."[12] According to the political scientist Richard Langhorne, "globalization is the latest stage in a long accumulation of technological advance which has given human beings the ability to conduct their affairs across the world without reference to nationality, government

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[9] Delbruck, J. (1993) Globalization of Law, Politics, and Markets - Implications for Domestic Law - A European Perspective, *Indiana Journal of Global Legal Studies:* Vol. 1: Iss. 1, Article 2.

[10] Kumar. (2003). A Critical Methodology of Globalization: Politics of the 21st Century? *Indiana Journal of Global Legal Studies,10*(2), 87. doi:10.2979/gls.2003.10.2.87

[11] Baylis, J., Smith, S., & Owens, P. (2017). *The globalization of world politics: An introduction to international relations*. Oxford: Oxford University Press.

[12] *Ivi*

authority, time of day or physical environment."[13] Moreover he believes that globalization is characterized by three different stages, which are: the creation of the stem engine and sea transport, the invention of the telegraph and lastly computer technology.

The last emphasis is on how globalization is defined by social theories. Anki Hoogvelt states that globalization it the tangible event, which shows that capitalism is expanding: "Money is being made out of the very circulation of money and is no longer tied to social relationships concerning production."[14] Postmodernist theorist Douglas Kellner concurs on the statement that globalization is a period in which the world is and has entered, but in contrast to the previous theorist he doesn't perceive it as a deepening of capitalism, rather as a shift from modernity. It is a state change between modernity and postmodernity.

Each above stated theorist by solely defining their perception and belief concerning globalization they delimit how to address and respond to it. For example the two economists A.S Bhalla and Gijsbert Van Liemt disagree on the ability of the state to control globalization, this disagreement originates in their definition of globalization. The political scientists Baylis and Smith and Langhorne also view globalization in a totally different manner, the first two view globalization as an "ongoing trend whereby the world has become one relatively borderless social sphere"[15] while the latter states that globalization depends only upon the accumulation of technological advancement. Also the social theorist Hoogvelt and Kellner strongly disagree, the former believes that globalization depends on the extent to which the state continues to regulate the market by deregulating it while the latter believes that globalization is an uncertain phenomenon that will be outdated in the forthcoming years.

Multiple theorists argued that globalization must be re-theorized since its too much dependent on economics ignoring other fundamental aspects such as culture or

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[13] Langhorne, R. (2001). *The coming of globalization: Its evolution and contemporary consequences*. Basingstoke: Palgrave.

[14] Kumar. (2003). A Critical Methodology of Globalization: Politics of the 21st Century? *Indiana Journal of Global Legal Studies,10*(2), 87. doi:10.2979/gls.2003.10.2.87

[15] Baylis, J., Smith, S., & Owens, P. (2017). *The globalization of world politics: An introduction to international relations*. Oxford: Oxford University Press.

politics. It is fundamental that theorists deal not only with defining globalization but also with the implications of their acknowledgments.

The term globalization creates a false impression that the world is borderless, that shared language exists, that every citizen is part of every political movement, that assumptions regarding the concept itself are similarly shared and that there is an agreement on the connotation of the term. These aspects grew even stronger from the moment that the term is now ever-present, in all disciplines and all scopes. The theory of globalization can't be merely descriptive and it is strongly believed that "the struggle to define [globalization's] meaning will structure much of the politics of the twenty first century."[16]

Some would argue that globalization is an ideologically based notion and is principally a meta-narrative used to validate the aspirations of various influential interests. Ultimately, globalization is an expansion of the ideology that capitalist organizations now generate the immeasurable amount and majority of goods and services produced worldwide.

Globalization has become one of the most fashionable exhortations of modern economic, political and academic deliberations. The term includes an extensive assortment of political, economic, and cultural movements. It is moreover argued that the term globalization is merely a synonym for several occurrences such as: economic liberalization, Westernization (western forms of politics and economics), the advancement in information technologies as well as incorporating the idea that humanity joined a single cohesive community in which there is no conflict. What has been previously stated is not the whole reality; globalization is not complete, despite many progresses and advancements in the lowering of trade barriers, in trade treaties, in liberalization and in the advancement of technology (and many other factors) we endure distant from a comprehensive global integration.

Globalization is not synonymous with world homogenization; it doesn't indicate an inclination towards a single nation state characterized by a sole political, economic and cultural structure, which are flawlessly cohesive. It implies instead that all cultures and societies must acknowledge that, although all the dissimilarities, barriers and

[16] Kumar. (2003). A Critical Methodology of Globalization: Politics of the 21st Century? *Indiana Journal of Global Legal Studies,10*(2), 87. doi:10.2979/gls.2003.10.2.87

cleavages that characterize our world, it is a single ground in which all individuals live and work.

If we encountered many exertions in defining the concept of globalization and if we perceived multiple facets of the term how can we measure it?

1.2. Globalization versus Internationalization

Inter-national means among or between nations. Recurrently the term internationalization has been confused with globalization but in fact it is something thoroughly different. Internationalization refers to the increasing importance of international trade, international relations, treaties and alliances. Internationalization plays an important role in a globalized world; it can be understood as the efforts of organizations to operate in one or various foreign countries. This can comprise the producing, sourcing, and exporting of products and services. In order to simplify the concept we can state that internationalization is an essential duty to embrace in order to globalize products or services.

Globalization is frequently used to designate the change in the world economy to a more liberalized and interdependent system while internationalization refers more narrowly to the activity of firms on an international scale. This specification is important if not necessary in order to have clearness and an accurate depiction before we thoroughly enter in the specifics of the matter.

1.3 The history of Globalization

The concept of globalization is as longstanding as history itself, the reason underlying this is that individuals have continuously, throughout their entire existence, employed in cultural relations, in the dissemination of knowledge and in the trade of goods and services. Historically, before 1870 none of the flows of trade, migration and capital were satisfactorily sizeable to allow the adoption of the term globalization.

Since the mid 19^{th} century, there have been two episodes of globalization. The first episode began around the mid 19^{th} century and ended with the beginning of World War I. The second episode began subsequently after World War II and lasted until 1980. It has been evident from these two waves of globalization that it has not been a smooth process, it shifted from accelerated integration to intense reversals.

The first wave of globalization lasted from 1870 to the start of World War I in 1914. International trade boomed encouraging advancements in transportation, in a lowering of trade barriers and the level of exports to world income doubled. The pattern of trade resulted in land-intensive primary commodities exchanged for manufacturers. The development of these primary commodities required individuals and this led to substantial migration mainly due to the fact that people were searching for better jobs. Sixty million people migrated from Europe to North America to work on newly available land. The similar thing happened in thickly populated countries such as China and India where people moved to less densely populated countries like Sri Lanka, Burma, Thailand, the Philippines and Vietnam. Due to the abundant amount of land in these new areas, the incomes were moderately equal. The production of these commodities required both labor and capital, as of 1870 the foreign capital stock in developing countries was around 9% of their income.[17] Institutions combined with the advancements in information technologies enabled the foreign capital stock of developing countries to rise to 32% of their income by 1914.[18] Moreover per capita incomes rose by an annual average of 1.3%. Argentina, New Zeeland, Australia and the United States became the richest country in the world by importing people, capital and institutions and by exporting commodities. Moreover in Europe the 1st wave of globalization concurred with the founding of governmental pillars of social protection, free education, pension and worker insurance.

The end of the First World War accompanied an era of protectionism. Trade barriers and tariffs were instituted. The world economic growth decayed and exports as a percentage of world income dropped back to the 1870 level. This protectionism focused on diverting the demand back into their domestic markets. This lasted from 1914 to 1945. The United States paved the way for this retreat by introducing the Smoot-Hawley tariff, which led to a dramatic decrease in imports and exports, of 33% and 40% respectively in the period from 1929 to 1933.[19] By 1950 the foreign capital stock of developing countries decreased to just 4% of income, which is even lower than

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[17] W. (n.d.). The New Wave of Globalization and Its Economic Effects. Retrieved from http://documents.worldbank.org

[18] *Ivi*

[19] *Ivi*

that of the 1870s. Moreover this retreat into nationalism led to anti immigration ideologies imposing solid restrictions on immigrants. Immigration in the Unites States collapsed from 15 million during 1870-1914 to 6 million between 1914 and 1950. Inequality also increased and average incomes were lower than the previous trend, the world rate of growth fell by about a third.[20] The reduction in growth and the increase in inequality were leading to a strong degree of poverty, similar to that of the 1820s, the number of poor individuals increased of 25%.

Succeeding World War II, a second wave of globalization arose, enduring from approximately 1950 to 1980. It concentrated on the amalgamation between developed countries as Europe, North America and Japan reinstated trade relationships throughout multiple multilateral trade liberalizations. Trade doubled relative to world income, regaining the level reached throughout the first wave of globalization. Liberalization had very disproportionate effects, for developing countries trade and the exchange of manufacturers for land intensive primary commodities were restored between the North-South, but the international movement of capital and labor was not. On the other hand the removal of barriers between rich countries strongly expanded the exchange of manufacturers and this led to international specialization allowing the accomplishment of agglomeration and economies of scale. This second wave of globalization generated a new form of trade: wealthy countries specialization in manufacturing niches that achieved productivity from agglomerated clusters (a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities)[21]. Trade between rich countries was newly determined by cost savings from agglomeration rather than from the comparative advantage founded on dissimilarities in factor endowments such as: amount of land, labor, capital and entrepreneurship that a country owns and can exploit for manufacturing. These clusters enabled a superior specialization, which led to an increase in productivity. This second wave also led to a reduction of inequality and poverty, rapid growth concurred with greater fairness in developed countries. The

[20] *Ivi*

[21] Delgado, M., Porter, M., & Stern, S. (2014). Defining Clusters of Related Industries. doi:10.3386/w20375

industrial world was often referred to as the "golden age", the first and most flourishing period in history.

Throughout this era there was an outpouring in the economies of the countries that contributed in this trading boom. Developing countries on the other hand were mainly excluded from this wave of integration, unable to trade beyond primary commodity exports. There was a resilient inequality amongst developed and developing countries mainly due to a small net change in developing countries and the rising equity between developed ones. World inequality in the late 1970s was merely equivalent to the one of a quarter of a century earlier.

1.4 Globalization in the 1990s – A third wave

Significant improvements in the latter part of the twentieth century, specifically the 1990s, augmented the process of globalization. In 1989 with the fall of the Berlin Wall many individuals started moving from East to West and in 1991 with the end of the Cold War the world became more interrelated. The communist countries, which had been deliberately isolated from the capitalist West, became comprised into the global market economy. Trade and investment increased, while impediments to migration and to cultural altercation were dropped.

From 1988 to 1993 the BRIC (Brazil, Russia, India and China), with Xiaoping in China opening up, the declaration of the separation of the Soviet Union and India increasing its service area, contributed to the expansion and enhancement of globalization. There was an increase in foreign direct investment due to openness and liberalization. Moreover in 1991 the World Wide Web was created and consequently accelerated the pace of this phenomenon.

The 1990s was a period of globalization par excellence. With the collapse of the Soviet Union, free market economics and pro-market policies triumphed globally. Companies became consumed with internationalizing their production, customers management and capital, 85% of the global stock of multinational investment was created soon after 1990. With the integration of international capital markets, global FDI flows grew strongly in the 1990s at rates well above those of global economic growth or global trade. Recorded global inflows grew by an average of 13% a year during 1990-1997. Driven by large cross-border mergers and acquisitions, these inflows increased by an average of nearly 50% a year during 1998–2000, reaching a record $1.5 trillion in 2000.[22]

Meanwhile liberalization by governments has progressively lowered tariffs and removed non-tariff barriers. Much took place within the successive round of multilateral trade negotiations under the GATT, culminating in the Uruguay Round, which created the WTO in 1995. Political resolutions by governments to eradicate institutional barriers to international trade and capital flows and to deliver incentives for corporations, have likewise supported the process of globalization: at national level with unilateral liberalization and structural modification for export-led growth, and through labor and social policy reorganization; at regional and multilateral levels, through settlements on trade and venture liberalization. With the WTO, globalization is managed at world level from a trade standpoint.[23]

Moreover free trade agreements, such as the North American Free Trade Agreement (NAFTA), signed in 1992 by the government of the United States, Canada, and Mexico, eradicated walls to the free flow of people, goods and services, thus easing more trade, investment and migration throughout national boundaries. Although it had a strong positive impact upon the elimination of barriers and the flow of goods and intellectual capital, after NAFTA passed into law in 1994 it followed seven years of the lowest unemployment rate in the history of the United States economy.[24]

Despite these significant improvements throughout history, in a fully globalized economy, goods and investments would flow across national borders with no more difficulty than that encountered by a company from London selling its products or taking out a loan in Manchester. We are still a long way from a single world market. Similarly in Europe, studies have shown that trade between regions within countries is

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[22] Sauvant, K. P., Maschek, W. A., & Mcallister, G. (2010). Foreign Direct Investment by Emerging Market Multinational Enterprises, the Impact of the Financial Crisis and Recession, and Challenges Ahead. *Foreign Direct Investments from Emerging Markets,* 3-29. doi:10.1057/9780230112025_1

[23] World Trade Organization. (n.d.). Retrieved from https://www.wto.org/english/res_e/statis_e/wts2017_e/wts17_toc_e.htm

[24] Taylor, T. (2002). The Truth about Globalization. *ABI/INFORM*, 24-44.

three to ten times higher than trade that crosses national borders[25]. This emphasizes that the belief that national borders are becoming economically obsolete is not accurate.

These historical insights are fundamental in order to picture how the conditions of globalization changed and how individuals perceive we are more globalized now than then, when actually the opposite is true.

1.5 Main drivers of globalization

The main forces, which drove globalization, have been: political changes, economic policies and technological innovations. The chief among these forces is technological innovation, which led to a reduction in communication costs and advancements in the speed of transportation. A tangible example is the inception of the jet engine, which led to the transportation of individuals, goods and the embracement of containerization in international shipping. Considerable investments were made to improve and create road infrastructures that allowed large cuts of trade to be carried by trucks and other vehicles in Western Europe and North America. A subsequent fundamental shift was the revolution in information and communication technology. New products such as the telephone, microprocessor and personal computers contributed to the overwhelming socio-political and economic revolution.

Less emphasized in the literature of globalization are the shifts in production techniques, which shaped new products, lengthened the global food production and made production more efficient (just-in-time production). A subsequent fundamental step was the shift from coal to gas and oil, which enhanced economic growth by providing a great and inexpensive source of energy leading to the incorporation of oil-exporting countries such as the Middle East in the new scenario of the global economy.

The bond amongst globalization and politics has been more multifaceted. With the Cold War, the world and the global economy fragmented, the division between East and west reached it's highest in the early 1960s with the Cuban missile crisis and the building of the Berlin Wall. But antecedent to these occurrences the Marshall Plan provided a strong stimulus to the economic retrieval. Consequently, with the China's economic reforms, the collapse of the Soviet Union and the fall of the Berlin Wall the main obstructions to economic integration were terminated.

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Economic policy has been a crucial conductor of globalization; it led to the lowering of trade barriers, deregulation and the reduction of restrictions on financial transactions and international trade. For several years, subsequent to World War II what limited trade were currency and payments restrictions rather than tariffs. The inception of the Eurodollar market was a fundamental step in increasing the accessibility of international liquidity and endorsing cross-border transactions in Western Europe. In the 1970s, the majority of governments deregulated the service industries such as telecommunications and transports. This deregulation involved numerous activities such as: simplification, elimination and diminution of government restrictions to the privatization of state-owned enterprises and the liberalization of these industries in order to increase competition.

Regarding trade, liberalization was pursued multilaterally through GATT negotiations. Trade agreements were increased, both regional and bilateral ones. Industrialization through import substitution became the preferred course to economic development. Subsequent points, which are fundamental to consider, are the actions, which contributed to the global macroeconomic stability, which provided global integration. These would include the Volcker US Federal Reserve's directing US monetary policy to put an end to US and global inflation in the early 1980s and the Louvre Accord, which steadied major exchange rates.[26] To conclude we must also comprise international institutions such as the IMF, World Bank and the GATT, which played a fundamental role in the process of global integration by enabling coherence and cohesion to international economic policymaking.[27]

[26] Globalization and Trade (n.d.). *World Trade Report 2008.* Retrieved from https://www.wto.org/english/res_e/publications_e/wtr08_e.htm

[27] *Ivi*

1.6 Two contrasting ideologies

Your Highnesses, as Catholic Christians, and princes who love and promote the holy Christian faith, and are enemies of the doctrine of Mahomet, and of all idolatry and heresy, determined to send me, Christopher Columbus, to the above-mentioned countries of India, to see the said princes, people, and territories, and to learn their disposition and the proper method of converting them to our holy faith; and furthermore directed that I should not proceed by land to the East, as is customary, but by a Westerly route, in which direction we have hitherto no certain evidence that any one has gone.[28]

In 1492 Christopher Columbus undertook his voyage in search of a direct water route west from Europe to Asia, but he never accomplished his goal, instead, he unintentionally barged upon the Americas. Columbus and his crew sailed from Spain in three ships: the Nina, the Pinta and the Santa Maria. On October 12th these three ships reached one of the Bahamian Islands. At the time India and the islands of the East were notorious for their spices, gold, gems and silk. When Columbus set sail he believed that the earth was round, for this reason he was certain that he could reach India by going west but he miscalculated the distance assuming that the earth was a smaller sphere than it actually is. Even though he never reached India, at his return he was able to confirm that the world was indeed spherical. Columbus became throughout history the man who made this astonishing discovery, nowadays this belief is collapsing on the ideal that the world is essentially flat. It is flat not in terms of shape but in terms of intellectual work and intellectual capital that can be delivered from anywhere in the world, a whole new degree of freedom in which countries are becoming able to compete for the global knowledge work and a prominent outsourcing of both individuals and organizations.

The world is being flattened due to the fact that the global field is becoming equable, now individuals are capable to collaborate with more people from different angles of the planet mainly due to technological innovations such as: computer, fiber-optic, dynamic software. The main exponent of this ideology was Thomas Friedman

[28] Columbus, C., & Markham, C. R. (n.d.). Journal Of The First Voyage Of Columbus. *The Journal of Christopher Columbus (During His First Voyage, 1492-93),*13-194. doi:10.1017/cbo9780511708411.003

who distinguished globalization into three main phases. The first era is Globalization 1.0, which has its birth with Columbus in 1492 up until the 1800. In this era the key drivers of change, which drove the process of global integration, were wind, countries and governments, which led the way in breaking down walls and enhancing mergers. The second era, according to Friedman, was Globalization 2.0, which lasted from 1800 to 2000 and was driven by multinational companies, which went global and expanded with the Industrial Revolution and the Nation State. In the first portion of this era global integration was enhanced by falling transportation costs and the creation of the steam engine while in the second portion by the fall of communication costs due to the telegraph and telephones. Nearby 2000 there was the third and last era entitled Globalization 3.0 in which its dynamic strength was unique in comparison to the previous ones, individuals who cooperated and contended globally gave its inimitable character. In order to emphasize this concept the author provides us with several examples, the one which I want to report, which has the greatest impact, is the one regarding medium sized hospital in the United States in which radiologists are outsourcing the reading of CAT scans in Australia or India mainly during the night shift when radiologists don't have sufficient personnel to provide in-hospital reports. This example reaffirms the above stated thesis of Thomas Friedman.

Thomas Friedman's view regarding global integration was strongly criticized by Pankaj Ghemawat who states that his assertions are an exaggerated vision of what is actually occurring in the world. According to Ghemawat the world isn't flat and solely a small portion of what we contemplate as globalization essentially subsists. To back up his statement he indicates that the total amount of the world's capital formation generated from foreign direct investment (FDI) has been less than 10% meaning that more that 90% of the fixed investment around the world is still domestic. Moreover the levels of internationalization in terms of migration, telephone calls, trade and stock investments as a fraction of gross domestic product all stand much closer to 10% rather than to 100%.[29] This data suggests that the world isn't in fact globalized but semi globalized, the levels of globalization are lower than those disguised by the globalization advocates. Advocates of globalization infer that geographical boundaries,

[29] Ghemawat, P. (2009). *Ridefinire la strategia globale*. Bologna: Il mulino.

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dissimilar languages and spatial proximity aren't an issue and that with the current technological tools barrier can be overcome, this is far from accurate as Ghemawat states. Moreover he considers an incompatibility between national sovereignty and international economic integration: "If you put globalization to a popular vote in the U.S., it would lose."[30]

What we will try to understand is how much we actually are globalized by comparing and thoroughly analyzing instrument used to measure globalization, only then we can truly infer if the world is flat, as Friedman perceives or spherical as Ghemawat believes.

1.7 An unsatisfactory debate

From its counterpoising definitions and ideologies previously mentioned, we can strongly deduce that the scope of this phenomenon goes well beyond any capability. Unsatisfactory is the expression that best depicts the modern dispute over globalization.

Globalization embodies the pervasiveness of the process of deterritorialization. In the preceding epoch there was a considerable correlation amongst the notion of "society" and the one of "nation-state", the nation state encompassed economic, political and cultural processes. This doesn't endure nowadays because there are practices that cross national borders and because there are others which are entirely free of territorial constraints, these procedures may be located anywhere or, contrariwise, nowhere: "Take, for instance, telephone calls, electronic finance and the depletion of stratospheric ozone. Such phenomena cannot be situated at a fixed territorial location. They operate largely without regard of territorial distance. They substantially bypass territorial borders. Thus, technologically speaking, a telephone conversation can occur across an oceans as readily as across a street. Today money deposited with a major bank is mostly stored in "placeless" cyberspace than in a vault. Ozone depletion exists everywhere on earth at the same time, and its relative distribution across different part of the world shifts without regard to territorial distances or borders. The geography of these global conditions cannot be understood in terms of territoriality alone; they also

[30] Ghemawat, P. (2018). *Redefining global strategy: Crossing borders in a world where differences still matter*. Boston: Harvard Business Review Press.

reside in the world as a single place that is, in a transworld space."[31] Keeping these considerations in mind it is relatively misconstrued to examine and investigate globalization with tools that utilize the nation-state as their unit of analysis.

The measures of globalization are nullified by methodological territorialism, a process of understanding and investigating social relations through the lens of territorial geography[32], which misrepresents the essence of globalization. Therefore it is necessary to detect and exploit authentic global indicators, not a mere gathering of national statistics. In simplistically adopting bare instruments, they could lead to a failure in comprehending essential properties and subtleties of this phenomenon. An emphasis should be placed on diversifying spaces, individual experiences and indissoluble dynamics, which involve all the inhabitants of the earth.

If acceptable measures of globalization are embraced they can supply an improved understanding and portrayal of its historic progression and its influence on territories and entities. It is essential to emphasize that all the mechanisms aimed at measuring multifaceted social phenomena are subjective; due to their essence these mechanisms are continuously vulnerable to criticism. Even if the word itself leads negative concerns, such criticism can be extremely valuable in order to upgrade the mechanisms themselves and for determining their limits.

As the physicist Lord Kelvin once observed: "When you can measure what you are speaking about, and express it in numbers, you know something about it. But when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind"[33]. This is what will be endeavored, gaining a satisfactory if not good knowledge of the phenomenon and of the measurements of international and global exposure.

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[31] Caselli, M. (2008). Measuring… What? Notes on Some Globalization Indices. *Globalizations,5*(3), 383-404. doi:10.1080/14747730802252529

[32] Greenway, D (2009). The World Economy. *Global Trade Policy 2008,* 104-156

[33] Yester, K (2009). Measuring Globalization. *Foreign Policy*.

Chapter 2. Measuring what?

2.1 Measurements of a complex societal phenomenon

The new global economy has to be comprehended as a multifaceted, interrelating, disjunctive concept, which it is not liable on simple models of push and pull, of surpluses and deficits, or of consumers and producers. The complexity of the current concept of globalization is due to fundamental disjuncture between economy, culture and politics. Due to the complexity of this phenomenon numerous scholars and institutions attempted to examine and construct indexes, which generate empirical comprehension into the characters, magnitude and consequences of the process. This undertaking has been proved to be exceedingly challenging for two focal reasons. The first one regards the intricacy and multiform nature of the phenomenon, which encompasses approximately each facet of social life. The only consensus regarding globalization regards its central extents: political, cultural and economic. These extents are extremely challenging to subject to a sole mechanism of measurements. Due to these two main reasons (amongst many others), any selected instrument or method used to measure this process can merely be incomplete, it might clutch some aspects ignoring others and it won't gain the unanimity of all individuals specialized in this scientific concern. The current existing instruments utilized to measure this phenomenon concentrate mainly on its objective features therefore, it is necessary to integrate the subjective facets in the new globalization indexes.

A multifaceted social phenomenon can exclusively be measured indirectly and the creation of the index will be inexorably founded on subjective selections that can certainly not be objectively justified. Two considerations can be made; the first one is to identify and select a single indicator that has certain characteristics that it could represents the entire phenomenon on its own. For example, taking into consideration a phenomenon like development, to measure it we usually implement the per capita GDP since the majority considers it as the most inclusive index. On the other hand the second consideration is to identify and select multiple dissimilar indicators and collect them into a comprehensive index.

Several are the fundamental features that a measure should encompass. Firstly the tool of measurement should be viable meaning that it must truthfully and unambiguously measure the desired phenomenon. Specifically it must be as thorough as possible, considering all the desired dimensions and each of these dimensions must be commensurable to its prominence within the phenomenon. In measuring a phenomenon such as globalization, which evolves in a very rapid manner, it is fundamental for the instrument to be perceptive meaning that it must be capable to trace deviations of measurements punctually and repeatedly. Since the instrument might be used by different entities and since the choices that lead to the creation of the instruments are arbitrary it is fundamental to clearly stipulate the standards and processes concerning the creation of the instrument. The instrument must be consistent, only in such manner we can achieve coherent results. Furthermore, we must take into consideration that the instrument should be capable of producing the desired results with little or no waste in terms of time, materials and costs. The required information must be provided in a timely manner and this information shouldn't necessitate disproportionately complicated computations. To conclude the depiction of these features we must state that: "If an index of globalization is to gain broad recognition, it must be relevant, meaningful and easily understandable for experts, but not only these, given that the concept of globalization is used well beyond the strictly academic community. Finally, a measurement instrument should furnish results that are clear, easily interpretable and unambiguous."[34]

Indexes are constructed following several procedures. Firstly, you must identify numerous scopes selecting those with the highest relevance in view of the embraced perspective. Secondly, it must be taken into consideration the quantity of features that the index can lever. When selecting these features a balance must be made between two criteria: (a) optimal representativeness with respect to the dimensions considered (b) availability, quality, timeliness and cost of corresponding information.[35] Once the scopes have been selected, it is central to apply weights to each one of them. Lastly, the value of each variable must be conveyed homogenously, values must moreover be transformed into index numbers identifying a maximum and minimum value. Once these values have been normalized, it is possible to obtain the overall index value achieved by adding the indicators or by calculating the mean.

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[34] Caselli, M. (2008). Measuring… What? Notes on Some Globalization Indices. *Globalizations,5*(3), 383-404. doi:10.1080/14747730802252529

[35] *Ivi*

All these motions are undoubtedly subjective, founded on the theoretical perspective of the entity that is constructing the instrument of measure and they should never be concealed.

What we can infer is that the main difficulties, which can be encountered, are constructing an instrument suitable to the purposefulness of the measure and, secondly, gaining international endorsements by the public, institutions and the individuals working on particular scientific fields within particular institutions. The latter appears to be more arduous than the former. Numerous were the failing attempts to propose an instrument in the hope of international recognition, an example can be the instrument proposed by Bennett, Drewnowski and Scott, and Dellacasa. The instrument was too complex, data was difficult to obtain, indicators were too numerous and it could be applied only to a small majority of countries. On the other hand the Physical Quality of Life Index proposed by Morris was excessively simplistic, it consisted only of three indicators and have never been utilized by any international organization.[36] Success has been achieved with the Human Development Index (HDI); its accomplishment was given by precise elements: the instrument is simple and intuitive, it is founded on three dimensions that have equivalent weights and it has four indicators overall, these indicators are accessible, documented and effortlessly understood. The HDI value is available in 177 countries and it has been embraced by an organization of the United Nations.

Based on above instances it is significant to affirm that a disproportionate sophistication in creating the instrument or on the contrary, an excessive synthesis and oversimplification are purposeless if once created it lacks of pertinence and recognition.

2.2 Preliminary measurement insights

In order to understand whether the world is globalized, an initial awareness is constructed by focusing on trade and financial openness, which are measured by the level of export, import and capital. These economic aspects don’t portray the whole picture they rather just focus on one or two single features, consequently by solely observing and analyzing them we won’t obtain an inclusive depiction of the level of globalization but it is still necessary to elucidate them in order to achieve a greater

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knowledge and to attain insights on how they will be subsequently used in the new globalization indexes.

2.2.1 Openness

When expressing the commercial interactions that a country institutes with the rest of the world, we should focus on its degree of openness. The trade openness of countries is reliant upon trade policies plus the geographical and economic features of a country. The degree of openness is measured by implementing the ratio of trade (import and export) to the Gross Domestic Product (GDP) of a country.

In 2017, the uppermost concentration of product exports was documented by the main petroleum exporting economies in Africa and Central and Western Asia as well as for several economies with solid dependence on the removal of minerals, such as Botswana, Zambia and Mali. The exports of industrialized economies and of developing economies in Eastern and South-Eastern Asia were further differentiated. For developing countries LLDCs, the price of exports to imports increased by approximately 10% in 2017, after a period of decline. On the other hand, Asian LDCs and for the whole developing economies, the relations of trade remained practically unaffected. The supply of manufactured goods is the most unevenly dispersed among the world economies. This is portrayed by a market concentration index of 0.19 in 2017, compared with values of between 0.12 and 0.15 for exports of food, raw materials, minerals and fuels. It is noteworthy that the market concentration of manufactured goods exports dropped over the past two years, after an unceasing growth from 2004 to 2015. Over the last ten years, in developing and transition economies, international trade in goods has considerably lost importance in relation to domestic production. Developing economies in Asia and Oceania exhibited a solid drop in the ratio of exports and imports to gross domestic product, indicated by a fall in the trade openness index from 35% to 25% between 2007 and 2017. Nevertheless, in 2017 their exposure to trade was still elevated in comparison to further developing economies.[37]

2.2.2 Foreign Direct Investment

FDI is defined as an investment reflecting a lasting interest and control by a foreign direct investor, resident in one economy, in an enterprise resident in another economy (foreign affiliate). FDI inflows include capital stipulated by a foreign direct investor to a foreign affiliate, or capital obtained by a foreign direct investor from a foreign affiliate. FDI outflows, on the other hand, embody the same flows from the perspective of the other economy. FDI streams are provided on a net basis, for example credits less debits. Therefore, in the instance of a disinvestment, FDI could be negative.

In 2017, world foreign direct investment inflows diminished by 23% to US$1.43 trillion. Having achieved the uttermost of US$1.92 trillion in 2015, investment fell back to 2013 levels. The reduction was triggered in part by a 22% decline in the value of cross-border mergers and acquisitions.

In North America and most parts of Europe, inflows of FDI amounted to lower than 2% of GDP. For former parts of the world inflows were greater. Nevertheless, negative FDI inflows, demonstrating reverse investment or disinvestment, were verified in particular economies presently undergoing political instability, such as Venezuela and Yemen. Negative inflows were likewise documented in some wealthier economies, such as Norway and Denmark. FDI inflows amounted to US$671 billion; almost double the worth of FDI outflows (US$381 billion) in developing economies. Developing economies in Asia and Oceania accounted for more than two thirds of all developing economy inflows and more than 90% of their outflows. Developed economies, in juxtaposition, produced more FDI than they obtain, for example, in 2017; they recorded inflows of US$712 billion and outflows of US$1 trillion. In the same year developed economies' segment of global outward FDI remained stable at 71%. Throughout the last two years, developed economies in America had their

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37 International Merchandise Trade. (2018). *UNCTAD Handbook of Statistics 2018 United Nations Conference on Trade and Development (UNCTAD) Handbook of Statistics,* 14-31.

share upraised from 20% in 2015 to 29% in 2017, accomplishing the equal share as Europe.

Asia and Oceania fortified their position as the leading host region of FDI in the developing world, having one third of world FDI. The share of American developing economies increased from 7% in 2016 to 11% in 2017, while the share of Africa remained at 3%.[38]

2.2.3 International Migration

In today's progressively interrelated world, international migration reaches almost all angles of the earth. The modern-day, inexpensive and quicker transportation eased the movement of individuals. Individual migrate in order to improve their quality of life in search for a better education, job and opportunities. Concurrently war; shortages and inequality induce people to leave their homes to pursue a more valuable future abroad.

The amount of international migrants worldwide has persistently grown in the current years, attaining 258 million in 2017, in contrast to 220 million in 2010 and 173 million in 2000. Over 60% of all international migrants live in Asia or Europe. Northern America had the third largest number of international migrants, which accounts to 58 million, followed by 25 million in Africa, 10 million in Latin America and the Caribbean and 8 million in Oceania.

In 2017, 67% of all international migrants were living in just 20 countries; the biggest amount of international migrants (50 million) lived in the United States of America. Saudi Arabia, Germany and Russia accommodated the second, third and fourth greatest amounts of migrants worldwide (around 12 million each), followed by the United Kingdom and Northern Ireland (nearly 9 million).

In 2016, the total number of immigrants and asylum seekers in the world was predicted at 25.9 million. Turkey hosted the greatest population of refugees worldwide, which amounted to 3.1 million, followed by 2.9 million in Jordan, 2.2 million in the State of Palestine, 1.6 million in Lebanon and 1.4 million in Pakistan.

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In 2017, of the 258 million international migrants worldwide, 106 million were born in Asia. Europe was the region of birth of the second largest number of migrants, followed by Latin America and the Caribbean and Africa. Women include less than half of all international migrants. The share of female migrants fell from 49% in 2000 to 48% in 2017. Female migrants outnumber male migrants in Europe.[39]

2.3 Conceiving wide-ranging instruments

The global character of much contemporaneous beliefs and activities accentuates how significant it is to measure globalization. The implementation of dissimilar definitional starting points leads to different measurements of globalization. If one perceives globalization as internationalization the indicators will relate to the levels of transactions across country borders. A specific problematic, which incurs in measuring globalization as internationalization is neglecting the geographical distribution, meaning that a country may have an elevated level of globalization when its international transactions are de facto, concentrated with adjacent countries for example 88% of Mexico's exports go to the United States.[40] Globalization could also be perceived as liberalization, meaning that globalization is understood as a policy program of economic liberalization. If one focuses on this perspective the indexes will include measurements of deregulation, privatization and fiscal restraints. If globalization is conceived as Westernization or Americanization, meaning that it focuses on the spread to all humanity of certain items and experiences, it will include indicators such as the worldwide spread of McDonald's restaurants and IKEA stores.[41] To conclude, if globalization is perceived as deterritorialization amongst the dimensions of the instruments you can encounter climate change, mobile phone networks and the cyberspace of the Internet even if there is an extremely short supply of the data.

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[39] International Migration Report 2017 - Highlights. (2018). *Statistical Papers - United Nations (Ser. A), Population and Vital Statistics Report*. doi:10.18356/5e2626a2-en

[40] Martens, P., & Zywietz, D. (2006). Rethinking globalization: A modified globalization index. *Journal of International Development,18*(3), 331-350. doi:10.1002/jid.1223

[41] *Ivi*

In the 21st century efforts have been made in order to measure globalization, since the phenomenon is extremely convoluted, theorists have tried to incorporate in these instruments a series of dimensions, which haven't been included in previous measurements. With the inclusion of these latest dimensions the indexes attempt to apprehend the multidimensional nature of the phenomenon. These innovative dimensions include the: economic, social, political, technological and ecological dimensions. Dimensions could be subsequently divided into sub-dimensions. There is no cultural dimension included, due to the difficulty in it's measuring, nonetheless some of the instruments comprise variable that can be related to the cultural aspects of globalization. It must be emphasized that these instruments differ from one another under many facets; this is primarily due to the different interpretations of the notion of globalization. The focal feature shared by these instruments is the fact that they all use the same unit of analysis: the nation state. On one hand this choice is made because most of the statistical data, meaning the available indicators, have the state as unit of analysis. The national perspective is particularly important if one reflects that the state contributes in shaping in part the process of globalization. For example, it is the state that provides infrastructures for communications and transports making possible the transnational flows that comprise the core of the phenomenon. Moreover, the nation states are unceasingly the main players in the social and economic spheres. With this being said, it is slightly contradictory to use the nation state as the main unit of analysis because it dissolute the main essence and distinguishing characteristic of globalization which is its dynamism in extending beyond the state. This is said on the consciousness that no perception and no unit of analysis, on its own, permit a thorough explanation concerning the intricacy of the globalization process.

The instruments furthermore are distinguished by the choices of the dimensions, the indicators used, the weights appointed to the indicators and the methods in which the indicators are combined. The complexity and multidimensionality of this phenomenon implies that there are extremely high amount of indicators, which can be theoretically available. Attention must be paid on the possible lack of correspondence or inaccuracy in measuring the indicators. Once the indicators have been selected weights are subjectively appointed to each indicator, according to some authors a reasonable choice is the one of appointing identical weights to all of the indicators in order to both reduce the complexity of the calculations and to diminish the impact of possible errors on the overall index value. On the other hand, the use of diversified weights is necessary due to the fundamental importance of some indicators in relation to the concept measured. Finally, the value of indicators is normalized (related to a common scale of reference 0-1 or 0-100) since they must be homogeneous in order to be aggregated into an overall index. The overall index will be obtained, after values normalization, by summing or calculating an average. It is fundamental to highlight that the amount of indicators varies widely, if a high amount of indicators is selected the index will undoubtedly cover the multiple facets of the phenomenon but, at the same time, it could increase the possibility of making errors and the difficulty in utilizing the instrument. On the other hand, if a small number of indicators are used, it will surely render the instrument more manageable, data can be more easily collected and errors could be limited. Nevertheless, it is extremely doubtful to find few indicators, which on their own can represent such a complex phenomenon. Subsequently, another feature that differentiates them is whether these instruments are sporadic or whether they can be consolidated over time.

Since globalization is a process that fluctuates over time, the temporal dimension of the phenomenon is fundamental; consequently the data implemented in the calculations must be collected systematically and continuously over time. This systematicness and continuousness doesn't belong to all of the instruments.

To conclude, the indicators used to measure the phenomenon can help clarify its definition.

2.3.1 A.T Kearney/Foreign Policy Globalization Index

The A.T Kearney Globalization Index was first published in an American journal entitled Foreign Policy in 2001. This index has been asserted as "A unique and powerful tool for understanding the forces shaping today's world". It provides a comprehensive guide to globalization in 50 developed countries and major developing markets worldwide. The index discloses the very diverse means through which countries are opening themselves up.

The latest version of the A.T Kearney Globalization Index was published in 2006, utilizing data relevant to the year 2004, it encompassed 62 countries conforming to 85% of the world's population and to 96% of the world's gross domestic product. The Index observes and measures deviations in four main constituents of global integration. These constituents are: economic integration in which data on foreign direct investment inflows and outflows and data on trade are combined. A social dimension entitled personal contact, which traces personal transfers, international telephone calls, cross-border payments (employee's compensation, worker's compensation, person-to-person and nongovernmental transfers) and international travel and tourism. A political dimension, which traces: the country's affiliation with a multitude of international organizations, financial and non-financial contributions to U.N. peacekeeping missions, ratification of selected multilateral treaties and lastly the amounts of governmental transfers payments. Lastly, a technological dimension which includes the number of Internet users, Internet hosts and secure servers through which encrypted transactions are transferred.

Corresponding to each of the above-mentioned dimensions there is a total of twelve variables (14 in the 2004 version, 13 in the 2003 and 2002 version, 11 in the 2001 version[42]) and each variable corresponds to one or more indicators. Each variable is normalized on the scale 0-1, where equivalent to 1 is the highest value recorded among all countries for that variable in the concerned year (in previous versions, only one maximum value was used for normalization, it corresponded to the highest of all those recorded since 1998) while the other values are considered proportionally in fractions of 1. The highest value on which the normalization is performed varies from year to year for each variable. Here the fundamental issue is that the analysis of the deviation over a period of time for a specific country has little implications. To overcome this issue the normalized values are multiplied by a scale factor equal to 100 for each value and vary proportionately to the growth or reduction in the maximum value of each variable in relation to each year. It is fundamental to highlight that since this methodology is consequent to normalization on the scale 0-1 it could possibly enhance the weights in the complete index of the factors for which considerable growth has been recorded in the preceding years. For example, the

[42] Caselli, M. (2012). Trying to Measure Globalization: Experiences, Critical Issues and Perspectives. *Springer Netherlands*. doi:10.1007/978-94-007-2807-3

United States has an elevated rating according to the index, this is mainly due to its enactment in the technological dimension, which is noteworthy to say, that it accounts only for 10% of the overall value of the index.[43] Moreover, once the index numbers for each variable have been determined, it occurs an arbitrary selection and assignment of weights founded on the conjectural considerations on the importance of each initial dimension. The dimension of economic integration with its variables trade and FDI have as indicators the imports and exports divided by the country's GDP and the FDI inflows and outflows divided by the country's GDP which have been given a weight of 2 and 3 respectively. The dimension of the personal contact has as variables the telephone, travel, remittances and personal transfers which consequently have as indicators the minutes of inwards and outward international telephone traffic, divided by the country's population, the inward and outward visitors, divided by the country's population and lastly cross-border remittances and personal transfers divided by the country's GDP. Each of these variables have been weighted 1 – 1 – 1 respectively. The dimension of technological connectivity has as variables the internet users, internet hosts and secure servers which consequently have as indicators the number of internet users, divided by the country's population, the number of Internet hosts, divided by the country's population and lastly the number of secure servers through which encrypted transactions are carried out, divided by the country's population. The weight given to each variable if of: 1/3 – 1/3 – 1/3 respectively. Considering the last dimension, which is that of political engagement we have four main variables, which are: membership in international organizations, contributions to the U.N. peacekeeping missions, ratification of multilateral treaties and governmental transfers. Each variable has its indicator: membership in a variety of representative international organizations, weighted average of financial contribution divided by the country's GDP and the country's personnel contribution divided by the country's population, ratification of selected multilateral treaties and amounts of governmental transfer payments and receipts divided by the country's GDP. Each variable has been weighted: 1/4 – 1/4 – 1/4 – 1/4 respectively.

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It is fundamental to highlight that in the index, the weight given to the dimension of economic integration is of a total of 5, this dimension determines 50% of the value of the inclusive index; therefore it could diminish or even invalidate its distinctive multidimensionality.

Once the weights have been allocated the total value of the index is achieved by adding the index numbers relative to each variable multiplied by its corresponding weight.

Singapore maintains its place at the top of the Globalization Index having a stable flow of international travellers equal to three times its total population. Countries such as Australia had a consistent shift climbing up four spots in the scale, reaching the eighth place. This upsurge is mainly due to high commodity prices combined with more consistent services and a greater foreign investment. Additionally, Switzerland lengthened its result by multiplying its economic contributions to the U.N. peacekeeping missions. As foreign investment moved to Asia (increased of 45% from 2003 to 2004) and Europe, Ireland, the most globalized country according to this index in 2001 and 2002 drifted of two spots in the ranking. The United States upsurge their position due to an extreme score in technology. For some of these countries globalization is primarily an economic phenomenon while for others, for example France, tops the rankings in political globalization but it lags on the economic side due to its high tariffs and agricultural subsidies.[44]

The A.T Kearney Globalization Index includes a wide range of variables; this high amount of variables is incorporated in order to attempt to apprehend every single facets of the globalization process. It is significant to point out that in the index construction a high amount of synthesis occurs, which inexorably alters the studied phenomenon. It is remarkable that the index doesn’t include Belgium, a country that ranks as the second most globalized in the world according to other globalization indexes such as the CSGR Globalization Index (which will be subsequently analyzed). The vast amount of information used in the instrument is taken from diverse sources and this could reduce the timeliness of the outcome. Moreover, there is an insufficient relevance given to the political

[44] Hicks, J. (2006). The Globalization Index: The Global Top 20. *Foreign Policy,*74-81.

dimension, which accounts merely for one–tenth of the overall index's value as well as the omission of the cultural dimension. Emphasis should be placed also on the origin of the international flows because if you include also the neighboring countries it can't be considered globalization. Lastly, there is an inadequate transparency of the methodological reports and a deficient availability to the database leading to a non-so thorough analysis as desired. Other than those already stated, there are further problematic and criticisms encountered with the A.T Kearney Globalization Index.

Firstly, the index uses outcome-based measures of the different dimensions of the phenomenon for example, to measure trade openness they calculate the value of imports and exports as a percentage of GDP. A consistent problematic in measuring the openness is that it highly depends upon country's characteristics such as geographical location, country's policies and population size. For example both the Netherlands and the United States are highly opened to trade, in 2006 trade openness scored 130% and 27% respectively.[45] But are really the Netherlands more open to trade flows that the United States? To overcome this issue one must focus on the single country's policies however they are impossible to measure in a quantitative scale. Consequently, variables should be structurally adjusted using, in the case of the geographical characteristics, a regression-based method in order to ensure that they precisely measure what they are intended to measure without diminishing the consistency of the instrument or its comprehensibility.

To conclude, the weights assigned to each variable are subjectively chosen, if on one hand this can be tolerated, it can be suggested to weight the variables with a statistical approach in order to eliminate or reduce bias. This could comprise selecting weights that maximize the instructiveness of the

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45 Trade openness by country, around the world. (n.d.) (2006). Retrieved from http://www.theglobaleconomy.com/rankings/trade_openness/.

complete index, as measured by the variance of the index across countries at a point in time.[46]

2.3.2 CSGR Globalization Index

The CSGR Globalization Index has been developed by Ben Lockwood and Michela Redoano at the Centre for the Study of Globalization and Regionalization at the University of Warwick in the United Kingdom. The latest version of the index accounts to 2004; the overall index has been calculated for 103 countries. The index encompasses a total of three dimensions, which are the following: economic, social (separated into two sub-dimensions: people and ideas) and political. The economic and social globalization indexes are available for 134 countries and the political globalization index for 189 countries.

The dimension of economic globalization has as variables: trade, which has as indicator exports plus imports of goods and services as a proportion of GDP, foreign direct investment, which has as indicator inflows plus outflows of FDI as a proportion of GDP, portfolio investment which has as indicator inflows plus outflows of portfolio investment as a proportion of GDP and lastly income, which has as indicators employee compensation paid to non-resident workers and investment income from foreign assets owned by domestic residents plus employee compensation paid to resident workers working abroad and investment income from domestic assets owned by foreign residents, as a proportion of GDP. The weights given to the variables are of: 0.418, 0.092,0.220 and 0.270 respectively. The total weight of the dimension is of 1.

The dimension of social globalization has two sub-dimensions, the former is people constituted by the following variables: foreign stock which has as indicator the stock of foreign population as proportion of total population, foreign flow which has as indicator inflows of foreign population as proportion of total population and lastly worker remittances which has as indicator worker remittances (receipts) as a proportion of GDP. The latter sub-dimension is ideas which has as variables: phone calls designated by international outgoing

[46] Lockwood, B. (2004). How Robust is the Kearney/Foreign Policy Globalisation Index? *The World Economy,27*(4), 507-523. doi:10.1111/j.0378-5920.2004.00611.x

telephone traffic (minutes) per capita, Internet users designated by Internet users as a percentage of population, films designated by number of film imported and exported, books and newspapers designated by the sum of value of books and newspapers imported and exported per capita (US dollars) and lastly mail designated by the number of international letters delivered and sent per capita. The weights assigned to the variables are of 0.266, 0.629, 0.079, 0.026, 0.004, 0.303, 0.061, 0.577 and 0.054 respectively for a total weight of the dimension of 1 (0.331 for people and 0.669 for ideas).

The last dimension is constituted by the political globalization which has as variables: embassies designated by the number of foreign embassies in country, UN mission designated by the number of UN peacekeeping operations in which country participates and lastly the organizations designated by the number of memberships of International organizations. The weights assigned to each variable are: 0.378, 0.357, and 0.266 respectively with a total weight of 1 for the total the dimension.

Each dimension has a minimum of three and a maximum of nine, for a total of 16 indicators. The value of each indicator has been normalized on a scale from 0 to 1, where 1 is the maximum value and 0 is the minimum. These values on a scale from 0 to 1 are the same throughout all the years considered by the index, this is called panel normalization. Through this normalization the change in some variables of the index in one year can subsequently change the ranking of countries in another year. The panel normalization is calculated by taking a variable, for example trade openness, you obtain the minimum and maximum values of this variable over the years and over all countries. For example in 2005 the maximum is 423% in Singapore and the minimum 26% in Brazil in 2006. Then, if the trade variable for some country (say Italy) in some year is x%, then the panel-normalized value of x is: $y = (x - 26)/(423-26)$. Suppose that Brazil's trade openness variable rose from 26% to 30% in 2006, from the above formula, this would change the value of trade openness for Italy in (say) 2009. In turn, this can change the overall ranking of the countries according to the index.

To overcome this issue one should implement annual normalization that consists in taking a variable for example trade openness and implement the same formula considering only the year in question. In 2005, the maximum value of this variable was 423%, for Singapore, and the minimum, 25% for the US. Also, the trade variable for Italy was 49% so the normalized value for Italy in 2005 is (49-25)/(423-25) = 0.060. Again, in 2006 the maximum value was 430% for Singapore, the minimum 26% in Brazil and 54% for Italy. So the normalized value for Italy is (53-26)/(430-26) = 0.067.

When all the indicators have been normalized, weights are assigned to each indicator. The weights are assigned by implementing a purely statistical methodology; it is based on the principal component weighting method, a procedure that recollects as much information as possible about each country during the aggregation. It is noteworthy that since the weights are assigned in such manner they should be recalculated every year, for this reason the intricacy of the instrument exponentially increases.

The economic dimension of the index is peculiar; the underlying idea is that cross border economic flows don't depend solely on trade openness but also on the country's characteristics. Extremely minute or under populated countries are more prompted to trade, this is the main reason which underlies the transformation of the four economic indicators into a new variable obtained by employing the difference between the value actually observed and that predictable by a regression which takes into account also non economic peculiarities which influence trade openness. These peculiarities are the following: population, surface area and a dummy variable expressing whether or not the country is landlocked. The landlocked variable has been included based on the concept that countries without seaports face higher costs of international trade and this could also affect foreign direct investment. Sachs, found that a country, which, is distant from the seacoast, is negatively related to per capita GDP. Furthermore, he argues that if the country is located in a tropical climate zone it will strongly determine economic underdevelopment: "Perhaps the strongest empirical relationship in the wealth and poverty of nations is the one between ecological zones and per capita income. Economies in tropical ecozones are nearly everywhere poor, while those in temperate zones are generally rich".[47]

Once all the indicators have been normalized they are aggregated into partial indexes relative to each dimension via arithmetic mean, which includes the appointed weights. The three partial indices are then aggregated into the overall by means of arithmetic mean. The aggregation of the sub indexes into the overall index occurs prior to the normalization on a scale from 0-1.

The index doesn't include 11 countries: Czech Republic, Croatia, Slovenia, Slovakia, Uganda, Taiwan, Botswana, Ukraine, Saudi Arabia, Turkey and Iran. Singapore occupies the firs place as it does in the A.T. Kearney/Foreign Policy Globalization Index. Countries with relatively small populations occupy the uppermost positions in the CSGR index notwithstanding the improvement made while creating the index. Small countries are still more involved in transnational flows. A discrepancy, which can be observed, is the absence of Belgium in the A.T. Kearney/Foreign Policy Globalization Index while it is ranked second on the CSGR index. The same goes for Russia, which is ranked amongst the top twenty countries in the CSGR index but, on the other hand, it occupies the 47th position in the ATK index.

The CSGR Globalization Index resulted from criticisms against the A.T. Kearney/Foreign Policy Globalization Index. The contractors of the CSGR index attempted to improve and correct the problematic arose in the latter instruments regarding primarily its economic dimension, the methodologies used to assign weights to the variables within each dimension and the diverse weights allocated to the diverse dimensions, which constituted the entire index. The CSGR Index attributes an equal weight to all three dimensions, on the contrary of the ATK Index, which gives a higher weight (5) to the economic dimensions. Giving equal weights to all dimensions could lead to a higher capability in capturing the core intricacy of this multidimensional phenomenon. Regarding the economic variables a correction factor has been introduced in order to reduce the impact of demographic and construction features on the index, without this correction the smaller countries would appear to be more globalized than larger ones. Weights

[47] *Ivi*

have been statistically attributed to each variable, this doesn't imply that they are more correct than those assigned based on theoretical assumptions, being subjectively chosen they can both be contested. The statistical procedure used involves the designation of insignificant weights to certain variables, for example in the sub-dimension ideas, the variable phone calls has a weight of solely 0.004, this can have a minimum if not null impact on the overall outcome of the index.

A database has been developed in order to trace and collect all the necessary information for constructing the index from 1998 to 2004, this database is essentially incomplete due to the scarcity in the availability of data, and this factor impairs further improvements on the index. It is remarkable to state that small differences amongst the indexes and their ranking is likely to result more from the essence of the instrument rather than from the differences in the phenomenon itself.

2.3.3 KOF Index of Globalization

Axel Dreher, of the KOF Swiss Economic Institute at ETH Zurich, developed the KOF Index of Globalization. The index was first published in 2002 and underwent numerous variations in 2008. The version, which will be portrayed, is the 2010 version, whose data refers to 2007 and which portrays 181 countries. This globalization index, as the one above-mentioned, attempts to solve the imprecise features of the A.T. Kearney/Foreign Policy Globalization Index. The corrections which were brought forward are analogous to those brought forward in the creation of the CSGR index.

Firstly, the KOF Index of Globalization considers three main dimensions: economic, social and political. The economic dimension is divided into two sub-dimensions: economic flows and restrictions imposed by the state on those flows. The social dimension is divided into three sub-dimensions: interpersonal contacts, information flows and cultural aspects of globalization. Lastly, the political dimension isn't comprised by any sub-dimensions.

The dimension of economic globalization is comprised of two sub-dimensions, which are: actual flows and restrictions. The actual flows have the following indicators: trade, whose variable is the sum of exports and imports of goods and services measured as a share of GDP, foreign direct investment flows, whose variable is the net flows plus net outflows of investment to acquire a lasting management interest as a percentage of GDP, foreign direct investment stocks, whose variable is the sum of inward and outward FDI stock as percentage of GDP, portfolio investment whose variable is the sum of portfolio investment asset stocks and portfolio investment liabilities stock as percentage of GDP and lastly the income payments to foreign nationals whose variable is the employee compensation paid to nonresident workers and investment income, income derived from the use of intangible assets is excluded. The weight of each sub-dimensions is: 19%, 20%, 24%, 17%, 20% respectively. The second sub-dimension has as indicators: hidden import barriers whose variable is based on the global competitiveness report's survey question: "In your country, tariff and non tariff barriers significantly reduce the ability of imported goods to compete in the domestic market"[48], mean tariff trade whose variable is as the mean increases, countries are assigned lower ratings. The rating decline towards zero as the mean tariff rate approaches 50%. Another indicator is the taxes on international trade whose variable include import duties, export duties, profit of import export monopolies, exchange profits, exchange taxes, revenue from taxes, intangible assets, government stocks, fees and capital transfers from non governmental sources. The last indicator is the capital account restrictions whose variable is based on two components: the first one based on the question "foreign ownership of companies in your countries is rare, limited, prevalent" while the second one is based on the IMF's Annual Report on exchange arrangements and restrictions. The weight of each sub-dimension is: 22%, 28%, 27%, and 22%, the total weight of the dimension of 37%.

Three sub-dimensions compose social globalization: personal contact, international flows and cultural proximity. The first sub-dimension has as its indicators: telephone traffic, whose variable is the sum of international incoming and outgoing telephone traffic (in min per person), transfers whose variable is sum of gross inflows and outflows of goods, services, income, or financial item

[48] Caselli, M. (2012). Trying to Measure Globalization: Experiences, Critical Issues and Perspectives. *Springer Netherlands*. doi:10.1007/978-94-007-2807-3

as a percentage of GDP, international tourism whose variable is the sum of arrivals and departures of tourists as a share of population, foreign population whose variable is the number of foreign or foreign-born residents in a country as percentage of total population and lastly, international letters whose variable is the number of international letters sent and received per capita. The weights of these indicators in the sub-dimension corresponds to: 26%, 3%, 26%, 20%, 25% respectively. The second sub-dimension has as its indicators: Internet users whose variable is people with access to the worldwide internet network (per 1,000 people), television whose variable is the share of households with a television set (per 1,000 people), trade in newspapers whose variable is the sum of exports and imports in newspapers and periodicals as percentage of GDP. The weights assigned to each indicator in the sub-dimension corresponds to: 36%, 36%, 28% respectively. The last sub-dimension comprises: number of McDonald's restaurants whose variable is the number of McDonald's restaurant per capita, number of IKEA stores whose variables is the number of Ikea per capita and lastly the trade in books whose variable is the sum of exports and imports in book and pamphlets as percentage of GDP. The weight assigned to each of these indicators corresponds to: 43%, 44%, and 12%. The dimension of social globalization has a total weight that amounts to 39%.

The dimension of political globalization has no sub-dimensions. It comprises the following indicators: embassies in countries whose variable is the absolute number of embassies in a country, membership in international organization whose variable is the absolute number of international intergovernmental organizations, participation in U.N. security council missions whose variable is the personnel which contributed to U.N. security council missions per capita and lastly, international treaties whose variable is any document signed between two or more states and ratified by the highest legislative body of each country since 1945. Treaties signed and ratified must be deposited in the Office of Secretary General of the United Nations to be included. The weight assigned to each indicator is of: 25%, 28%, 22% and 25% respectively, for a total weight of the dimension which accounts to 25%.

The indicators amount to 24 and each indicator is normalized on a range of 0 to 100, where 100 is the maximum level of globalization and 0 the minimum. Precisely, the figure 100 matches the maximum value documented by the indicator in the period from 1970 to 2007, while the figure 0 corresponds to the minimum value in the equivalent period. It must be emphasized that the normalization was brought forward in such manner: (observed value – minimum value)/(maximum value – minimum value) * 100. While in the second version of the index, since 2008, normalization has been brought forward on the basis of the percentile values of the distribution of the indicator considered. This correction was made in order to reduce the impact of possible outliers on the rate of the overall index and sub-indices. Subsequent to this correction, the position of certain countries in the ranking dramatically changed. Particularly, the United States, which from 2002 to 2005, was the most globalized country according to the index, in 2010 it ranked only 27th (57th for economic globalization; 25th for social globalization and 14th for political globalization[49]). This shift was not solely due to the change in normalization but was also due to the changes in the set of indicators used.

In the primary version, the indicators, which referred to the cultural features of globalization, were chosen on the foundation that cultural globalization relates to "the denomination of American cultural products". Examples of this were indicators such as: telephone average cost of call to US, number of McDonald's restaurant per capita. Globalization was read as Americanization, this debatable consideration has been altered in the latter index by nuancing the indicators, rendering the theoretical framework more adequate.

The attribution of weights in this index resembles the one utilized in the CSGR founded on a statistical procedure established on principal components analysis. In the former version of the index the weights were calculated focusing only on the data for the most recent year while in the latter version the weights are calculated on the basis of the data documented for all countries involved, from 1970 to the most recent year for which data is accessible. The initial focus

[49] Caselli, M. (2012). Trying to Measure Globalization: Experiences, Critical Issues and Perspectives. *Springer Netherlands*. doi:10.1007/978-94-007-2807-3

of the calculation is placed on the indicators of every single dimension in order to be capable of constructing the sub-indices, subsequently the focus shifts on the sub-indices in order to accomplish the overall index. Since the weights are determined by using the data for all countries in each year it is fundamental to update the data with a new reference year or new countries and consequently repeat the calculations of the weights based on the new evidence.

After having described each indicator and their corresponding weights it can be observed that the indicator "international tourism" accounts for 26% of the sub-index "social globalization", hitherto in the former version of the index this indicator only accounted to 1%. This argument suggests how the update of the data (with a new reference year or new countries) led to substantial variations in the importance attributed to the various indicators. Another feature, which has to be discerned, is that of "hidden import barriers" and "capital account restriction" which have as variables data consisting from subjective assessments collected from experts through surveys. The KOF Globalization Index is one of the few indexes, which are still used nowadays.

2.3.4 Maastricht Globalization Index

In an attempt to improve the A.T. Kearney/Foreign Policy Globalization Index, by choosing diverse variables and indicators, Pim Martens, Daniel Zyweitz and Moshin Raza developed the Maastricht Globalization Index in 2003. Since 2003 the index underwent several alterations and improvements particularly in the technique used for normalizing the values of the various indicators used. Pim Martens, contributed in the development of the above mentioned KOF Index of Globalization nevertheless the current proposed instrument is very dissimilar in terms of both characteristics and methodologies.

The Maastricht Globalization Index is constituted of eleven indicators situated in five dimensions: political, economic, social, technological and ecological. Noteworthy is the ecological dimension and the inclusion of an indicator that refers to the arms trade in the political dimension, these peculiar features are comprised solely in this instrument.

The first dimension is the political domain which has three indicators: the embassies whose variable is the absolute number of in-country embassies and high commissions, the organizations, whose indicator is the absolute number of memberships in international indictors and lastly the military whose indicator is trade in conventional arms as a share of military spending. The weights of the indicators are of 1,1,1 respectively for a total weight of the dimension of 1.

The second dimension is the economic domain which has three indicators: trade, whose variable is imports + exports of goods and services as a share of GDP, FDI whose variable is the gross foreign direct stocks as a share of GDP and lastly capital whose variable is the gross private capital flows as a share of GDP. The weights of the indicators are of 1,1,1 respectively for a total weight of the dimension of 1.

The third dimension is the social and cultural domain, which has two indicators: migrants whose variable are those who changed their country of residence per 100 inhabitants and tourism whose variable is the international arrivals + departures per 100 inhabitants. The weights of the indicators are of 1 and 1 respectively for a total weight of the dimension of 1.

The fourth dimension is the technological domain, which has two indicators: the phone, whose variable is the incoming + outgoing international telephone traffic in minutes per capita and the internet whose variables are the internet users as a share of population. The weights of the indicators are of 1 and 1 respectively for a total weight of the dimension of 1.

The fifth and last dimension is the ecological domain, which has one indicator: the eco footprint whose variable is the ecological deficit. The weight of the indicator is of 1 for a total weight of the dimension of 1.

The normalization of the indicators ranges from a scale of 0 to 100, where 100 resemble the maximum level of globalization. The normalization is brought forward by means of the usual formula: (observed value – minimum value)/(maximum value – minimum value) * 100. The maximum and minimum value included in the formula relates, for every indicator, to the maximum and minimum value recorded for that same indicator in 2000. This implies that, the index calculated for the year 2000 and for the year 2008, in relation to 2008 some countries could document values superior to 100 on both the individual indicator and on the overall index. The previous version of the Maastricht index encompassed more complex procedures in the normalization of the values. The values of the indicators, in fact, undertook a logarithmic conversion and were consequently modified using a correction factor (as for the CSGR Index) founded on the size of the population and on whether the country was landlocked or not.

Once the normalization has been brought forward the values are gathered within its dimension simply by summing them, the same weight is attributed to each of them. After the dimensions have been established they are combined into the overall index assigning, as for the values, equal weight to each one of them. This process is slightly different from the one used in the previous version of the index, where the indicators were summed to generate the value of the complete index straightforwardly, without employing the aggregation of the five dimensions beforehand. In such manner, a larger weight was attributed to the dimension, which encompassed the higher quantity of indicators.

It is fundamental to emphasize that the aggregation of the dimensions are brought forward by simple summation, hence, what has been stated regarding the designation of equal weights is contradictory since the method would still comprise the attribution of greater weight to the dimension composed by the greatest amount of indicators.

The developers of the Maastricht Globalization Index failed to provide evidence on how exactly the values of the index are calculated; hence, the construction of the instrument can't be entirely understood. Moreover, referring to the latest version of the index, the categorization of the countries in relation to the different dimensions and indicators of which the index consist, hasn't been published, consequently its only available the classification of 117 countries with reference to the years 2000 and 2008.

The latest edition of the Maastricht Globalization index accounts to 2012 and it integrated two fundamental variations in contrast to the previous 2008 version. The first variation regards the logarithmic transformation of the indicators with skewed distributions; this variation has been introduced in order to make the index more consistent with the multidimensionality of the phenomenon. When the aggregation of two indicators with equal weights and different distributions occurs the average weight of the indicators won't be equal despite the application of equal weighting. For example, when indicator 1 is skewed to the left and indicator 2 to the right, then indicator 2 will offset a grater percentage of the overall final index. As a consequence of the enclosure of this new phase, the average weight of the indicators are more balanced as it can be observed from the following percentage for the 2008 and 2012 edition of the index respectively: political (30 → 15%), economic (16 → 22%), socio-cultural (12 → 24%), technological (16 → 18%) and environment (30 → 21%), emphasizing that unflawed equal weighting would infer a weight of 20% for each dimension.

The second variation regards the replacement of Phone by Cell Phone defined as "incoming and outgoing international telephone traffic in minutes per capita", and Ecological deficit has been replaced by Ecological Footprint of imports and exports as a share of bio capacity. The reason for the switch between Phone and Cell phone is the rising importance of cell phones in developing countries, it emphasizes how interconnected a country's population is internally and externally. The ecological footprint is a measure of "how much area of biologically productive land and water a certain economic unit or activity (in this case the traded good and services) requires to produce all the resources it consumes and to absorb the waste it generates, using prevailing technology and resource management practices"[50]. If a country acquires a high score in the ecological dimension it implies that the ecological deficit of traded goods and services for a country is high relative to national bio capacity.

According to the 2012 Maastricht Globalization Index the most globalized country is Belgium, followed by the Netherlands, Switzerland, Austria and Germany. European countries dominate the top end list. The BRICS countries, stated to be the biggest emerging economies rank 39 (Russia), 53 (South Africa), 71 (China), 75 (Brazil), and 85 (India). The lowest ranked

[50] Figge, L., & Martens, P. (2014). Globalisation Continues: The Maastricht Globalisation Index Revisited and Updated. *Globalizations,11*(6), 875-893. doi:10.1080/14747731.2014.887389

countries are Burundi, Madagascar, Nepal, Guinea, Mali, Angola, and Turkmenistan.

Undoubtedly the Maastricht Globalization Index, being a composite indicator, which aggregates quantitative and qualitative indicators and with the acknowledgement that it includes mathematical models we can perceive it as more robust and coherent.

2.3.5 NGI A New Globalization Index

The New Globalization Index has been presented by Petra Vujakovic, whose main aim was to capture the multidimensionality of this phenomenon instead of focusing uniquely on pure economic meters. The NGI has been calculated for 70 countries from 1995 to 2005. This index appeals each of the above-mentioned instruments presenting remarkable corrections to them. This index has been considered innovative since it introduces new variables and methodologies. The NGI comprises 21 indicators divided amongst three dimensions, which are: political, economic, and social.

The first dimension is the economic dimension who has as indicators: trade in goods, whose variable is the bilateral imports and exports of goods weighted with geographical distances between countries in km, using city-level data to assess the geographic distribution of population inside each country. Trade in services whose variable is the sum of services exports and imports as percentage of GDP. FDI stocks whose variable is the sum of inward and outward FDI stock as % of GDP. FDI flow whose variable is the sum of inward and outward FDI recorded in the balance of payments financial account as % of GDP. Portfolio investment stock whose variable is the sum of portfolio investment stock assets and liabilities from the international investment position records as % of GDP. Portfolio investment flow whose variable is the sum of inflows and outflows of portfolio investment recorded in the balance of payments as a % of GDP. Income payment to foreign nationals whose variable is the sum of receipts and payments of employee compensation for non-resident workers, and investment income as % of GDP. Trademark application by non-residents whose variable is the share of applications by non-residents with national patent office. Lastly we encounter the patent application by non-residents whose variable is the share of patent applications filed by non-residents with a national patent office.

The second dimension is the political dimension comprised by the following indicators: environmental agreements, whose variable is the absolute number of international environmental agreements ratified, international organization membership whose variable is the absolute number of membership in international organizations, embassies in country, whose variable is the absolute number of embassies in country, participation in UN peacekeeping missions whose variable is the peacekeeping personnel contributions to UN peacekeeping missions.

The third and last dimensions is the social dimension comprised by the following indicators: migration stock, whose variable is the number of people born in a country other than that in which they live, including refugees as a % of total population, international tourism, whose sum of arrivals and departures of international tourists as a shore of population, outbound student mobility, whose variable is the number of students from a given country studying abroad as a percentage of the total tertiary enrolment in that country, international phone calls whose variable is the sum of international incoming and outgoing telephone traffic divided by the total population, international internet bandwidth, whose variable is the contracted capacity of international connections between countries for transmitting internet traffic, international trade in newspapers, whose variable is the sum exports and imports in newspapers and periodical as % of GDP, international trade in books, whose variable is the sum of exports and imports in books and pamphlets code as % of GDP and lastly transfers whose variable is the sum of current transfers recorder in the balance of payments whenever an economy provides or receives goods, services, income, or financial items without quid pro quo as % of GDP.

In the economic sphere, trade in goods and services are separated in order to insert the geographical distance feature in the index. The stock variable has been added next to the flow value for portfolio investment, which is fundamental for volatile variables. Patent and trademarks applications by non-residents are two totally new variables, by adding these indicators, new valuable possibilities arises. The political sphere resembles that of numerous indexes a part from the variable “the international environmental agreements” which introduces the environmental scope to the index. The “international internet bandwidth” substitutes the number of Internet users in order to fit best its purpose. Variables such as “outbound student mobility” or “school enrolment” enter the calculations; these types of variables are novel for a globalization index.

Furthermore, a measurement of geographical distances amongst countries is comprised in the index in order to overcome the inability of distinguishing globalization and regionalization. For example, commercial streams between two neighboring countries, both belonging to the European Union are probably indicators of regionalization rather than globalization. This distinction is brought forward by taking into consideration globalization indicators, which usually refer to inflows and outflows to/from the considered country and weighting them by multiplying their values by the distance separating the countries between which those flows take place. This methodology is applied only to the variable “trade in goods” due to a lack of data availability. The trade in goods variable is consequently a sum of bilateral trade volumes multiplied by the geographical distance between respective countries. This procedure supports countries that trade with distant countries across the globe while it merely considers the trade with neighboring countries. For example, Austria’s trade with China will obtain a higher weight in the indicator since it gives a clearer and more consistent depiction of a country’s level of globalization rather than if you give a higher weight on the trade between Austria and a country pertaining to the EU.

The normalization of values is obtained by implementing the usual formula: (observed value – minimum value)/(maximum value – minimum value) * 100. Differently from the previous instruments, before the formula is applied the values are restricted to 2.5 and 97.5 percentile values in order to reduce the effect of outliers. The NGI introduces a correction factor, based on regression, which includes demographic and physical characteristics of the country in question. This correction is applied either on the number of inhabitants or on its surface area (are not used simultaneously as on the CSGR) based on which of the two has the greatest influence on the value of the variable. This correction is applied on all the indicators.

The weights applied to the indicators are established based on the principal component analysis (PCA), which enables a beforehand division of indicators in homogeneous groups, which define the sub-indices. This division enables to analyze multiple variables in order to discover patterns and interrelationships. Unlike the previous instruments sub-indexes aren't theoretically established by rather they are based on statistical methodologies. By implementing this methodology it arises that the factor solutions resemble almost entirely the theoretical assumptions. The dimension of finance has a total weight of 37% including as indicators: FDI stock with a weight of 19%, FDI flow with a weight of 13%, portfolio stock with a weight of 20%, portfolio flow with a weight of 14%, income payments with a weight of 19% and the internet with a weight of 15%. Moreover, the trade and politics dimension has a total weight of 32% including as indicators: trade in goods with a weight of 11%, trademarks with a weight of 14%, patents with a weight of 14%, transfers with a weight of 10%, environmental agreements with a weight of 16%, international organizations with a weight of 18% and embassies with a weight of 16%. Lastly, the social dimension has a total weight of 31%, including as indicators: trade in services with a weight of 14%, migration with a weight of 9%, tourism with a weight of 15%, telephone with a weight of 15%, books with a weight of 11%, newspapers with a weight of 14%, outgoing students with a weight of 12%, and peacekeeping with a weight of 11%.[51] Political variables are mostly grouped within the same component except for the peacekeeping missions, which ended in the social dimension. The Internet ended up in the financial dimensions due to the fact that the amount of electronic data sent by banks internationally accounts for the largest part of this variable not making it a social indicator. To conclude the PCA led to some remarkable understandings, the most prominent one was

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[51] Caselli, M. (2012). Trying to Measure Globalization: Experiences, Critical Issues and Perspectives. *Springer Netherlands*. doi:10.1007/978-94-007-2807-3

that the finance indicators were removed together in a distinct dimension leaving trade and business indicators in a trade and politics dimension together with political variables. Most social indicators stayed in the same group confirming that there is indeed a “people” factor in the phenomenon.

The classification of 70 countries according to their level of globalization, measured by the NGI is showed with reference to the year 2005.

Table 2.1 *Classification of countries based on the NGI. Reference year: 2005*

Ranking	***Country***	***Ranking***	***Country***
1	Ireland	36	Bulgaria
2	Switzerland	37	Tunisia
3	Netherlands	38	Poland
4	Belgium	39	Morocco
5	Malta	40	Slovenia
6	Cyprus	41	Greece
7	Iceland	42	China
8	United Kingdom	43	Argentina
9	Austria	44	Philippines
10	Sweden	45	Bolivia
11	Denmark	46	Russia
12	Canada	47	Latvia
13	Norway	48	El Salvador
14	Estonia	49	Azerbaijan
15	France	50	Venezuela
16	Slovakia	51	Peru
17	Germany	52	India
18	Finland	53	Ukraine
19	Panama	54	Mexico
20	Malaysia	55	Moldova
21	New Zealand	56	Colombia
22	Spain	57	Indonesia

23	Australia	58	Korea
24	Croatia	59	Japan
25	Israel	60	Lithuania
26	Portugal	61	Burundi
27	Italy	62	Kazakhstan
28	Czech Republic	63	Brazil
29	Hungary	64	Romania
30	Chile	65	Kyrgyz
31	Mauritius	66	Bangladesh
32	United States	67	Turkey
33	Honduras	68	Georgia
34	Uruguay	69	Armenia
35	South Africa	70	Belarus

Source: Caselli, M. (2012). Trying to Measure Globalization: Experiences, Critical Issues and Perspectives. Springer Netherlands. doi:10.1007/978-94-007-2807-3

The table illustrates that Ireland is the most globalized country and, on the contrary, Belarus is the least globalized country of the 70 ranked ones. Small countries mainly take up the highest positions in the index, even though corrections have been introduced, as previously mentioned, for the country size. It is also relevant to emphasize that all of these small countries are part of the European Union, due to this reason a question can be posed on whether these countries are in fact globalized or only well integrated, despite geographical distance corrections have been introduced. Moreover, developed countries such as the United States, Italy or Japan aren't included in the top 10 ranks this might be caused by the social dimension. The lowest score of these countries lies in the social dimension, this is particularly accurate for Japan which is characterized by a relatively introvert society. Always focusing on the social and financial indicator, Estonia which ranked 14th on the overall index left behind the other two Baltic countries, Latvia and Lithuania who ranks 47th and 60th respectively.

Estonians are referred to: "the most socially cohesive, skilled, educated and economically adaptive people of all the former Soviet Republics."[52]

The BRICSAM countries (Brazil, Russia, India, China, South Africa and Mexico) rank in the middle-lower part of the index. An overall feature of this group is its extremely low score across the finance dimensions.

To conclude, as the globalization index itself is concerned a further investigation is needed in order to overcome the problem of measuring regionalization and globalization, in such manner if this problem is overcome you can get a step closer to measuring "authentic" globalization.

2.3.6 One-dimensional Indexes

Globalization has been regarded as a phenomenon which is primarily economic in nature, for this reason there are some indexes which focus only on one single dimension: the economic one. The economic dimension is thought to encompass the completeness of the phenomenon; consequently in 2001 the World Market Research Center developed the G-Index for 189 countries. The index considers only the economic aspects of globalization, for this reason the dimensions are divided into the old economy and the new economy.

The dimension of the old economy has as its indicators: international trade whose variable is the exports plus imports US$ per annum as % of GDP, Foreign Direct Investment whose variable is the foreign direct investments US$m per annum as % of GDP, Private Capital Flows whose variable is the private capital flow US$ per annum; bond, non-bond credits, portfolio investment as % of GDP. The weights of the indicators are of: 50%, 10%, 10% respectively, for a total weight of the dimension of 70%.

The dimension of the new economy encompasses as indicators the service exports whose variable are the service exports, US$ per annum as % of GDP, Internet Hosts whose variable is the number of internet hosts expressed as a ratio to GDP and lastly, international telephone traffic whose variable is the volume of international telephone traffic undertaken by a country, measured by

[52] Vujakovic, P. (2010). How to Measure Globalization? A New Globalization Index (NGI). *Atlantic Economic Journal*, *38(2),* 237–237., doi:10.1007/s11293-010-9217-3.

millions of minutes, expressed as a ration to GDP. The weights of the indicators are of: 20%, 5%, 5% respectively, for a total weight of the dimension of 30%.

Noteworthy is the dimension of the new economy, which has as indicators the “Internet Hosts” and the ”International Telephone traffic” which are two factors not economic in nature. The developers of this index don’t explain how they attributed the weights to the indicators; presumably the decision has been completely based on subjective reasoned choice. Likewise there is no explanation regarding the normalization and aggregation of the values, nor the year of reference of the data. Only for the indicator “private capital flow” the year has been specified as being 1998.

From the ranking of the countries it can be perceived that those, which are small in size, occupy the top ranking: Liechtenstein, Singapore, Cayman Islands, Hong Kong, Panama and Luxemburg. On the other hand, the most economically developed countries such as: United States, Italy, Japan, Germany and United Kingdom occupy the lowest positions in the ranking. This might be caused by the physical and demographic structure of the countries. On the basis of this consideration, authors of some of the instruments above-mentioned included corrective factors also on the basis of the result given by the G-Index.

Another one-dimensional index, which can be considered a meaningful exception, is the Cultural Globalization Index developed by Kluver and Fu. This instrument doesn’t focus, as the majority of one-dimensional instruments do, on the economic dimension; it rather focuses on the cultural one. Cultural aspects of globalization are extremely difficult to measure; the idea used in order to overcome this difficulty was to measure culture by referring to the international flows of “popular media”, being accountable for the dissemination of worldwide beliefs and principles. In particular, these popular media refers to: cinematic films, television programming, print publications and foreign satellite channels. A consistent problematic which incurred was the availability of data for the indicators, which obliged the creators to focus solely on two of them: the value of the imports and exports of print media goods (periodicals, books, brochures and newspapers) divided by the number of inhabitants of the considered country and the number of imported films divided by the number of inhabitants of the considered country. Noteworthy is the inclusion only of imports on the film indicator; this has been justified by the belief that it is the exposure of people to foreign beliefs and principles that constitutes cultural globalization. Consequently, we could question why also on the print media good they didn't consider only the imports.

Moreover, the creators decided to develop two distinct indices of cultural globalization due to the discrepancy in the amount of data available for the countries, data on 28 countries could be found for the film indicator while 69 for the print media goods indicator. The first index includes only the print media goods since it is the one with more available data while the second index includes the overall print media goods and films.

Table 2.2 *Classification of countries based on the Cultural Globalization Index proposed by Kluver and Fu (2008) in its complete and partial version. Reference year 1997*

Ranking	***Country***	***Ranking***	***Country***	***Ranking***	***Country***
1	Singapore	24	Trinidad & Tobago	47	Tunisia
2	Switzerland	25	Mauritius	48	Paraguay
3	Belgium	26	Israel	49	Brazil
4	Ireland	27	Chile	50	Nicaragua
5	Canada	28	Greece	51	Bolivia
6	United Kingdom	29	Panama	52	Zimbabwe
7	Denmark	30	Hungary	53	Peru
8	Finland	31	Poland	54	Romania
9	Cyprus	32	Malaysia	55	Albania
10	Norway	33	Argentina	56	Morocco
11	Sweden	34	Japan	57	Thailand
12	Netherlands	35	Macau	58	Honduras
13	Greenland	36	Russia	59	Turkey
14	Island	37	Mexico	60	Philippines

15	Barbados	38	Colombia	61	Jamaica
16	St Kitts & Nevis	39	Lithuania	62	Guatemala
17	France	40	Latvia	63	Algeria
18	Australia	41	Croatia	64	Egypt
19	Germany	42	New Zealand	65	Madagascar
20	Portugal	43	Venezuela	66	Indonesia
21	Italy	44	Ecuador	67	China
22	United States	45	Oman	68	Uruguay
23	Czech Republic	46	El Salvador	69	Pakistan

Ranking	***Country***	***Ranking***	***Country***
1	Belgium	15	Oman
2	Cyprus	16	Poland
3	Iceland	17	Lithuania
4	Denmark	18	Argentina
5	Norway	19	Ecuador
6	Finland	20	Russia
7	Sweden	21	Croatia
8	Netherlands	22	Morocco
9	Australia	23	Peru
10	Czech Republic	24	Romania
11	France	25	Zimbabwe
12	Latvia	26	Indonesia
13	Germany	27	Algeria
14	Hungary	28	Pakistan

Source: Caselli, M. (2012). Trying to Measure Globalization: Experiences, Critical Issues and Perspectives. Springer Netherlands. doi:10.1007/978-94-007-2807-3

The methodology implemented to aggregate the two indicators consists in calculating a score given by the average of the positions, recorded by the country considered in the classifications of the two indicators composing the index.

2.4 Comparative Analysis

Academics, which are concerned with this phenomenon substantially, agree on the dimensions that constitute the indexes. This consideration underlines numerous assumptions, the first assumption regards the fact the they all consider globalization as being multidimensional, the second assumption regards the fact that globalization is a socially significant phenomenon which should be measured with suitable methodologies conceived for the purpose. One of the key factors, which equate them, is that almost all of them draw from the A.T Kearney/Foreign Policy Globalization Index. An economic, social, political and technological dimension comprise all the above-mentioned indexes, the only index which covers also the ecological dimensions is the Maastricht Globalization Index.

In all of the economic dimensions the indicators of all four indexes include both trade and foreign direct investment, in all of the political dimensions the only indicator included in all indexes is the membership in international organizations, moreover, three indexes out of four implement as indicators the embassies in the country. Regarding the social and technological dimension all indexes include: telephone traffic, international tourism and the number of Internet users.

Numerous are the difficulties in comparing the different indexes, the first problematic arises in the territorial coverage, some indexes include less other include more countries, there is also a difference in the selected countries, for example the A.T Kearney/Foreign Policy Globalization Index includes: Iran, Ukraine, Turkey (just to mention some) which the CSGR Index doesn't include. Moreover, another difficulty, which has been encountered, is the time period that the indexes cover.

A ranking including 55 countries comparing the four indexes led to results, which aren't strongly homogeneous even though the coefficient of correlation among the indexes demonstrates a substantial congruence. From the comparison it arose that, while some countries are ranked by the indexes in similar manners, for example, Switzerland, Denmark, Sweden and New Zeeland, other countries, on the other hand, are allocated in an extremely different manner for example, the United States. A reason for the allocation of the United States in such low rankings might be its extensive population and surface area which makes it extremely difficult to create a single value which encompasses all its characteristics, the ranking of the United States is strongly controversial since the United States are considered as the embodiment of globalization. In the top ranking we can encounter countries which are all part of the European Union and this leads us to question whether the instruments actually measure globalization or the dynamics of regionalization. If a country records a high volume of trade, but this trade is directed primarily toward only one country, then it doesn't mean that it is strongly globalized; rather it implies that it is strongly reliant upon it. Consequently they shouldn't consider only the volume of trade but also the trade partners and their geographical location.

Undoubtedly the level of globalization of each country differs based on the instrument used; consequently the choice of indicators, weights and aggregation has strong repercussions upon the results. The use of an extensive amount of variables and indicators, in the attempt of covering all the aspects of the phenomenon, are actually detrimental since it enhances complexity, reduces timeliness, it impedes control on the quality of information, and diminishes the instrument's reliability. Moreover, it is complex to have immediately available information especially for developing countries. Indexes could jeopardize and alter the true essence of the phenomenon. The instruments that have been thoroughly explained show that it is not so much globalization itself to be measured; rather, it's the degree of contribution in some of its distinctive dynamics of specific unit of analysis such as states and people. Unquestionably they don't account for the phenomenon in its entirety.

Globalization is often represented as an inevitable phenomenon, but this is not the case. With their policies, countries can direct themselves towards a greater or lower degree of openness. From these and multiple other choices it depends their future growth. After having described the above-mentioned instruments we hope that one could acquire a higher awareness.

2.5 An Alternative Approach

It has been observed that the previous indexes are state-based; Peter J. Taylor shifted the focus from states to a "city-centric view of the world"[53]. Taylor, in order to quantify the global interconnectedness of cities, started by categorizing global firms and by identifying the location of their commercial offices. He assumes that a firm can be identified as global if its offices are in at least fifteen different cities, of which one at least is situated in North America, Western Europe and Pacific Asia. Firms are subsequently selected based on the availability of the required information. On the basis of this criteria Taylor selects 100 firms, which work on six different sectors: accountancy, advertising, finance and banking, insurance, law and management consulting. The selected firm have offices in thousands of cities consequently Taylor selected only 315 of them; the choice is based upon territorial representativeness and economic importance. A weight is subsequently attributed to each firm constructing a scale which ranges from 0 to 5 where 0 represents that a city has no office of the firm while 5 represents that in that city there is the firm's headquarter. In order to identify the connection amongst cities you multiply the score relative to the presence of a certain firm in one city by the score relative to the presence of the same firm in another city. The score, which identifies the connectivity of a city, is therefore obtained by summing the intensities of the links of all the firms present in that city with all the other 314 considered by the study.

Peculiar is the use of firms as indicator of how much cities are interconnected, on one hand we can state that firms aids the interconnectedness of the world markets leading to globalization, on the other hand, it is one thing to say that the markets of the world are coming together, but are global markets creating globally minded companies? Are we observing the development of rootless corporations directed only by market prospects, not by loyalty to their home countries? As managers attempt to expand their corporations outside their home country, are they substituting their customary operational directions in favor of alleged global principles of conduct? Are the performances of corporations corresponding to the ideal of globalization? Are global

[53] Caselli, M. (2012). Trying to Measure Globalization: Experiences, Critical Issues and Perspectives. *Springer Netherlands*. doi:10.1007/978-94-007-2807-3

corporations overpowering the work of nations to realm their characteristic identities? More precisely why are companies global? Are they actually global?

Chapter 3. Degree of firm's International Exposure

3.1 Multinational Corporations, Internationalization theory and inconclusive indexes

Multinational corporations have been defined as: "Any corporation that is registered and operates in ore than one country at a time. Generally the corporation has its headquarters in one country and operates wholly or partially owned subsidiaries in other countries. Its subsidiaries report to the corporation's central headquarters."[54] Multinational corporations have been defined as the invisible hand of globalization meaning an unobservable market force that supports the demand and supply of goods in a free market in order to achieve equilibrium. The definition itself describes multinational corporations as international entities, despite its nature; numerous difficulties have been encountered in measuring their degree of international and global exposure.

The Internationalization theory focuses on the notion that firms select the most cost effective foreign location for particular MNCs activities and internalize markets up to the point where the benefits of further internationalization exceed or are equal to the total cost. Three theories, which explicate a firm's internationalization process, are the Uppsala Model, Transaction cost theory and the Network model.

In the creation of the Uppsala Model, researchers noted that companies appeared to originate their operations abroad in rather near markets and progressively penetrate more distant ones. It moreover appeared that companies entered these markets through means of exports, after several years of exports wholly or partially owned operations are established. From these insights it was assumed that the internationalization of firms developed through steps. The firm will not commit a high level of resources in the market until it has acquired increasing levels of experimental knowledge. Firms start internationalization by going to those markets in which they have a lower psychic

[54] Britannica, T. E. (2012, May 28). Multinational corporation. Retrieved from https://www.britannica.com/topic/multinational-corporation

distance and where uncertainty is low. Psychic distance refers to differences in language, cultural and political system that increases the difficulty in the flow of information amongst the firm and the market. The Uppsala model has been criticized due to its deterministic nature and due to the fact that it ignores the interdependencies between different country markets.

The Transaction Cost analysis model claimed that a firm would expand until the cost of organizing an extra transaction within the firm will become equal to the cost of carrying out the same transaction by means of an exchange on the open market. It moreover claims that a firm will perform internally those activities, which are at lower cost while relying on the market for activities in which independent outsiders has a cost advantage.[55] The transaction cost analysis states that cost minimization explains structural decisions. Firms internalize to reduce transaction costs that emerge when markets fail to operate under the requirements of perfect competition. This model has been criticized due to the neglecting of internal transaction costs and of production costs.

According to the Network model the process of a firm's internationalization is developed through the establishment, development and maintenance of relations within network participants on foreign markets. It emphases the importance of developing long-term interactions with entities from foreign environments, a high degree of firm internationalization implies that it has strong links with entities from various countries.

Forbes annually ranks the "Most International" 100 American manufacturing and service firms on the basis of total foreign revenue. The ranking based on this criterion can be accepted since a company's foreign sales are meaningful first-order indicators of its involvement in international business. It is noteworthy that if another indicator was used undoubtedly the ranking would be modified. Moreover, the selection of the criterion is biased, based upon one's perception of that which encompasses the highest level of international exposure of an organization. There is no universal instrument that measures the international exposure of an organization; instead, there are one dimensional or multidimensional indexes. Relying on just one-dimensional variable for measuring the degree of internationalization might be deceptive and it might not depict the dynamic process of the phenomenon. There are three main indexes

[55] Pearson, Internationalization Theories. (n.d.). In *The decision whether to internationalize* (pp. 60-94).

available in the literature: the Transnationality Index (TNi) published by the UNCTAD, the Transnationality Spread Index (TSi) introduced by Ietto-Gillies and the Degree of Internationalization Scale (DOI) introduced by Daniel Sullivan.

The Transnationality Index of the UNCTAD is constructed by implementing the average of foreign share in sales, employment and assets (FSTS, FETE, FATA). It is calculated for the 100 biggest MNCs worldwide. Two peculiarities arise when analyzing this index, the 100 biggest companies are located in both small and large countries consequently, depending on the size of the home country, foreign direct investments as indicated by the foreign share in employees might substantially vary. Moreover, the second peculiarity regards the fact that the index distinguishes only amongst local/national and foreign activities without including how widely these foreign activities are spread. To overcome this problematic Ietto-Gilles introduced the Network Spread Index, which is achieved by dividing the number of foreign countries in which a company has affiliates by the total number of countries worldwide in which there is inward stock of FDI minus 1.[56] This index alone doesn't include the volume of foreign activities; consequently, a combination of both transnationality and network-spread index is supposedly able to encompass both dimensions of internationalization. Therefore Ietto-Gillies develops the Transnationality Spread Index by calculating TNi x NSi.

Daniel Sullivan develops an additional index called The Degree of Internationalization Scale, including data for 74 of the 100 most international American manufacturing and service firms according to Forbes ranking, based on total foreign revenues. The selected components of its index are: foreign sales to total sales, foreign assets to total assets, number of foreign subsidiaries to total number of subsidiaries, time of top manager's international experience to years of work experience and, lastly, the psychic dispersion of international operations. To obtain the score on the internationalization of the included firms these above-mentioned rations are simply summed up. The main criticism regarding Sullivan's methodology is that he combines measures of different levels (structural, attitudinal and performance related), a high

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56 Hassel, A., Höpner, M., Kurdelbusch, A., Rehder, B., & Zugehör, R. (2003). Two Dimensions of the Internationalization of Firms*. *Journal of Management Studies,40*(3), 705-723. doi:10.1111/1467-6486.00357.

degree of one variable couldn't be replaced by any other high value, regarding the different outcomes on the part of the dependent variable. It remains questionable whether it is best to implement a one-dimensional measure, which measures the degree of one stage (e.g. sales) supplemented by other indicators, or whether these indicators can be combined onto a multidimensional index since not all companies follow through the same stages or patterns of internationalization. Despite the measureless amount of studies regarding the matter of firm's international and global exposure, the present state of research findings is characterized as "mixed", "inconclusive", "contradictory", "inconsistent", "conflicting" and "disappointing"[57].

In spite of both positivistic and instrumental research the consistency of measuring the degree of a firm's international exposure remains speculative. The degree of a firm's international and global exposure is subjective; some state that it is caused by research and development intensity, some by the diversification of employee's nationality, some by outsourcing, some by the fact that the market indicates so and some by a combination of all these elements.

3.2 Meta-Analysis

Meta-analysis has achieved extensive acknowledgement in management research over the past few decades as an essential instrument for integrating and increasing our knowhow on specific research topics. The interdisciplinary and interdependent nature of the internationalization research offers the type of rich knowledgeable framework in which meta-analysis techniques can be most valuable. Independent samples were taken from 84 studies and a meta-analysis that aggregates the empirical findings was conducted; this study presents a systematic investigation of the correlation amongst indicators that should measure the degree of firm's international exposure. Based on theories and dissenting opinions we developed numerous hypothesis which we statistically tested in order to observe whether the hypothesis could be accepted or not. By considering all variables a meta-analysis was brought

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57 Kirca, A. H., Roth, K., Hult, G. T., & Cavusgil, S. T. (2012). The role of context in the multinationality-
performance relationship: A meta-analytic review. *Global Strategy Journal,2*(2), 108-121.
doi:10.1002/gsj.1032

forward in order to see if there is a positive correlation amongst the variables and the degree of firm's international exposure, the higher correlation could indicate the finest indicator of the degree of internationalization.

We considered the variables that are most commonly used in order to indicate the degree of internationalization of an organization which are:

- Research and Development Intensity
- Top Management Teams
- Human Resources diversification
- Headquarter relocation and Firm Characteristics
- Export Intensity
- Subsidiaries

3.2.1 Research and Development Intensity

Research and Development (R&D) refers to the activities companies undertake to innovate and introduce new products and services to use or sell, or to improve its existing line.[58] The undertaken research and development enhances the corporation's experience enabling them to improve and develop innovative goods and services. Moreover, R&D enables a corporation to achieve competitive advantage and economies of scale. Corporations commit substantial capital efforts in R&D, they are required to evaluate the risk-adjusted return on their R&D expenditures that unavoidably comprise risk of capital as no instant payoff is achieved and the overall return on investment (ROI) is uncertain. The level of capital risk upsurges as more is expended on R&D. Other corporations may decide to outsource their R&D, for a variety of reasons, the main ones are size and costs.

Multinational Corporations are increasingly considered to be the main conduit of new technologies between countries. It is assumed that they owe the advanced technology exploited in host countries and, consequently, other host country's firms expect to learn from this technology in order to be capable of facing foreign competition. There has been a shift from traditional competence

[58] Kenton, W. (2019, April 22). Research and Development (R&D). Retrieved from https://www.investopedia.com/terms/r/randd.asp

home base exploiting to the competence creating where MNCs grasp foreign technical and scientific infrastructures, this leads, not only to the exploiting of its existing ownership advantage on host market, but also to the absorption of local knowledge and a subsequent building of new firm specific advantage. Outsourcing the R&D can lead to cross border knowledge flows, it includes both technological transfers from the corporation's headquarters to its foreign subsidiaries and "reversal" technology transfers from foreign R&D centers to domestic procedures and amongst affiliates. Foreign R&D investments from innovation and knowledge-seeking motivation tend to be complement, moreover, foreign R&D investments are mainly brought forward in order to increase long-term profitability, the choice of the location is based upon strategic asset-seeking and asset exploiting and augmenting. R&D outsourcing is assumed to enhance the international exposure of an organization since the source of their profitability is not generated domestically. Theorists believe that "R&D activities themselves predict the rise of MNCs" moreover research and development intensity is "perhaps the principal mean of gaining market share in global competition".[59]

In contrast, the home country itself could provide a rich environment of knowledge sourcing for the technology frontier, with copious R&D resources and possible knowledge spillovers, in this case outsourcing R&D doesn't contribute to the knowledge base of the firms, henceforth it has little effect on productivity and subsequent profitability. Noteworthy is the consideration that the outsourcing of R&D could lead to difficulties of communicating across cultures, costs, time and effort and the risk of loosing intellectual property. Theorists suggest that, R&D is more fruitful if centralized into their home country in order to avoid knowledge spillovers with competitors and to improve the corporate control over knowledge flows. Physical proximity is becoming fundamental due to the fact that R&D centers create mainly tacit knowledge, which requires a high level of communication amongst the involved parties. The embeddedness and fit between corporations and the home country capabilities

[59] Sullivan, D. (1994). Measuring the Degree of Internationalization of a Firm. *Journal of International Business Studies,25*(2), 325-342. doi:10.1057/palgrave.jibs.8490203

reduces the effectiveness and appeal of foreign R&D. Moreover, evidence shows that a major portion of R&D still tends to be located in the home country.[60] Empirical literature consists of many diverse and conflicting results regarding the correlation between international exposure and R&D.

The above discussion raises the following hypotheses:

- *H1a: R&D intensity is an accurate measure of the corporate's degree of international exposure*
- *H1b: R&D intensity isn't an accurate measure of the corporate's degree of international exposure*

3.2.2 Top Management Teams

To enhance and measure the level of international exposure of an organization the variable of top executives is emphasized. The level of education, lower average age, privileged education and international experience are positively correlated with the top management teams. The combined backgrounds of decisions makers that comprise these teams leads them to have a greater awareness regarding international issues and, moreover, the lower average age enhances and leads them to have a higher propensity of risk taking.

The international experience of the TMT reduces uncertainty, increases the speed of internationalization and facilitates international diversification. As top executives international experience increases it is likely that firm's overseas involvement increases as a consequence. TMT executives who had a high degree of international consignments eases and heightens a firm's international exposure because those consignments provide an awareness of market opportunities in other countries and reduces anxiety and pressure associated with doing business overseas. The previous international experience of executives can also increase the amount of international connections, which consequently paves an easier path for future foreign expansions.

60 Belderbos, R., Leten, B., & Suzuki, S. (2013). How Global is R&D? Firm-Level Determinants of Home Country Bias in R&D*. *SSRN Electronic Journal*. doi:10.2139/ssrn.2381979

An essential characteristic of TMT is its size, which is related to higher degrees of multi nationality, this is because larger teams supposedly own more skills, abilities, diversified backgrounds and resources that are critical for resolving the possible problematic encountered in the internationalization process. Moreover the size of TMT could be perceived as an indicator of socio cognitive intensity in an organization. A large team size benefits from a division of labor, which increases the ability of an organization to manage more effectively and efficiently its international operations. Moreover, a large team size delivers the organization with intangible cognitive resources, broad network ties and multivariate educational backgrounds and characters that could consequently lead to a greater degree of innovation, open-mindness and tendency to be more open toward other cultures. The larger the teams size the wider the perspectives and approaches.

Based on the upper echelons theory, which states that organizational outcomes are partially predicted by managerial background characteristics of the top-level management team[61], the collective tenure of team's members can influence their capability to concentrate on concerns and disparities without being convoluted in personal divergences. A longer tenure, moreover, leads to stronger TMT cohesion. The team's cohesion is fundamental to the fruitful implementation of strategies aimed at internationalization, the development of these strategies require a strong interdependence and integration. Longer serving TMT strengthen the group and results in more satisfactory experiences when entering international markets. Executives with longer tenure undoubtedly have more information, experience and acquire a higher level of knowledge regarding unacquainted international settings; consequently they can make more consistent and accurate decisions. Thus, the effects of long TMT tenure, TMT's international experience and TMT's size should be positive.

[61] What is Upper Echelons Theory. (n.d.). Retrieved from https://www.igi-global.com/dictionary/upper-echelons-theory/58132

The above discussion raises the following hypotheses:

- *H2a: TMT international experience is an accurate measure of the corporate's degree of international exposure*
- *H2b: TMT size is an accurate measure of the corporate's degree of international exposure*
- *H2c: TMT tenure is an accurate measure of the corporate's degree of international exposure*

There are conflicting arguments regarding TMT's tenure. Researches believe that a long TMT tenure tends to develop limiting perspectives and a narrow knowledge when assessing different alternatives. Executives in the long period homogenize their views, develop habits, establish routines, rely more on past experiences and develop a narrower vision in the evaluation and creation of alternatives. Due to the fact that the process of enhancing the organization's international exposure consists in extensive processing and evaluation, the long tenure of TMT's will be less likely to engage in the process. The greater flexibility required in operating in foreign countries is increased when there are shorter organizational tenures due to their higher level of dynamism.

The above discussion raised the following hypothesis:

- *H2d: TMT tenure isn't an accurate measure of the corporate's degree of international exposure*

3.2.3 Human Resources

Recounting the upper echelons theory, the executives experience determines the strategic choices and the patterns he will implement in enhancing the international exposure of its organization, moreover, it highlights that strategic choices are strongly associated with the characteristics of individuals making these decisions. The process of internationalization is characterized by a high degree of complexity, and requires a unceasing commitment, to manage complexity managers should embody characteristics such as: adaptability, open-mindness, risk taking, tolerance for ambiguity and, lastly, innovation.

CEO international experience and tenure are strongly associated with the degree of international exposure of an organization because the intricacy of internationalization itself requires considerable international and operative experience. Prior overseas experience can undoubtedly benefit future overseas activities, managing businesses in foreign markets and creating wide-ranging market networks. International experience provides CEOs with unique knowledge, worldwide views and professional ties; unquestionably a CEO with international experience is a valuable and inimitable resource, which can contribute powerfully to the competitive advantage of the organization. CEOs international experience might be critical in managing intra firm coordination across subsidiaries and cross subsidizing businesses in novel markets. Studies found that CEOs international experience is positively related to internationalization, such experience would likely contribute to the firm performance through better management development, coordination and control of international operations, information coordination and processing between parent firms and foreign affiliated and among affiliates.[62] Therefore based on the above-mentioned statements, theoretical evidence emerges to suggest that CEOs international experience is extremely valuable for MNCs.

Similarly, considering the long-term tenure of CEO, it can positively affect the firm internationalization efforts due to the fact that it may better prepare managers to deal with the complexity and strategic challenges of global organizations. In the early stages of their careers CEOs might be risk averse due to the deficiency in the knowledge of the task. Long-tenure CEOs could be more likely to undertake more risky choices in enhancing the international exposure of their organization as they become more acquainted with the decision making process involved in the task acquiring a greater degree of expertise, knowledge and power. Long-tenure also results in greater autonomy leading to pursuing strategic choices that involve higher risk and resource requirements.

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[62] Carpenter, M. A., Sanders, W. G., & Gregersen, H. B. (2001). Bundling Human Capital with Organizational Context: The Impact of International Assignment Experience on Multinational Firm Performance and CEO Pay. *Academy of Management Journal,44*(3), 493-511. doi:10.5465/3069366

The above discussion raises the following hypotheses:

- *H3a: CEO international experience an accurate measure of the corporate's degree of international exposure*
- *H3b: CEO tenure is an accurate measure of the corporate's degree of international exposure*

Considering and additional perspective regarding the level of CEOs international experience, it arises the fact that if this international experience is truly so valuable then why do many MNCs not hire internationally seasoned CEOs. Moreover, critics state that the international experience is region-specific and that global complexity can be managed adequately through middle management, expatriates, locals or international consultants.[63] Since a CEO is usually entrenched in complex top management teams a firm might have to consider a whole top team in order to achieve the international skills, knowledge and networks associated to the CEO to successfully enhance the international exposure of its organization. Consequently, the rarity, inimitability and ambiguity of CEOs international assignment experience might not be a consistent measure of the organization's degree of international exposure.

The above discussion raises the following hypothesis:

- *H3c: CEO international experience isn't an accurate measure of the corporate's degree of international exposure*

The diversity of human resources can be considered as a fundamental asset in the process of internationalization. Diversity in the workforce can enhance the responsiveness to the wide variety of world customers, can reduce the cultural barriers in entering a foreign market, and it can increase the ability to cope with a rapid changing environment. Appropriate resources for international expansion are fundamental; if these resources are heterogeneous there is a higher probability of succeeding in the international scope. It is fundamental to state that when we talk about the diversification of human

[63] *Ivi*

resources we intend the different nationalities they pertain to. Focusing solely on nationalities could be problematic because their place of birth doesn't necessarily indicate that they grew or had experience there, rather they could be born in Italy, grown in Italy but attended an American university and worked in America for the majority of their life.

The internationalization theory proposes that firm internationalization is positively associated with the possession of tangible and intangible assets; therefore we propose that diversified human resources enhance and are an accurate measure of the degree of international exposure.

The above discussion raises the following hypothesis:

- *H3d: Diversified human resources are an accurate measure of the corporate's degree of international exposure*

3.2.4 Headquarter relocation and Firm Characteristic

Firms possess a collection of knowledge and abilities that allows them to exploit a wide range of opportunities. They follow the path of internationalization in order to grow or in absence of firm-specific advantages. At the firm level its size can provide a better understanding of whether it can be used as a tool to describe the degree of international exposure.
Large firms benefits from economies of scale and scope, they can constrain later entrants from gaining access to markets, customers, suppliers and other assets. Large firms have the possibility of owning more resources to invest in expansions, innovations, to incur the costs, and to bear the risk of international expansion. Usually large firms are more risk seeker due to their high amount of resources and they can have access to privileged learning channels and have a stronger bargaining power in order to achieve concessions from the host country's institutions. Larger firms moreover, have a wider pool of human resources with a wide range of diversified knowledge, skills and experience; this serves as an advantage for the internationalization efforts. Smaller firms suffer from a lack of experience in the early phases of their internationalization process and this enhances the level of uncertainty.

A corporate headquarter is the center of operations, from which orders are issued, it represents the location where most, if not all, of the vital tasks of an organization are coordinated. The main tasks that are brought forward in HQ's are: strategic planning, legal, finance, marketing, information technology, procurement, human resources and corporate communications. Throughout the internationalization process many multinational corporations decide to relocate their headquarters overseas. There are multiple reasons for undertaking this decision, although the main reason for which they relocate is the need to respond to the demands of external stakeholders, more precisely global financial market and shareholders. It can also be relocated in order to achieve a geographical proximity to specialized labor, complementary suppliers and access to knowledge spillovers. For the above-mentioned reasons we believe that the HQ and business unit relocation can be a good measure of the degree of international exposure of an organization.

The above discussion raises the following hypotheses:

- *H4a: Firm size is an accurate measure of the corporate's degree of international exposure*
- *H4b: Corporate relocations are an accurate measure of the corporate's degree of international exposure*

3.2.5 Export Intensity

Export intensity is calculated by implementing the ratio of exports to sale, it is considered as one of the most important indicators of the degree of firm involvement in foreign markets. There are numerous compelling reasons, for which a corporation might decide to export, such as: increase in sales and profits, selling novel goods and services to foreign markets increases sales and revenues, moreover once the export development costs have been covered you achieve additional foreign sales in the long term. Enhance competitiveness, achieving global market shares, by entering foreign markets companies achieve a piece of their share from the international marketplace. Create potential corporate expansion; companies who undertake exporting typically have to have a presence or representation in the foreign market. Moreover, obtain new knowledge; going international leads to valuable notions and ideas, it enhances the innovativeness and the achievement of new marketing techniques, which can benefit both the domestic and foreign market. The last reason regards business diversification that could lead to competitive advantage. All of these potential benefits, which can be achieved by enhancing the export intensity, can lead to a consequent increase of the degree of corporate international exposure.

Internationalization comprises all aspects of transnational activities such as exports, exporting is an effective entry strategy for companies which are accessing new foreign markets, it is one of the less complex ways to contribute in global trade. Companies that export, spread the business risk by diversifying into multiple markets. Many firms serve a market via exports before investing in that location, this is mainly due to uncertainty regarding the possible profitability that could be achieved in the foreign market. Exporting is a particularly significant internationalization strategy, it involves low levels of commitment and risks, and the company doesn't have to cope with the intricacies of establishing foreign subsidiaries. Therefore the export intensity might not be an accurate measure of the degree of international exposure because it might pertain to the initial stages of the internationalization process.

The above discussion raises the following hypotheses:

- *H5a: Export intensity is an accurate measure of the corporate's degree of international exposure*
- *H5b: Export intensity isn't an accurate measure of the corporate's degree of international exposure*

3.2.6 Subsidiaries

A subsidiary is a company controlled by another (parent) through the ownership of greater than 50% of its voting stocks.[64] The governance structures of MNCs have experienced significant alterations because of the rising need to internationalize. MNCs are gradually decomposing their value creating

[64] What is a subsidiary? definition and meaning. (n.d.). Retrieved from http://www.businessdictionary.com/definition/subsidiary.html

undertakings to achieve benefits from globally dispersed markets and factors of production. MNCs might decide to locate value-creating activities in host countries in order to exploit the talented labor pool, reduce labor costs, and increase sales. In such manner they enhance the quality of their products and services due to the high quantity and quality of tangible and intangible resources. Countries differ in terms of geographical, political, cultural and economic scenario, consequently when establishing a subsidiary the parent company should take into consideration all of these aspects, selecting the location which gives them the highest competitive advantage.

Subsidiaries are considered as a valuable strategic constituent for multinational corporations, they might be founded in order to search for new market opportunities, or acquire resources required for the domestic markets. As subsidiaries settle and develop, they could mature their individual capabilities becoming even more valuable and increasing their offerings to MNCs. Numerous studies in the past decades showed that subsidiaries are positively correlated to internationalization. Large subsidiaries are better able to engage in geographic and product diversification activities, more autonomous subsidiaries can influence the strategic decisions of the parent firm. Moreover, the ability of large subsidiaries to diversify may enable the exploitation of new market opportunities and economies of scale and scope.

Subsidiaries are becoming increasingly independent from MNCs, enabling them to create their own strategies, roles and capabilities. When MNCs are particularly focused on exploiting opportunities in foreign markets large subsidiaries can gain superior competitive positions. The large size of subsidiaries is also fundamental for the dispersion of risk through product diversification. When subsidiaries operate in environments, which have a high level of uncertainty they are more capable of leveraging and arraying their resources to capitalize on new prospects in the host countries.

Theoretically the more subsidiaries are present in foreign countries the higher is the degree of internationalization of a corporation.

The above discussion raises the following hypothesis:

- *H6a: Subsidiaries are an accurate measure of the corporate's degree of international exposure*

3.3 Methodology

Throughout the Meta-Analysis, researchers implement critical decisions in numerous areas. In this unit, we explain these decisions, which include (a) the techniques engaged for gathering and selecting the studies for the meta-analysis, (b) the procedure developed to decrease errors by indicating the nature of information to be extracted from available studies and (c) the techniques used to analyze the data.

3.3.1 Literature Search

In order to construct the database from which the samples are taken for the meta-analysis, we initially searched for empirical studies that investigate the measures and drivers of internationalization in the literature in Jstor, Wiley Library, Emerald Insight and Business Premier database using the following search entries: *degree of internationalization, internationalization, measuring internationalization and multinational.* Throughout this procedure, we guaranteed that the research enclosed interrelated courses of literature, such as: export intensity, foreign market entry, subsidiary intensity, and corporate relocation. Furthermore we conducted an issue-by-issue investigation of major strategic management, international business, and finance journals ranging from 1996 to 2017.

Thenceforth we scrutinized the references of all journal issues on the topic, which have been published beforehand. To conclude, we tried to elicit unpublished research and conferences in order to tackle the publication bias. Upon completion of the research procedure, a total of 11 effects were obtained from independent samples reported in 84 studies. A complete bibliography of all the used studies has been stipulated. A number of studies couldn't be included due to several reasons; firstly, the results were founded on data used on other already included studies, secondly, the studies weren't consistent with the research question and lastly, at least four study effects weren't available.

3.3.2 Coding Procedures

In order to be able to reduce the error from the manipulation of data we specified the information that should have been extracted from each single study. The fundamental criteria on which we focused is the following: (a) we included correlations from each sample only when the studies reported results based on multiple independent samples (b) we did not include correlations between more than one variable when the studies were based on the same data collections.

3.3.3 Data Analysis

The basic principle of our meta-analysis is to calculate the effect sizes for the individual studies convert them to a joint metric and subsequently combine them to achieve an average effect size. In order to acquire a common metric we brought forward the weighted mean effect size that led us to have a more definitive conclusion than what we could have obtained using solely a narrative review. Typically meta-analytic studies are weighted by the sampling precision meaning the accurateness of the effect size that they provide, this is accomplished by using the sample size as a weight. The effect size has the function of exposing the magnitude of a phenomenon; throughout this meta-analysis our effect size is given by the correlation between two variables. The correlation is frequently denoted as r and it is extensively used as an effect size when combined quantitative data are accessible. Moreover, we used the effect size since its nature complements statistical hypothesis testing.

Subsequently after calculating the weighted mean effect size we computed the mean of the samples and its standard deviation, which are necessary in order to achieve the standard error. The standard error provides the measurement of statistical accuracy of our estimate; it is defined as the estimate of the standard deviation from the estimator. The standard error is of critical importance since it is used to weight the effect sizes when conjoining studies and it leads to a facilitated process in the interpretation of opposing research results.

Once we completed the above-mentioned steps we tested the significance of the average effect size from the boundaries of the 95% confidence interval constructed upon the effect size. A Z-score has been brought forward in order to show how many standard deviations an element is from the mean; from the Z-score we achieved the p-value that supported the conclusion on the significance of the achieved results. A small p-value (< 0.05) indicates robust evidence against the null hypothesis consequently the null hypothesis can be rejected, while a large p-value (> 0.05) denotes feeble support against the null hypothesis.

Table 3.1 *Overview of correlation between variables and measurements of international exposure (personal elaboration)*

Construct (hypothesis)	***Total Sample Size***	***Number of Effects***	***Weighted Mean Effect Size***	***Standard Deviation***	***Standard Error***	***95% Confidence Interval***	***Z Value***	***P Value***
R&D Intensity	11,440	18	2.50	4.38	0.17	-0.04 to 0.12	2.61	p < .01
TMT international experience	1,649	7	3.70	3.35	0.22	-0.14 to 0.18	4.92	p < .01
TMT size	1,607	9	1.88	3.07	0.23	3.47 to 3.77	5.22	p < .01
TMT tenure	927	6	2.21	3.53	0.28	-3.05 to -3.04	2.64	p < .01

CEO international experience	1,131	5	0.13	3.46	0.25	-0.07 to 0.33	3.26	p < .01
CEO tenure	1,291	6	0.53	3.36	0.23	-0.07 to 0.29	3.84	p < .01
Human Resources	6,889	8	1.02	5.99	0.20	-0.11 to 0.17	1.15	p = 0.25
Corporate relocation	1,332	4	0.16	4.90	0.27	-0.10 to 0.42	2.71	p < .01
Firm size	1,895	4	0.48	4.45	0.20	0.28 to 0.68	4.26	p < .01
Export Int.	4,638	7	2.71	3.98	0.18	0.24 to 0.47	1.16	P = 0.24
Number of Subsidiaries	6,014	10	0.11	4.94	0.20	-0.02 to 0.24	1.22	P = 0.22

3.4 Results

A review of the results present in Table 1 reveals that only certain variables can be considered accurate measures of international exposure. Specifically, taking into consideration the first hypothesis: *R&D intensity is an accurate measure of the corporate's degree of international exposure* we can infer from the statistical results: r = 2.50 z value = 2.61 p value = p < .01 that the hypothesis can be accepted rejecting consequently hypothesis 1a: *R&D intensity isn't an accurate measure of the corporate's degree of international exposure.* Focusing on the second hypothesis 2a: r = 3.70 z value = 4.92 p value = p < .01, from the outcome we can accept the hypothesis being statistically significant, so TMT international experience is an accurate measure of international exposure. Hypothesis 2b: *TMT size is an accurate measure of the corporate's degree of international exposure* which resulted in: r = 1.88 z value = 5.22 p value = p < .01, consequently we will can accept the hypothesis being statistically significant. Hypothesis 2c: *TMT tenure is an accurate measure of the corporate's degree of international exposure* will be accepted, rejecting hypothesis 2d since it results in: r = 2.21 z value = 2.64 p value = p < .01. Hypothesis 3a: *CEO international experience an accurate measure of the corporate's degree of international exposure* can be accepted since the results are statistically significant as shown: r = 0.13 z value = 3.26 p value = p < .01, similarly also hypothesis 3b: *CEO tenure is an accurate measure of the corporate's degree of international exposure* will be accepted since the statistical significance is the following: r = 0.53 z value = 3.84 p value = p < .01. The above-mentioned results being statistically significant will lead us to reject hypothesis 3c: *CEO international experience isn't an accurate measure of the corporate's degree of international exposure*. The statistical results regarding the variable of human resources are inconsistent: r = 1.02 z value = 1.15 p value = 0.25 consequently hypothesis 3d: *Diversified human resources are an accurate measure of the corporate's degree of international exposure* will be rejected. Firm size with r = 0.48 z value = 4.26 p value = p < .01 provided support for Hypothesis 4a: *Firm size is an accurate measure of the corporate's degree of international exposure.* Findings also provided support for the hypothesized accuracy of corporate relocation as measure of the corporate's degree of international exposure, H4b: r = 0.16 z value = 2.71 p value = p < .01. The evidence summarized in Table 1 also suggests a negative association between export intensity as a measure of corporate's degree of international experience: r = 2.71 z value = 1.16 p value = 0.24, consequently hypothesis 5a: *Export intensity is an accurate measure of the corporate's degree of international exposure* will be rejected, accepting hypothesis 5b: *Export intensity isn't an accurate measure of the corporate's degree of international exposure.* To conclude, there is significant evidence: r = 0.11 z value = 1.22 p value = 0.22 which will lead us to rejects hypothesis 6a: Su*bsidiaries are an accurate measure of the corporate's degree of international exposure.*

3.5 Discussion

The measuring of the corporate's degree of international exposure has been one of the most widespread, discussed and controversial topics in management research and international business over the past decades. This stream of literature is extremely extensive and varied, spanning through a great selection of disciplines and studies. Notwithstanding the far-reaching research, slight unanimity has been reached regarding which variables, indexes and measures are actually accurate when measuring the corporate's degree of international exposure.

Throughout our analysis we attempted to use a meta-analytic approach to join these disparate research domains and integrate the cumulative evidence in order to achieve a statistically significant result, which could provide us with insights on which of these variables are precise and could be positively used to measure the corporate's degree of international exposure.

Specifically, this study presents the following contributions: the achieved results strengthen the empirical outcome in the corporate's internationalization research and delivers laborious empirical overviews about selected variables, which are widely studied in the literature. In this respect our meta-analysis shapes and encompasses preceding qualitative examinations by delivering a farther objective construal of the research findings. In this way, we incorporated the unique theoretical insights pertaining to the subject of study across a large number of research, studies and disciplines in order to achieve a more consistent result.

We will now focus on discussing the mot significant findings based on the meta-analysis and emphasize their research implications.

The aggregated evidence constructed on the meta-analysis supports the previously mentioned echelons theory, which emphasizes the crucial importance of an executive's international experience and tenure as a chief measure for the corporate's degree of international exposure. CEO international experience and tenure are intensely concomitant with the degree of international exposure of an organization because the intricacy of internationalization itself necessitates substantial international and operative experience. Moreover, CEO international experience and tenure are significant because the higher is their experience and tenure the higher could be the degree of corporate's international exposure. Cultural intelligence can be promoted, forcing individuals to seek for opportunities outside their realms as well as to persevere in the face of difficulties. If CEO tenure is high, it enables them to become more acquainted with the decisions process and more confident in the undertaking of new processes and experiences. Studies found that CEOs international experience was positively connected to internationalization, such knowledge is expected to contribute to the firm international performance throughout better management improvement, organization and governance of international operations, communication management and administering between parent firms and foreign affiliated and among affiliates itself. Therefore based on these studies and on our statistically significant results, theoretical evidence emerges to support the notion that CEOs international experience and tenure are extremely valuable for MNCs and are an appropriate measure for the corporate's degree of international exposure. To conclude, it is our belief that future research should concentrate on how CEOs and managers cooperate and interrelate in formulating noteworthy international expansion decisions.

Focusing on group level factors such as the TMT size, international experience and tenure we can positively state that they are an accurate indicator of corporate's degree of international exposure, this is due to numerous compelling features. It must be emphasized that if we focus solely on TMT size it may be a poor instrument in indicating the degree of international exposure, even if they are positively correlated. Rather, combining all three elements the results could be exhaustive; TMT international experience decreases ambiguity and consequently the pace of internationalization, international diversification and overseas involvement. Performing business overseas might enhance anxiety, TMT executive who have a high degree of international consignments reduces this anxiety and eases the firm's international exposure. Higher is a TMT's international experience higher is the extent of international connections which eases future foreign expansions. A large team size can be beneficial in multiple ways: wider diversified backgrounds, capabilities and resources, which can be implemented in the internationalization process resulting in positive expansions. International operations can be subsequently managed in a more effective and efficient manner. Moreover, the larger the teams size, the wider the opportunities, approaches and perspectives. The higher the TMT tenure the stronger is the TMT solidity and cohesion. Longer tenure leads to strong interdependence and experience, which is fruitful in the implementation of internationalization strategies. Decisions in long tenure TMT's can be more precise and consistent due to the knowledge acquired throughout time and experience. Therefore based on the theoretical insights and on the statistically significant results we believe that there is a strong positive correlation amongst TMT size, international experience, tenure and the measuring of the degree of corporate's international exposure. To conclude, we believe that future studies could develop and implement more sophisticated measures to capture additional traits such as: TMT knowledge level, performances and perceptions as well as contextual and environmental variables. Obtaining further research on these additional traits could be beneficial in achieving even more precise insights on whether TMT international experience, size and tenure could portray an accurate measure of corporate's degree of international exposure. Although because of the limited amount of data we couldn't examine and explore these matters.

From our findings, R&D intensity is accepted as a measure of corporate's degree of international exposure, this is because, as previously mentioned, higher is the R&D intensity in foreign countries higher is the profitability which is not generated domestically. R&D is considered as the primary tool for gaining market share in global competition, this is due to broad knowledge flows, technological spillovers and innovation. Moreover, R&D activities and its intensity are considered as predictors of the rise of multinational corporations especially in the international scenario. R&D intensive MNCs achieve higher diversification in activities; increase firm capacity to absorb knowledge created from the relationships forged with external organizations,

which subsequently leads to increase their performance. Moreover, R&D permits a corporation to attain competitive advantage and economies of scale.
Searching and leveraging competencies in different markets increase R&D intensity, which consequently enhances internationalization, for this reason we can infer that R&D intensity is a practically truthful measure of corporate's degree of international exposure. It must be stressed that R&D intensity considered in this study mainly pertains to outsourced R&D, for further research it could be beneficial to make a distinction between in home and outsourced R&D and observe whether also in home R&D could contribute in measuring the corporate's degree of international exposure.

Our findings confirm that firm's size and corporate relocation are accepted as measures of corporate's degree of international exposure, size and relocation are a necessary precondition for the pursuing of internationalization. Large firms develop a more forceful extension in the international market due to their capabilities and assets. By owning more resources they can highly invest in expansions being capable of bearing the risk of international development. Firms, which are big in size, have a wider pool of human resources that enhance the benefits and eases international growth. Moreover, firm's size plays a fundamental role in achieving competitive advantage, due to their large size they can control greater market shares and they can ride the learning curve faster. Not necessarily a large firm is a perfect measure of the degree of corporate's international exposure, but, based on the previously mentioned considerations and on the current literature a large firm is more prone to engage in international activities, enhancing consequently, their international exposure.

Corporate headquarter relocation is another vital constituent of our analysis, findings in our studies lead to the acceptance of this variable as a measures of the corporate's degree of international exposure. When engaging in international operations, aimed at enhancing their exposure in the international market, many corporations employ in the relocation of their headquarters in order to respond to arising necessities. This relocation is sometimes necessary in order to answer to the demands of the global market, shareholders and external stakeholders. Relocation can moreover take place to enhance the geographical proximity to contractors, expert workforce and new knowledge sources. Most headquarter relocations are envisioned to diminish overall costs, overheads and improve efficiencies, undoubtedly different types of HQ units perform their orchestrating role in dissimilar means and relocation is propelled by distinctive reasons. A report from the UNCTAD advocated a "world market for corporate headquarters" is emerging[65]. In order to support our thesis it must be emphasized the symbolic value of HQ relocation, it could be used as a way to signal investors and international banks that the MNC is not constrained by local standards and prospects, and thus a player in the global financial market. Based on a research, it is confirmed the theoretical arguments from international business literature: corporate's HQ relocates overseas when they already have a large percentage of their sales and manufacturing activities overseas[66].

Throughout our findings it arose that the variable of human resources is not statistically significant, this might be caused by numerous factors. Even though, as previously mentioned, the assortment of human resources can be contemplated as a necessary asset in the progression of internationalization, this diversity can't be analyzed nor quantified. It is too broad of a concept to be an accurate measure of the corporate's degree of international exposure. Undoubtedly the miscellany of individuals can reduce many problematic encountered in the process of internationalization such as: enhanced responsiveness, reduction of cultural impediments, augmented aptitude to manage changing environments. In our study, when we refer to diversification of human resources we propose the diverse nationalities they relate to. Focusing solely on this characteristic could have been erroneous due to the fact that their place of birth and cultural origins doesn't necessarily indicate that that culture, ideologies or perspectives have shaped them. If individuals are born in one country it doesn't necessarily mean that they lived or grew there, rather, they could have attended an international school abroad or they could have worked in another country for a great part of their life. Moreover, a distinction should have been made between nationality and ethnicity, many individuals immigrated to other countries, for example they were born in Italy, moved to England and considered themselves British. Heterogeneity in human resources is considered necessary in order to successfully enhance corporate's international

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65 Birkinshaw, J., Braunerhjelm, P., Holm, U., & Terjesen, S. (2006). Why do some multinational corporations relocate their headquarters overseas? *Strategic Management Journal,27*(7), 681-700. doi:10.1002/smj.541

66 *Ivi*

exposure, but how do we identify and characterize this heterogeneity? This is the focal setback which makes human resources an inaccurate measure of the corporate's degree of international exposure. For future research it could be appropriate to focus on the international experience of human resources because we believe that it is more comprehensive and that it will provide a more accurate depiction of the correlation between the two variables.

From our findings it arose that export intensity should be rejected, as measure of the corporate's degree of international exposure. This might seem unusual since exports are considered one of the primary means in the internationalization strategy. Before engaging in FDI firms, through exports, respect a steady internationalization process, obtaining knowledge about the local supply and demand. Due to uncertainty, before investing in an overseas location, numerous corporations serve markets via exports since it involves low menaces, commitments and no intricacy in establishing foreign subsidiaries. Exports can be considered a preliminary stage in the internationalization process; its intensity doesn't necessarily indicate that the corporation is fully exposed internationally. Moreover it is fundamental to emphasize that typically the internationalization strategy through exports is brought forward by small-medium firms that might not have the necessary resources, might be incapable of incurring in costs or in bearing risks. To conclude, we reconfirm our initial thesis: export intensity might not be an accurate measure of the degree of international exposure because it might pertain to the initial stages of the internationalization process.

From our findings it arose that subsidiaries are rejected as measures of the corporate's degree of international exposure. As we stated beforehand, theoretically the more subsidiaries are present in foreign countries the higher is the degree of internationalization of a corporation. This statement will be rejected based upon the statistical insignificance that arose in our investigation, it could be accurate to say that the more subsidiaries are present and spread overseas the more a corporation can be considered international, but this presence doesn't necessarily indicate that the corporation is internationally exposed, rather, subsidiaries may be established to search and explore novel markets, recognize opportunities, or gather the necessary resources and when subsidiaries work in circumstances that have an elevated degree of uncertainty they are efficient in leveraging and disposing their assets to exploit novel prospects in host countries. As for exports, subsidiaries can be considered as an agent of the firm and a strategic tool in order to enhance international exposure not to effectively measure it. It must be considered also that subsidiaries are becoming more autonomous and independent from MNCs, allowing them to construct their own competences, functions and strategies, bearing in mind this independence they might be less than accurate in depicting the true measure of international exposure of the parent corporation. Subsidiaries are becoming so independent that the current literature is diversifying overall MNC performance and subsidiary performance[67], treating subsidiaries as completely autonomous entities. For future research we propose to take into consideration several aspects of subsidiaries: their degree of autonomy, their geographical distance from the parent corporation and their performance.

3.6 Limitations

Every meta-analysis is constrained by the essence and breadth of the original findings on which it's constructed. The variables selected for this meta-analysis are constrained to those for which ample data was obtainable. Thus, our depicted schema is not a thorough classification; it is rather a summary of the most commonly studied variables for measuring the degree of international exposure of a corporation. Our included variables are undeniably of focal concern for management and international business researchers because they epitomize the most recurrently examined relationships.

Moreover, the interpretation and examination of various outcomes (relationship between human resources, CEO tenure and international experience with the degree of international exposure) demands thoughtfulness because of availability bias, which implies that additional investigation is necessary in order to construct more assertive generalizations concerning the robustness of these relationships.

Another subsequent limitation regards the computation of effect sizes that are based upon a pooled variance, meaning an estimation of variance of diverse populations when the mean of every population could be dissimilar but its variance is presumed to

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[67] Ramsey, J., Cabral, F. D., & Bahia, B. R. (n.d.). How to Determine Subsidiary Performance Based on the Internationalization Strategy. Retrieved from *Journal of Management Policy and Practice vol. 14(1)* 2013

be the same or an adjusted variance, meaning the measure of the dispersion of the sample around its mean. These computations lead to criticism, which can be valid only to some extent; in order to reduce this problematical one could set a higher standard in the inclusion and exclusion standards.

Social dependence is another limitation encountered in the development of a meta-analysis, with social dependency we infer that each generation of researchers motivate and educate the next and this leads to question the statistical independence and the cogency of meta-analysis. It must be emphasized that in current times, as a matter of fact, divergence predominates amongst the scholar community.

Publication bias also known as the "file-drawer problem" is one of the most common limitations occurring when producing a meta-analysis; publication bias leads to removing studies that don't have significant results. It occurs when outcomes of published studies are methodically diverse from outcomes of unpublished ones. Adding to the meta-analysis unpublished studies could modify effect sizes but it doesn't necessarily eliminate the publication bias. Publication bias could lead to misleading estimates of effects and associations between study variables. To minimize this limitation one could deliberately search for unpublished studies such as presentations, thesis or conferences. This is one of the many biases that can occur, several others could be the reviewer bias, sampling error and the researcher's personal bias.

The subjectivity in the selection criteria by researchers is another resilient limitation throughout meta-analysis, different studies on the same subject could produce different conclusions, and this is due to the subjective views, methodologies and studies discrepancies.

Notwithstanding the above-mentioned limitations the findings from this meta-analysis are considered comprehensive and should be useful to assess the state of measurements regarding corporate international exposure literature and design forthcoming studies and analysis.

3.7 Case Study

Ferrero had its inception in the early 1950s and is nowadays one of the largest confectionery companies in the world. The Ferrero Family was the first Italian manufacturer after World War II to develop production locations and offices overseas in the confectionary sector. Ferrero's products are present and sold, directly or through authorized retailers, in more than 170 countries, the group is present in 55 countries and territories. In the fiscal year 2016/2017 Ferrero had a net turnover which was distributed geographically in such manner: Italy 14%, Rest of Europe 59% and outside Europe 27%[68]. The group is comprised of 95 joined companies managed under Ferrero International S.A., which is the parent company based in Luxemburg.

After the success in the Italian market Michele Ferrero decided to internationalize his business, expanding its production and commercialization in foreign countries. The definition of a global corporation is the following: a corporation, which operates in more than one country. Undoubtedly Ferrero, based on the reported evidence, could be envisioned as a global company but if we dig deeper we can perceive several facets, which distance us from the idea of the globalized company.

The first point on which we linger is that Ferrero considers himself as a “glocal” company, which means that it acts global but thinks local. This local thinking might lead the company not to fulfill the demands of the foreign markets or, alternatively it might encounter difficulties in the acceptance of the product from the foreign market. Glocalization involves several reforms of different aspects of globalization with an emphasis on local realities, this can also be considered slightly contradictory since you are juxtaposing two explicitly opposing concepts. Globalization led to a homogeneous notion of culture and interaction among nations, now this is leading to matters of insecurities, in order to overcome these insecurities the development of the term glocalization was established. While globalization centers upon the concept of homogenization creating “one world”, glocalization rather, emphasizes heterogeneity, developing a mixture of many dissimilar cultures. Glocalization accentuates global heterogeneity, rejecting the concepts or Westernization or Americanization.

Moreover, glocalization can operate as an appropriate progression, which doesn’t essentially require the turnaround of the globalization process but emphasizes the joint function of both local and global efforts, achieving from both features it operates as a neutral policy. We believe that glocalization could be a more concrete phenomenon in comparison to the one of globalization, both theoretically and practically. For the aforementioned statements we conclude that Ferrero, rather than a

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68 Sharing Values to Create Value - CSR Europe. (n.d.). Retrieved from https://www.csreurope.org/sites/default/files/Ferrero-8th CSR Report - Summary_0.pdf

purely global company, can be depicted as a hybridization of both local and global efforts even though it is common knowledge that the group is purely global. This common knowledge is frequently inaccurate due to the theoretical and practical complexity of the phenomenon of globalization. These statements will be later supported by evidence from our antecedent meta-analysis.

An additional noteworthy feature to take into consideration, which weakens the notion of Ferrero as a global company is its organizational structure and governance. Today, Ferrero remains a true family-owned and run business, a third generation of Ferrero sons joined their father and endure their procedures beneath the identical essential values, ideologies and ethics that gave Ferrero its start in Alba more than 50 years ago.

In September 1st, 2017 the Ferrero Group's CEO and entrepreneur, Mr. Giovanni Ferrero, took over the role of Executive Chairman. This shift led to continuity in the organizational culture and values with the aspiration of developing break-through innovations, directions and strategies. Several are the criticisms, which could be brought forward concerning the predominant role of the family in the organizational structure.

The family business always rejected any partnership or outside shareholders in the company, keeping privacy in management and highlighting internal development. In certain cases this aspect could be detrimental, new partnerships could lead to: expanded geographical reach, innovation, knowledge spillovers, acquisition of customers and resources, eased new market penetration. This changed when Mr. Giovanni Ferrero pursued higher revenues through acquisitions. His belief was that the current product line wouldn't overcome competitors, consequently to be able to compete with rivals in 2015 he acquired Thorntons, it was Ferrero first acquisition ever followed by Nestlé, Butterfinger and BabyRuth. Giovanni defied the views of his father and industry experts, hoping that through these acquisitions the market position wouldn't vacillate.

Mr. Giovanni Ferrero has a varied international educational background; he lived in Brussels where he attended the European school and later he specialized in marketing at the Lebanon Valley College in the United States, his career started with an internship at Ferrero in Germany. Subsequently he shifted many positions and locations at Ferrero, his first assignment placed him with Tic Tac in Belgium, later he relocated in Germany undertaking a managerial role before learning business development in Brazil, Argentina, Mexico and the United States. Undoubtedly throughout his studies he related and interacted with many individuals of different cultures who enabled him to have a multivariate and open vision of the world. His work in many different countries and with many different realities unquestionably enhanced his experience and international vision of business. It must be said that his specialization was marketing and his creativity made him a strong counterpart to his brother Pietro, but when he died Giovanni was forced to run by himself all the company related affairs. He spent more than two years running twofold roles as CEO and chairman and had very little time to address corporate strategy. His experience is limited only to the Ferrero group, which is ideal since he aspired to work in the family company for all his life, we can underline that if he, had had experience also in other sectors or realities perhaps he could have engaged things differently. Some outsiders are skeptical of Giovanni's acquisition plan, unlike his father, who prompted growth through innovation; Giovanni is just buying his way to growth. Michele Ferrero, Giovanni's father, in fact, turned down Parmalat acquisition and refused to consider stock market listings. Giovanni's acquisitions are considered questionable since he acquired Nestlé whose products are thought of being unhealthy and mass marketed. Moreover, industry insiders stated that Giovanni was the least interested in running the business.

Noteworthy is the appointing of the new foreign managers and CEO in 2017, first CEO who is completely external to the family. Lapo Civiletti has been Ferrero's manager for over 10 years, and previously worked in Johnson Wax, Kraft and Mars.

Based on our meta-analysis, both the CEO international experience and tenure are accepted as measures of the degree of corporate international exposure. Focusing on this case, based on the previously mentioned evidences we can partly say that the CEO, now executive chairman has a medium to high tenure and international experience but it is not enough to make an accurate conjecture.

As of 2017 the Ferrero group encompassed 34,543 employees from 123 nationalities. The employee base is diversified both regarding gender and nationalities. The group brings forward initiatives to promote cultural diversity moreover; they developed the first edition of the Master in International Management, a corporate master developed jointly with SDA Bocconi. Human Resources are the pillars of every organization, individuals with unique knowledge, capabilities and varied cultural backgrounds enhance the company's competitive advantage making it very difficult for competitors to reach or overcome them. Individuals are an extremely difficult aspect to measure and investigate due to the immense facets they comprise, consequently, even though the Ferrero Group is comprised by individuals coming from 123 nationalities, nationalities don't precisely depict one's true identity, as précised earlier individuals who are born in a country aren't necessarily raised in that country or had educational and work experience in the county in which they were born. For these reasons, and from the statistical results, which arose in our meta-analysis, human resources aren't an accurate measure of the corporate degree of international exposure.

To conclude, with this elucidation the Ferrero Group can't refer completely itself as a global group only based upon the 123 nationalities of its human resources. If we must indicate the degree of international exposure of the Ferrero Group constructed from this element we will be incapable of making an accurate conjecture.

Based on our meta-analysis, subsidiaries can't be considered an accurate measure of the corporate's degree of international exposure. The Ferrero's Group is comprised by 73 consolidated subsidiaries, the strategy which they implement in order to enter and penetrate new countries and markets is referred to as: "international expansion through FDI"[69]. The dominant entry mode selected and executed by the Group is FDI and Greenfield investment, in order to preserve its know-how and maintain strict control over its resources. Ferrero's first subsidiary was established in Germany and subsequently in France in 1960. In the second half of the 1960s, eight other European subsidiaries were established but production was not to be relocated to these countries, only marketing and distribution undertakings. Ferrero shifted its international horizons to the United States, entering this market was challenging due to its different characteristics, as a consequence, they decided to enter by starting with a sales office in order to explore and learn the land. Once success was achieved they implemented the same entry modes used for Europe. To coordinate the numerous worldwide subsidiaries Ferrero International was founded in Luxemburg. In 1988 the Belgian and Spanish subsidiaries were established and from 2009 to 2012 they expanded also in Russia, Australia and India. In 2012 their strategy changed, they decided to acquire hazelnut producing MNCs in Turkey and the Caucasus, in 2014 they

[69] Calvelli, A., & Cannavale, C. (2019). Internationalizing Firms. doi:10.1007/978-3-319-91551-7

acquired the Turkish company Oltan and subsequently in 2015 Ferrero obtained the British company Thorntons. In 2015 the only markets with no internationalization projects were Asia and China. Due to the growing economic importance that these countries were having Ferrero decided to penetrate also these markets, they did so by opening the first factory in China, repositioning its products due to the presence of competitors such as: Mars China and Mondelez China. In 2017 Ferrero decided to invest in Singapore with a Greenfield investment in a center for innovation and development. The Ferrero Group wants to broaden its expansions in the Asian market by implementing a Greenfield investment in Malaysia. The main reason for which they have selected Malaysia is that there you can find the world's top-two palm oil and cocoa producers. The plant in Shanghai produces a large amount of Ferrero's products but not Nutella, which is still exported from Italian factories. Establishing a subsidiary in Malaysia could be beneficial in terms of low raw materials, transportation and distribution costs and reduction in implementation time.

Forming a subsidiary provides the advantage of having manifold entities in the same business. Subsidiaries will be capable to adjust to the local culture and can develop the management style that fits best. They deliver an organizational framework for differentiating corporate identity. Subsidiaries could also aid when a company has the desire of diversifying but at the same time maintaining its corporate identity. Taxation is another strong feature, which could lead to the decision of establishing a subsidiary. Lower tax rates and taxation base only on the profits made in that state, rather than on the total profits of the parent company could be an additional motivation for founding a subsidiary. Moreover, subsidiaries can make some transactions easier to bring forward by reducing regulatory requirements, it can attract additional investors and make mergers easier between two distinctive businesses. Another strong factor, which leads organizations to form subsidiaries, is limited liability. It is possible to limit a parent's company potential loss using the subsidiaries as a liability. To conclude, another possible benefit of establishing subsidiaries are the issues regarding disclosure. Maintaining certain activities in a privately held subsidiary makes it more challenging for competitors to expose and attain sensible information which the company isn't ready to disclose yet. Subsidiaries are contemplated to be a cherished strategic component for corporations, they might be originated to explore new market prospects, or gain resources, which are necessary for the domestic markets. Subsidiaries can become a valuable source for multinational corporations due to their ability in engaging in product and geographic diversification and strategic actions and decisions exploiting consequently economies of scale and scope. Through subsidiaries uncertainty and risk can be reduced, autonomy can be enhanced gaining superior competitive advantage and exploiting new prosperous possibilities in the host countries.

On the other hand, there are various disadvantages, which could come with the development and establishment of a subsidiary. There are occurrences in which the parent company could be liable for the actions of the subsidiaries, in the case in which the subsidiary is an operating company the parent company could be liable, consequently they could be subject to many damages including legal enforcement. Moreover, the parent company might need to guarantee the loans of its subsidiaries, thus, straightforwardly subjecting itself to the accountabilities of its subsidiaries. The parent company could also encounter several difficulties in controlling and managing the subsidiaries. Subsidiaries might have restricted freedom in operations and decision undertakings, problems that could occur might be difficult to solve due to the complexity of the organizational structure and chains of command. Decision-making could become time consuming, slowing operations and making it more difficult for complications to be solved. Control is another consistent issue, it might be extremely convoluted to exercise the correct amount of control and to have a complete vision of what is occurring daily in the subsidiaries, the more there are the more complicated is to govern them. Subsidiaries, moreover, being an additional branch of the organization can lead to extra legal and tax employments and this could be a consistent disadvantage for the parent company. Before establishing a subsidiary it is fundamental for the corporation to analyze a wide range of factors such as: availability of skilled workers, availability of resources, legal system, logistics infrastructures, political stability, property rights and fiscal and monetary policies. Cost is another important issue when deciding to establish and subsidiary overseas, purchasing a local company could be the rapider approach to institute the structure in its novel environment but it might be arduous for the parent company not to overpay for the local company's assets and the worth will be additionally increased if there is a bidding war. The archetypal issues of working in a foreign country could also arise. There could be linguistic complications, cultural differences and a lack of tangible and intangible resources in the necessary areas. Ensuing local procedures and regulations to the letter is fundamental if the parent company doesn't want to incur in any legal or financial action since it holds the responsibility of the subsidiary. We should also consider the variation on the currency market, a company, as Ferrero, with numerous subsidiaries overseas might encounter consistent difficulties in the translation of the subsidiary's financial statements to the parent's presentation currency.

Taking into consideration both advantages and disadvantages of establishing one or many subsidiaries we can state that an accurate analysis should be made antecedently, regarding the multiplicity of the issue involved. Based on the advantages we can perceive that establishing a subsidiary can surely aid an organization both from the technical and the strategic point of view, nevertheless we can't state that the amount or dispersion of Ferrero's subsidiaries can precisely indicate and measure the corporate's degree of international exposure. It is rational to think that a high number of subsidiaries present overseas indicate the corporation is extremely international; we could attempt to dismantle this rationalization.

The presence of numerous subsidiaries overseas doesn't necessarily indicate that a corporation is highly internationally exposed; rather, the choice of establishing these subsidiaries could be of a legal, political or taxation nature. Our inference is backed up by the statistical insignificance that arose in our investigation. Other than a legal, political, taxation or cost reason that might drive a corporation to establish foreign subsidiaries other factors could be the analysis and study of new markets, the exploitation of necessary resources which can't be implemented or found otherwise and the recognition of fruitful opportunities.

Establishing a network of foreign subsidiaries unquestionably enables multinational corporations to leverage new expertise, ideas and resources, both tangible and intangible. Despite these ameliorations one could criticize that subsidiaries are just a preliminary, yet fundamental tool to explore a market before actually penetrating it. Subsidiaries are particularly challenging elements their self to be investigated and examined due to their complexity, given by its multifaceted features. Since it is so challenging to scrutinize them it is rare that they could provide us with a consistent measure of the corporate's degree of international exposure. As we previously mentioned, another consideration is that subsidiaries are becoming strongly independent from their parent company; consequently we can't expect that they provide a truthful measure of international exposure. Subsidiaries can be contemplated as a proxy of the parent corporation and as a cardinal instrument to augment the corporate international exposure not to successfully measure it. Founded upon the above-mentioned implications we can assert that if we should designate the degree of international exposure of the Ferrero Group, based on this element we would be unable of constructing an accurate conjecture.

Ferrero's in 2016/17 realized on foreign markets 8,7 of its 10,3 billion total of revenues. Comprised the 1,05 billion of products exported from Italy. The increase in exports in foreign countries was also pushed due to the results of the consolidated financial statement of the previous year, which indicated that the selling of products increased in Germany, Poland, Spain and France while in Italy sales remained flat. Turkey registered a significant upsurge while the United States and Mexico realized the more significant amount of sales. Foreign countries are worth for Ferrero 85% of its total revenues. A jar of Nutella is sold every 2.5 seconds, it is one of Italy's biggest exports. Italy is the 7th largest exporting economy in the world, Italy exported $ 482B in 2017, top exports include: medicaments, cars, refined petroleum, food. The top export destinations are: Germany, France, the United States, the United Kingdom and Spain.

Many multinational corporations, in order to enter in the international scenario, begin by exporting, utilizing it as a first step before internationalization through direct investment. Using this low risk and low commitment mode of entry they gain new valuable experience and cultivate the essential abilities to employ in more multifaceted and riskier operations, including acquisitions abroad. Through exports companies accrue experience, which will be beneficial for subsequent international investment strategies. Exports leads to numerous opportunities including a better knowledge of consumers and markets, diversification of market opportunities also in the case in which the domestic market could be lacking, expanding the lifecycle of mature products which could be saturated in the domestic market. It is noteworthy to mention that exports aren't only beneficial for companies; they also enhance the growth and expansion of national economies. Moreover, consumers can benefit from certain products that aren't solely produced locally. The export of products can lead to an increase in sales expanding the vision of the business internationally. Through exports businesses are focused on discovering new opportunities abroad and consequently contributing in increasing profits. Exporting to multiple markets enables the companies to diversify and spread their risk, to meet foreign demand usually companies must expand their production, increasing production can often lower per unit costs and lead to a greater use of capacities. Choosing an export market as an initial stage of the internationalization process necessitates the examination of multiple factors such as: social, political, cultural, economic and legal environments, furthermore to scrutinize an extensive array of public services, purchasing power and demand-related issues, as well as international trade indicators. The achievement of information regarding the destination markets is therefore fundamental.

Several are the challenges faced when a corporation incurs in exports, extra costs is the first problematic, pay back periods are longer, there are up-front costs for developing new materials and lastly you also incur in higher administrative costs and higher costs for allocating personnel to travel. When exporting to foreign countries you encounter different laws, restrictions, safety and security codes consequently the corporation needs to modify their products in order to adhere to the legislations of the foreign country. When exporting companies must weight the financial risk incurred in the process. In comparison to domestic sales, the documentation required is extremely vaster, time consuming and license are required. Another challenging consideration is the one regarding market information, before entering in a foreign market the company must bring forward a detailed analysis but finding information on foreign markets is indisputably more time consuming and difficult than searching for information and examining the domestic market. For example, in developing countries this kind of information regarding market characteristics, business practices and cultural barriers could be inaccessible.

When a corporation decides to export in foreign countries it must take into consideration taxes, if the corporation sells in another country in the European Union, it must keep records and submit details of these sales on their VAT return. If they have high levels of sales to EU countries they must complete an Itrastat Supplementary

Declaration[70]. Usually the export strategy is brought forward by medium to large sized enterprises due to the costs, which they might need to bear.

Many corporations operate in a new market via exports before bringing forward an investment; this is mainly because of ambiguity regarding the effectiveness that could be attained in the foreign market. Based upon the previously mentioned advantages and disadvantages concerning export we can state that they could be a preliminary process, antecedent to internationalization, being such it isn't an accurate measure of the degree of international exposure since it may relate to the initial stages of the internationalization process. To conclude, we can affirm that if we should describe the degree of international exposure of the Ferrero Group, based on the element of its exports we would be incapable of establishing an accurate conjecture.

Throughout this case study we have been able to explore the Ferrero Group and to make various conjectures regarding its degree of international exposure. The Group is considered one of Italy's most recognized and fruitful businesses worldwide, with its global presence in more than 50 countries they follow a core mission, providing high quality, crafted precision, product freshness, careful selection of the finest raw materials and respect and consideration for their customers. The Ferrero Group is universally recognized as a global corporation, but can we actually make an accurate assertion that its degree of international exposure is so high as it is thought to be?

The collective opinion is prompted to consider the Group as global due to the following factors:

- 25 operating manufacturing plants
- 9 worldwide agricultural establishments
- Group present in 55 countries around the world
- The products are present and commercialized directly or through authorized retailers in over 170 countries which make up the entire international community
- Consolidation of 95 companies worldwide
- Acquisitions of international confectionary corporations such as Nestlé and Butterfinger (just to mention some)

[70] Migrator. (2018, August 29). Advantages and disadvantages of exporting. Retrieved from https://www.nibusinessinfo.co.uk/content/advantages-and-disadvantages-exporting

- Turnover geographically distributed: Italy 14%, Rest of Europe 59% and outside Europe 27%
- Human Resources belonging to 123 nationalities

Indisputably these features designate international traits to the corporation but going in depth into the matter we can state that no accurate inferences can be made. To support this thesis we rely on the statistical significance provided by our meta-analysis. The outcome of our meta-analysis lead to remarkable findings; by analyzing single features and applying them to the case study it arose that the human resources, subsidiaries and exports aren't significant measures of the degree of international exposure of a corporation while the CEO international experience and tenure are more significant. By examining the case study it arose that family members comprise the organizational structure, only recently they added an external individual as CEO. It can be criticized that, the non-diversified organizational structure and the short tenure of the CEO (2 years) makes the variable a non-significant measure of the degree of international exposure of the corporation.

Furthermore human resources, being mostly an intangible variable can't be easily measured, due also to its nationality/ethnicity complexities it can't be a consistent measure of the degree of international exposure of the corporation.

Subsidiaries and export intensity can be jointly considered, it is common thought that more subsidiaries a company has and higher the export intensity the more internationally exposed is the organization, on the other hand these two components are considered as preliminary stages or proxies of the internationalization strategy, being considered as such they are incapable of providing us with an accurate measure of the degree of international exposure of the corporation.

To conclude, from our thorough analysis it surfaced that the Ferrero Group has unquestionably an international character but its features aren't consistent enough to make assertions regarding its actual degree of international exposure.

Conclusions

The concept of globalization is as long-lasting as history itself, this assertion is supported by the notion that individuals have unceasingly, during their entire existence, engaged in cultural interactions, in the propagation of knowledge and in the exchange of goods and services. The conception of the phenomenon of globalization has been concretely established in the mid 19th century (since previously there were no trade and cultural exchanges) shifting uninterruptedly from accelerated integration to intense reversals caused by World War I and World War II. The pace of globalization found its unceasing upsurge and balance around the latter part of the 20th century with free market economies, pro-market policies, governments liberalization, political resolutions, free trade agreements and companies which began to internationalize its products, management, consumer base and capital. Theorists, historians and researchers outline these remote origins of globalization, but no emphasis has been placed on the actual meaning of the term.

The notion of globalization is still being refined nowadays by theorists and scholars of all disciplines. No consensus has been reached regarding the nature and physiognomies of this phenomenon. Multiple are the incongruities encountered when attempting to define globalization, this is mainly due to its theoretical nature which lacks of practical foundations, with the inability of having some tangible proof and based only upon one's preferences defining the phenomenon of globalization becomes an intricate task. Sociologists, economists, legal, political science and social theorists all have a different perception and understanding of the phenomenon which ranges from a change in the pace and nature of social integration within nation-state and the increasing governance of this integration by autonomous transnational processes for sociologists, to the growing interdependence of national economies for economists, to a process of denationalization of clusters of political, economic, and social activities for legal scholars, to a process of increased interconnectedness between societies and the world becoming a borderless sphere from the point of view of political science and international relations. Lastly, social theories describe globalization as a tangible event, which emphasizes the expansion of capitalism.

The multifaceted definitions, the inclusion of the term in extensive areas of studies in which it is perceived in thoroughly different manners and its exclusive conjectural essence makes the term abstract, demanding theorization and demonstration.

Defining the term can be considered as an unsatisfactory debate, which goes beyond any capability. The word globalization is now used to describe everything that is occurring world-wide without having a concrete understanding of what it actually is or does, the world and all of what it encompasses are considered completely globalized, rather the world is not so globalized as it is thought to be, and this thesis is supported by the fact that there are no actual measures or indexes which designate the degree of globalization of a country or the degree of global and international exposure of a multinational corporation. These are the focal motivations, which drove the undertaking of a concrete path in order to give an objective and consistent foresight of the phenomenon. It must be emphasized that if adequate measures of globalization are comprised they can provide us with an improved understanding and representation of its historic development and its impact on states and individuals. It is necessary to underline that all the instruments meant to measure multilayered social phenomena are idiosyncratic.

Due to the intricacy of this phenomenon several scholars and institutions attempted to scrutinize and construct indexes, which generate empirical understanding into the features, magnitude and consequences of the process. All the up to date constructions of measures and indexes are unsatisfactory, lacking of unanimity, objectivity and precision. Measurements must be perceptive, viable, consistent, timely and representative. In order to try and perceive if the world is globalized it is common knowledge to focus on several preliminary indicators such as: openness, foreign direct investment and international migration but they are insufficient since they focus solely on one or two single features and they are purely economic in nature. Based on how globalization is perceived it will be measured in dissimilar ways, in the 21st century indexes have been developed to attempt to measure globalization, in order to capture all of its facets several dimensions, weights and normalization for homogenization purposes have been included in these indexes. The indicators which have been selected are the following: A.T Kearney/Foreign Policy Globalization Index, CSGR Globalization Index, KOF Index of Globalization, Maastricht Globalization Index, NGI

A New Globalization Index and one-dimensional Indices. The key factor, which likens them, is that almost all of them draw from the A.T Kearney/Foreign Policy Globalization Index, an economic, social, political and technological dimension encompass all the aforementioned indexes, the only index that includes an ecological dimensions is the Maastricht Globalization Index. There are numerous differences amongst the indexes; the main ones regard the territorial coverage and the differences in the selection and classification of the countries. The level of globalization of each country in each index differs due to the selection of the weights, variables and aggregation methods. A strong heterogeneity is present amongst the rankings of the indexes rendering us incapable of having a standardized depiction of the phenomenon. Due to the existing challenges it has been decided to narrow the focus on multinational corporations trying to gain a thorough understanding on whether or not they are truly global agents.

For the aforementioned reasons it is believed that the most concrete way to give a subjective visualization of globalization (and globalization applied to multinational corporations) is through statistics. Being a mathematical analysis, which uses quantified models, representations and synopses for a given set of experimental data or real life studies[71] it gave a comprehensive understanding of how certain elements, which are believed to indicate the degree of global and international exposure of an organization are actually statistically insignificant. Statistical methodologies have been embodied in a meta-analysis, the meta-analysis, by examining data from a large number of independent studies of the same subject lead us to determine the overall trends, no other methodology enables the incorporation of such amount of data. The meta-analysis allowed us to include a total of 11 effects obtained from independent samples reported in 84 studies, without the application of a meta-analysis we wouldn't have accomplished such inclusive outcomes. The considered variables are those most commonly used to indicate the degree of internationalization of an organization: Research and Development Intensity, Top Management Teams, Human Resources diversification, Headquarter relocation and Firm Characteristics, Export intensity and, lastly, Subsidiaries. Moreover, since the validity of a hypothesis can't be determined or

[71] Kenton, M. G. (2019, April 09). How Statistics Work. Retrieved from https://www.investopedia.com/terms/s/statistics.asp

based on the result of a single study, the meta-analysis was the appropriate tool for synthesizing data across numerous studies and achieve a tangible, elucidating outcome. The established hypotheses were the following:

- *H1a: R&D intensity is an accurate measure of the corporate's degree of international exposure*
- *H1b: R&D intensity isn't an accurate measure of the corporate's degree of international exposure*
- *H2a: TMT international experience is an accurate measure of the corporate's degree of international exposure*
- *H2b: TMT size is an accurate measure of the corporate's degree of international exposure*
- *H2c: TMT tenure is an accurate measure of the corporate's degree of international exposure*
- *H2d: TMT tenure isn't an accurate measure of the corporate's degree of international exposure*
- *H3a: CEO international experience an accurate measure of the corporate's degree of international exposure*
- *H3b: CEO tenure is an accurate measure of the corporate's degree of international exposure*
- *H3c: CEO international experience isn't an accurate measure of the corporate's degree of international exposure*
- *H3d: Diversified human resources are an accurate measure of the corporate's degree of international exposure*
- *H4a: Firm size is an accurate measure of the corporate's degree of international exposure*
- *H4b: Corporate relocations are an accurate measure of the corporate's degree of international exposure*
- *H5a: Export intensity is an accurate measure of the corporate's degree of international exposure*
- *H5b: Export intensity isn't an accurate measure of the corporate's degree of international exposure*

- *H6a: Subsidiaries are an accurate measure of the corporate's degree of international exposure*

To achieve the results it has been calculated the effect sizes (*r*) for every individual study convert them to a joint metric and subsequently combine them to obtain an average effect size. We computed the weighted mean effect size in order to attain a common metric; subsequently we calculated the mean of the samples and its standard deviation, which are necessary in order to achieve the standard error. The standard error provides the measurement of statistical accuracy of our estimate. Once terminated the aforementioned stages we verified the connotation of the average effect size from the 95% confidence interval constructed upon the effect size. A Z-score has been computed and from the Z-score we achieved the p-value, which lead us to several significant conclusions. The resulting statistical significance leads us to accept the following hypotheses:

- *H1a: R&D intensity is an accurate measure of the corporate's degree of international exposure*
- *H2a: TMT international experience is an accurate measure of the corporate's degree of international exposure*
- *H2b: TMT size is an accurate measure of the corporate's degree of international exposure*
- *H2c: TMT tenure is an accurate measure of the corporate's degree of international exposure*
- *H3a: CEO international experience an accurate measure of the corporate's degree of international exposure*
- *H3b: CEO tenure is an accurate measure of the corporate's degree of international exposure*
- *H3c: CEO international experience isn't an accurate measure of the corporate's degree of international exposure*
- *H4a: Firm size is an accurate measure of the corporate's degree of international exposure*
- *H4b: Corporate relocations are an accurate measure of the corporate's degree of international exposure*

The resulting statistical insignificance leads us to reject the following hypotheses:

- *H3d: Diversified human resources are an accurate measure of the corporate's degree of international exposure*
- *H5a: Export intensity is an accurate measure of the corporate's degree of international exposure*
- *H6a: Subsidiaries are an accurate measure of the corporate's degree of international exposure*

The statistically non-significant hypotheses were as such due to specific prevailing motivations. The hypothesis of Human Resources is rejected since the diversity that distinguishes them can't be analyzed nor quantified. Their prevailing traits can unquestionably aid the process of internationalization but their heterogeneity makes the variable too broad to be a truthful measure of the corporate's degree of international exposure. The hypotheses of subsidiaries and export intensity can be partly related since both variables are perceived as tools or proxies used to ease the internationalization strategy and process. Export intensity isn't an accurate measure of the corporate's degree of international exposure because it pertains mostly to the initial stages of the internationalization process. Subsidiaries are also rejected as measures of the corporate's degree of international exposure since their purpose might be solely to leverage novel opportunities, resources and markets, these factors can enhance international exposure not measure it. The statistical results have been furthermore practically applied on the Ferrero's case study where we theoretically demonstrated why our rejected variables couldn't be used to measure and indicate whether the Ferrero Group has an actual high degree of international exposure.

Measuring globalization and the corporate's degree of international exposure has been one of the most widespread, discussed and controversial topics in management research and international business throughout the past epochs. There is indisputably a consistent extent of research that still has to be accomplished in order to reach consensus on the issue, throughout this thorough dissertation we are confident of having provided a foundation for forthcoming studies and examinations, as well as having considerably questioned an elusive phenomenon. With all of the variables and factors taken into consideration, quantifying the degree of global exposure remains appealing for incumbent actors, and given the present tendency in growth it will persist in such way for the predictable future.

Bibliography

Andersen, Torben, M. Herbertsson, Tryggvi, T. (2003) Measuring Globalization. *IZA Discussion Paper No. 817*. Available at SSRN: https://ssrn.com/abstract=434540

Asmussen, C. G., Pedersen, T., & Petersen, B. (2007). How do we capture "Global Specialization" when measuring firms' degree of globalization? *Management International Review, 47*(6), 791-813. doi:10.1007/s11575-007-0053-x

Athanassiou, N., & Nigh, D. (1999). The impact of U.S. company internationalization on top management team advice networks: A tacit knowledge perspective. *Strategic Management Journal,20*(1), 83-92. doi:10.1002/(sici)1097-0266(199901)20:13.0.co;2-y

Athanassiou, N., & Nigh, D. (2000). Internationalization, Tacit Knowledge and the Top Management Teams of MNCs. *Journal of International Business Studies,31*(3), 471-487. doi:10.1057/palgrave.jibs.8490917

Bantel, K. A., & Jackson, S. E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal,10*(S1), 107-124. doi:10.1002/smj.4250100709

Barkema, H. G., & Shvyrkov, O. (2007). Does top management team diversity promote or hamper foreign expansion? *Strategic Management Journal,28*(7), 663-680. doi:10.1002/smj.604

Baylis, J., Smith, S., & Owens, P. (2017). *The globalization of world politics: An introduction to international relations*. Oxford: Oxford University Press.

Behyan, M., Mohamad, O., & Omar, A. (2015). Influence of internationalization orientation on export performance: In the perspective of Malaysian manufacturing firms. *Journal of Business & Industrial Marketing,30*(1), 83-95. doi:10.1108/jbim-05-2012-0091

Belderbos, R., Leten, B., & Suzuki, S. (2013). How Global is R&D? Firm-Level Determinants of Home Country Bias in R&D*. *SSRN Electronic Journal*. doi:10.2139/ssrn.2381979

Belderbos, R., Du, H. S., & Goerzen, A. (2017). Global Cities, Connectivity, and the Location Choice of MNC Regional Headquarters. *SSRN Electronic Journal*. doi:10.2139/ssrn.3076851

Belderbos, R., Sadowski, B. M., & Lokshin, B. (may 2015). The Returns to Foreign R&D. *Journal of International Business Studies,46*(6). doi:DOI: 10.1057/jibs.2014.63

Berson, Y., Oreg, S., & Dvir, T. (2008). CEO values, organizational culture and firm outcomes. *Journal of Organizational Behavior,29*(5), 615-633. doi:10.1002/job.499

Binks, M., Ucbasaran, D., Westhead, P., & Wright, M. (march 2002). Internationalization of SMEs: A research note. *Journal of Small Business and Enterprise Development,9(1)*, 38-48. doi:DOI: 10.1108/14626000210419473

Birkinshaw, J., Braunerhjelm, P., Holm, U., & Terjesen, S. (2006). Why do some multinational corporations relocate their headquarters overseas? *Strategic Management Journal,27*(7), 681-700. doi:10.1002/smj.541

Björkman, I., Fey, C. F., & Park, H. J. (2007). Institutional theory and MNC subsidiary HRM practices: Evidence from a three-country study. *Journal of International Business Studies,38*(3), 430-446. doi:10.1057/palgrave.jibs.8400267

Blomkvist, K. (2012). Knowledge management in MNCs: The importance of subsidiary transfer performance. *Journal of Knowledge Management,16*(6), 904-918. doi:10.1108/13673271211276182

Bourguignon, F. (2002). Making Sense of Globalization: A Guide to the Economic Issue.*CEPR Policy Paper No.8*, 1–108.

Bouquet, C., Morrison, A., & Birkinshaw, J. (2008). International attention and multinational enterprise performance. *Journal of International Business Studies,40*(1), 108-131. doi:10.1057/jibs.2008.64

Britannica, T. E. (2012, May 28). Multinational corporation. Retrieved from https://www.britannica.com/topic/multinational-corporation

Brouthers, L. E., Nakos, G. E., & Brouthers, K. D. (september 2009). Key factors for successful export performance for small firms. *Journal of International Marketing,17(3)*, 21-38. doi:DOI: 10.1509/jimk.17.3.21

Calvelli, A., & Cannavale, C. (2019). Internationalizing Firms. doi:10.1007/978-3-319-91551-7

Campa, J., & Guillén, M. F. (1999). The Internalization of Exports: Firm- and Location-Specific Factors in a Middle-Income Country. *Management Science,45*(11), 1463-1478. doi:10.1287/mnsc.45.11.1463

Cannella, A. A., Park, J., & Lee, H. (2008). Top Management Team Functional Background Diversity And Firm Performance: Examining The Roles Of Team Member Colocation And Environmental Uncertainty. *Academy of Management Journal,51*(4), 768-784. doi:10.5465/amj.2008.33665310

Carpenter, M. A., & Fredrickson, J. W. (2001). Top Management Teams, Global Strategic Posture, And The Moderating Role Of Uncertainty. *Academy of Management Journal,44*(3), 533-545. doi:10.2307/3069368

Carpenter, M. A., Sanders, W. G., & Gregersen, H. B. (2001). Bundling Human Capital with Organizational Context: The Impact of International Assignment Experience on Multinational Firm Performance and CEO Pay. *Academy of Management Journal,44*(3), 493-511. doi:10.5465/3069366

Carpenter, M. A. (2002). The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance. *Strategic Management Journal,23*(3), 275-284. doi:10.1002/smj.226

Caselli, M. (2008). Measuring… What? Notes on Some Globalization Indices. *Globalizations,5*(3), 383-404. doi:10.1080/14747730802252529

Caselli, M. (2013). Nation States, Cities, and People. *SAGE Open*, 3(4),. doi:10.1177/2158244013508417

Caselli, M. (2012). Trying to Measure Globalization: Experiences, Critical Issues and Perspectives. *Springer Netherlands*. doi:10.1007/978-94-007-2807-3

Casillas, J. C., & Moreno-Menéndez, A. M. (2013). Speed of the internationalization process: The role of diversity and depth in experiential learning. *Journal of International Business Studies,45*(1), 85-101. doi:10.1057/jibs.2013.29

Cassiman, B., & Golovko, E. (2010). Innovation and internationalization through exports. *Journal of International Business Studies,42*(1), 56-75. doi:10.1057/jibs.2010.36

Chiao, Y., Yu, C. J., Li, P., & Chen, Y. (2008). Subsidiary size, internationalization, product diversification, and performance in an emerging market. *International Marketing Review,25*(6), 612-633. doi:10.1108/02651330810915556

Chrisman, J. J., & Patel, P. C. (2012). Variations in R&D Investments of Family and Nonfamily Firms: Behavioral Agency and Myopic Loss Aversion Perspectives. *Academy of Management Journal,55*(4), 976-997. doi:10.5465/amj.2011.0211

Chung, C. C., Park, H. Y., Lee, J. Y., & Kim, K. (2015). Human capital in multinational enterprises: Does strategic alignment matter? *Journal of International Business Studies,46*(7), 806-829. doi:10.1057/jibs.2015.15

Columbus, C., & Markham, C. R. (n.d.). Journal Of The First Voyage Of Columbus. *The Journal of Christopher Columbus (During His First Voyage, 1492-93),*13-194. doi:10.1017/cbo9780511708411.003

Dass, P. (2000). Relationship of Firm Size, Initial Diversification, and Internationalization with Strategic Change. *Journal of Business Research,48*(2), 135-146. doi:10.1016/s0148-2963(98)00097-6

Delbruck, J. (1993) Globalization of Law, Politics, and Markets - Implications for Domestic Law - A European Perspective, *Indiana Journal of Global Legal Studies:* Vol. 1: Iss. 1, Article 2.

Delgado, M., Porter, M., & Stern, S. (2014). Defining Clusters of Related Industries. doi:10.3386/w20375

Dörrenbächer, C. (2000). Measuring corporate internationalisation. *Intereconomics,35*(3), 119-126. doi:10.1007/bf02927197

Dunn, R. M. (2001). Has the U.S. economy really been globalized? *The Washington Quarterly,24*(1), 53-64. doi:10.1162/016366001561546

Edwards, T. H. (2007). How Globalized Really is European Trade? *Spatial Economic Analysis,2*(3), 259-280. doi:10.1080/17421770701550363

Eriksson, K., Johanson, J., Majkgã¥Rd, A., & Sharma, D. D. (n.d.). Experiential Knowledge and Cost in the Internationalization Process. *Knowledge, Networks and Power*. doi:10.1057/9781137508829.0008

Executive summary of “Determinants of subsidiary’s technological capability - examining the roles of subsidiary-local supplier linkage”. (2014). *Journal of Business & Industrial Marketing,29*(5). doi:10.1108/jbim-04-2014-0081

Fernhaber, S. A., Gilbert, B. A., & Mcdougall, P. P. (2014). International Entrepreneurship and Geographic Location: An Empirical Examination of New Venture Internationalization. *Location of International Business Activities,*94-136. doi:10.1057/9781137472311_5

Figge, L., & Martens, P. (2014). Globalisation Continues: The Maastricht Globalisation Index Revisited and Updated. *Globalizations,11*(6), 875-893. doi:10.1080/14747731.2014.887389

Filatotchev, I., & Piesse, J. (2009). R&D, internationalization and growth of newly listed firms: European evidence. *Journal of International Business Studies,40*(8), 1260-1276. doi:10.1057/jibs.2009.18

Ganotakis, P., & Love, J. H. (2012). Export propensity, export intensity and firm performance: The role of the entrepreneurial founding team. *Journal of International Business Studies,43*(8), 693-718. doi:10.1057/jibs.2012.16

Gao, G. Y., Murray, J. Y., Kotabe, M., & Lu, J. (2010). Erratum: A “strategy tripod” perspective on export behaviors: Evidence from domestic and foreign firms based in an emerging economy. *Journal of International Business Studies,41*(6), 1090-1091. doi:10.1057/jibs.2010.32

Ghemawat, P., & Altman, S. (n.d.). . Global Connectedness Index 2016: The State of Globalization in an Ange of Ambiguity. Retrieved from www.dhl.com/content/dam/downloads/g0/about_us/logistics_insights/gci_2016/DHL_GCI_2016_full_study.pdf.

Ghemawat, P. (2017). Globalization in the Age of Trump. *Harvard Business Review*. hbr.org/2017/07/globalization-in-the-age-of-trump.

Ghemawat, P. (2009). Ridefinire la strategia globale. Bologna: *Il mulino.*

Ghemawat, P. (2018). Redefining global strategy: Crossing borders in a world where differences still matter. *Boston: Harvard Business Review Press.*

Ghemawat, P. (2013). The Globalization of Firms. *Globalization Note Series*.

Ghemawat, P. The Globalization of Markets. *Globalization Note Series*, ghemawat.com/wordpress/wp-content/uploads/2010/01/Globalization-of-Markets.pdf. Globalization and Trade (n.d.). *World Trade Report 2008.* Retrieved from https://www.wto.org/english/res_e/publications_e/wtr08_e.htm

Greenway, D (2009). The World Economy. *Global Trade Policy 2008,* 104-156

Hadjikhani, A. (n.d.). A Note on the Criticisms Against the Internationalization Process Model. *Knowledge, Networks and Power*. doi:10.1057/9781137508829.0009

Hambrick, D. C., Cho, T. S., & Chen, M. (1996). The Influence of Top Management Team Heterogeneity on Firms Competitive Moves. *Administrative Science Quarterly,41*(4), 659. doi:10.2307/2393871

Hassel, A., Höpner, M., Kurdelbusch, A., Rehder, B., & Zugehör, R. (2003). Two Dimensions of the Internationalization of Firms*. *Journal of Management Studies,40*(3), 705-723. doi:10.1111/1467-6486.00357

Herrmann, P., & Datta, D. K. (2002). CEO Successor Characteristics and the Choice of Foreign Market Entry Mode: An Empirical Study. *Journal of International Business Studies,33*(3), 551-569. doi:10.1057/palgrave.jibs.8491031

Herrmann, P., & Datta, D. K. (2005). Relationships between Top Management Team Characteristics and International Diversification: An Empirical Investigation*. *British Journal of Management,16*(1), 69-78. doi:10.1111/j.1467-8551.2005.00429.x

Herrmann, P., & Datta, D. K. (2005). Relationships between Top Management Team Characteristics and International Diversification: An Empirical Investigation*. *British Journal of Management,16*(1), 69-78. doi:10.1111/j.1467-8551.2005.00429.x

Hicks, J. (2006). The Globalization Index: The Global Top 20. *Foreign Policy,*74-81.

Hirst, Paul Quentin, (2009). Globalization in Question. *Polity*.

Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International Diversification: Effects on Innovation and Firm Performance in Product-Diversified Firms. *Academy of Management Journal,40*(4), 767-798. doi:10.5465/256948

Hitt, M. A., Bierman, L., Uhlenbruck, K., & Shimizu, K. (2006). The Importance of Resources in the Internationalization of Professional Service Firms: The Good, the Bad, and The Ugly. *Academy of Management Journal,49*(6), 1137-1157. doi:10.5465/amj.2006.23478217

Hoskisson, R. O., & Johnson, R. A. (1992). Research notes and communications corporate restructuring and strategic change: The effect on diversification strategy and R & D intensity. *Strategic Management Journal,13*(8), 625-634. doi:10.1002/smj.4250130805

Hsu, C., & Liu, H. (january 2008). Corporate diversification and firm performance: The moderating role of contractual manufacturing model. *Asia Pacific Management Review,13(1)*, 345-360.

Huselid, M. A., Jackson, S. E., & Schuler, R. S. (n.d.). Technical and Strategic Human Resource Management Effectiveness as Determinants of Firm Performance. *Academy of Management Journal,40*(1), 171-188.

Ignatius, Adi (2017). The Truth About Globalization. *Harvard Business Review*. hbr.org/2017/07/the-truth-about-globalization.

Ikenberry, G. J., & Friedman, T. L. (2005). The World Is Flat: A Brief History of the Twenty-First Century. *Foreign Affairs,84*(5), 167. doi:10.2307/20031715

International Merchandise Trade. (2018). *UNCTAD Handbook of Statistics 2018 United Nations Conference on Trade and Development (UNCTAD) Handbook of Statistics,*14-31.

International Migration Report 2017 - Highlights. (2018). *Statistical Papers - United Nations (Ser. A), Population and Vital Statistics Report*. doi:10.18356/5e2626a2-en

Jankowska, Justyna. Measures of Company Internationalization. *Financial Aspects of Organizational Management*.

Johnston, S., & Menguc, B. (septembr 2007). Subsidiary Size and the Level of Subsidiary Autonomy in Multinational Corporations: A Quadratic Model Investigation of Australian Subsidiaries. *Journal of International Business Studies,38*(5), 787-801.

Juliens, John (2013). The Flat World Debate Revisited. *Strategy-Business*. www.strategy-business.com/article/00190?gko=403fb

Kellner, D. (1998). Globalization and the Postmodern Turn. *Globalization and Europe: Theoretical and Empirical Investigation,*23.

Kenton, M. G. (2019, April 09). How Statistics Work. Retrieved from https://www.investopedia.com/terms/s/statistics.asp

Kenton, W. (2019, April 22). Research and Development (R&D). Retrieved from https://www.investopedia.com/terms/r/randd.asp

Kim, K. Y., Pathak, S., & Werner, S. (2015). When do international human capital enhancing practices benefit the bottom line? An ability, motivation, and opportunity perspective. *Journal of International Business Studies,46*(7), 784-805. doi:10.1057/jibs.2015.10

Kirca, Ahmet H. (2010). Firm-Specific Assets, Multinationality, and Financial Performance: A Meta-Analytic Review and Theoretical Integration. *SSRN Electronic Journal.* doi:10.2139/ssrn.1672973.

Kirca, A. H., Roth, K., Hult, G. T., & Cavusgil, S. T. (2012). The role of context in the multinationality-performance relationship: A meta-analytic review. *Global Strategy Journal,2*(2), 108-121. doi:10.1002/gsj.1032

Knight, D., Pearce, G. L., Smith, K. G., Olian, J. D., Sims, H. P., Smith, K. A., & Flood, P. (1999). Top Management Team Diversity, Group Process, and Strategic Consensus. *Strategic Management Journal,20*, 445-465.

Kogut, Bruce (2014). What Makes a Company Global?. *Harvard Business Review*, hbr.org/1999/01/what-makes-a-company-global.

Konwar, Z., Papageorgiadis, N., Ahammad, M. F., Tian, Y., Mcdonald, F., & Wang, C. (2017). Dynamic marketing capabilities, foreign ownership modes, sub-national locations and the performance of foreign affiliates in developing economies. *International Marketing Review,34*(5), 674-704. doi:10.1108/imr-01-2016-0004

Kumar. (2003). A Critical Methodology of Globalization: Politics of the 21st Century? *Indiana Journal of Global Legal Studies,10*(2), 87. doi:10.2979/gls.2003.10.2.87

Laamanen, T., Simula, T., & Torstila, S. (2011). Cross-border relocations of headquarters in Europe. *Journal of International Business Studies,43*(2), 187-210. doi:10.1057/jibs.2011.52

Lages, L. F., Jap, S. D., & Griffith, D. A. (2007). The role of past performance in export ventures: A short-term reactive approach. *Journal of International Business Studies,39*(2), 304-325. doi:10.1057/palgrave.jibs.8400339

Lahiri, N. (2010). Geographic Distribution of R&D Activity: How Does it Affect Innovation Quality? *Academy of Management Journal,53*(5), 1194-1209. doi:10.5465/amj.2010.54533233

Langhorne, R. (2001). *The coming of globalization: Its evolution and contemporary consequences*. Basingstoke: Palgrave.

Lee, S., & Song, S. (2012). Host country uncertainty, intra-MNC production shifts, and subsidiary performance. *Strategic Management Journal,33*(11), 1331-1340. doi:10.1002/smj.1982

Lin, W. T., & Liu, Y. (2011). The impact of CEO succession on top management teams and the degree of firm internationalisation. *European J. of International Management,5*(3), 253. doi:10.1504/ejim.2011.039941

Lockwood, B. (2004). How Robust is the Kearney/Foreign Policy Globalisation Index? *The World Economy,27*(4), 507-523. doi:10.1111/j.0378-5920.2004.00611.x

Lu, J. W., & Beamish, P. W. (2004). International Diversification and Firm Performance: The S-curve Hypothesis. *Academy of Management Journal,47*(4), 598-609. doi:10.5465/20159604

Mäkelä, K., Björkman, I., Ehrnrooth, M., Smale, A., & Sumelius, J. (2013). Explaining stakeholder evaluations of HRM capabilities in MNC subsidiaries. *Journal of International Business Studies,44*(8), 813-832. doi:10.1057/jibs.2013.27

Martens, P., & Zywietz, D. (2006). Rethinking globalization: A modified globalization index. *Journal of International Development,18*(3), 331-350. doi:10.1002/jid.1223

Matta, E., & Beamish, P. W. (2008). The accentuated CEO career horizon problem: Evidence from international acquisitions. *Strategic Management Journal,29*(7), 683-700. doi:10.1002/smj.680

Matta, E., & Beamish, P. W. (2008). The accentuated CEO career horizon problem: Evidence from international acquisitions. *Strategic Management Journal,29*(7), 683-700. doi:10.1002/smj.680

Measuring Globalisation: OECD Economic Globalisation Indicators 2010. (n.d.). Retrieved from http://www.oecd.org/sti/ind/measuringglobalisationoecdeconomicglobalisationindicators2010.htm

Migrator. (2018, August 29). Advantages and disadvantages of exporting. Retrieved from https://www.nibusinessinfo.co.uk/content/advantages-and-disadvantages-exporting

Mihalache, O. R., Jansen, J. J., Frans A. J. Van Den Bosch, & Volberda, H. W. (2012). Offshoring and firm innovation: The moderating role of top management team attributes. *Strategic Management Journal,33*(13), 1480-1498. doi:10.1002/smj.1983

Nadkarni, S., & Herrmann, P. (2010). CEO Personality, Strategic Flexibility, and Firm Performance: The Case of the Indian Business Process Outsourcing Industry. *Academy of Management Journal,53*(5), 1050-1073. doi:10.5465/amj.2010.54533196

Nell, P. C., & Ambos, B. (2012). Parenting Advantage in the MNC: An Embeddedness Perspective on the Value Added by Headquarters. *SSRN Electronic Journal*. doi:10.2139/ssrn.2050359

Nielsen, B. B., & Nielsen, S. (2012). Top management team nationality diversity and firm performance: A multilevel study. *Strategic Management Journal,34*(3), 373-382. doi:10.1002/smj.2021

O'Donnell, S. W. (2000). Managing foreign subsidiaries: Agents of headquarters, or an interdependent network? *Strategic Management Journal,21*(5), 525-548. doi:10.1002/(sici)1097-0266(200005)21:53.0.co;2-q

Papadopoulos, N., & Martín, O. M. (2010). Toward a model of the relationship between internationalization and export performance. *International Business Review,19*(4), 388-406. doi:10.1016/j.ibusrev.2010.02.003

Pearson, Internationalization Theories. (n.d.). In *The decision whether to internationalize* (pp. 60-94).

Pehrsson, A. (2009). Marketing strategy antecedents of value adding by foreign subsidiaries. *International Marketing Review,26*(2), 151-171. doi:10.1108/02651330910950402

Pioppi, C. (1993). *Wider Horizons With Larger Details: Subjectivity, Ethnicity and Globalization in: The Limits of Globalization* (Pp. 284 - 305). London: Alan Scott. Retrieved from https://www.academia.edu/2002576/Wider_Horizons_With_Larger_Details_Subjectivity_Ethnicity_and_Globalization.

Posta, Pompeo, Della (2007). Effetti, Limiti e Potenzialità Della Globalizzazione: Il Quadro Economico. *Effetti, Potenzialità e Limiti Della Globalizzazione*, 27–44., doi:10.1007/978-88-470-0609-6_3.

Ramsey, J., Cabral, F. D., & Bahia, B. R. (n.d.). How to Determine Subsidiary Performance Based on the Internationalization Strategy. Retrieved from *Journal of Management Policy and Practice vol. 14(1)* 2013

Richard, O. C., & Johnson, N. B. (2001). Strategic human resource management effectiveness and firm performance. *The International Journal of Human Resource Management,12*(2), 299-310. doi:10.1080/09585190121674

Richard, Peet,. Making Sense of Globalization: Hegemonic and Counter-Hegemonic Geographies. *The SAGE Handbook of Economic Geography*, 74–88.,

Ritzer G. (2007),. The Globalization of Nothing. *Pine Forge Press.*

Roth, K. (1995). Managing International Interdependence: CEO Characteristics in a Resource-Based Framework. *Academy of Management Journal,38*(1), 200-231. doi:10.5465/256733

Rugman, A. (2001). End of Globalization. *Toronto: ExecuGo media.*

Ruzzier, M., & Ruzzier, M. K. (2014). On The Relationship Between Firm Size, Resources, Age At Entry And Internationalization: The Case Of Slovenian Smes. *Journal of Business Economics and Management,16*(1), 52-73. doi:10.3846/16111699.2012.745812

Sanders, W. M., & Carpenter, M. A. (1998). Internationalization And Firm Governance: The Roles Of Ceo Compensation, Top Team Composition, And Board Structure. *Academy of Management Journal,41*(2), 158-178. doi:10.2307/257100

Santangelo, G. D., & Meyer, K. E. (2011). Extending the internationalization process model: Increases and decreases of MNE commitment in emerging economies. *Journal of International Business Studies,42*(7), 894-909. doi:10.1057/jibs.2011.25

Sauvant, K. P., Maschek, W. A., & Mcallister, G. (2010). Foreign Direct Investment by Emerging Market Multinational Enterprises, the Impact of the Financial Crisis and Recession, and Challenges Ahead. *Foreign Direct Investments from Emerging Markets,*3-29. doi:10.1057/9780230112025_1

Sharing Values to Create Value - CSR Europe. (n.d.). Retrieved from https://www.csreurope.org/sites/default/files/Ferrero-8th CSR Report - Summary_0.pdf

Skaggs, B. C., & Youndt, M. (2003). Strategic positioning, human capital, and performance in service organizations: A customer interaction approach. *Strategic Management Journal,25*(1), 85-99. doi:10.1002/smj.365

Slater, D. J., & Dixon-Fowler, H. R. (2008). CEO International Assignment Experience and Corporate Social Performance. *Journal of Business Ethics,89*(3), 473-489. doi:10.1007/s10551-008-0011-y
Slater, D. J., & Dixon-Fowler, H. R. (2008). CEO International Assignment Experience and Corporate Social Performance. *Journal of Business Ethics,89*(3), 473-489. doi:10.1007/s10551-008-0011-y
Sui, S., & Baum, M. (2014). Internationalization strategy, firm resources and the survival of SMEs in the export market. *Journal of International Business Studies,45*(7), 821-841. doi:10.1057/jibs.2014.11

Sparks, Colin (2005). The Problem of Globalization. *Global Media and Communication*, 1(1), 20–23.

Sullivan, D. (1994). Measuring the Degree of Internationalization of a Firm. *Journal of International Business Studies,25*(2), 325-342. doi:10.1057/palgrave.jibs.8490203

Sullivan, D. (1996). Measuring the Degree of Internationalization of a Firm: A Reply. *Journal of International Business Studies*, *21(1),* 179–192.

Sutcliffe, G. (1999). Still Underwhelmed: Indicators of Globalization and Their Misinterpretation. *Review of Radical Political Economics*, *31(1),* 111–131.

Taylor, T. (2002). The Truth about Globalization. *ABI/INFORM*, 24-44.

The World Bank (2006). Trade Openness by Country, around the World. *TheGlobalEconomy.com*, www.theglobaleconomy.com/rankings/trade_openness/

Tihanyi, L. (2005). The Effect of Cultural Distance on Entry Mode Choice, International Diversification, and MNE Performance: a Meta-Analysis. *Journal of International Business Studies*, *36(3),* 270–283.

Trade openness by country, around the world. (n.d.) (2006). Retrieved from http://www.theglobaleconomy.com/rankings/trade_openness/.

Tsao, S., & Chen, G. (2010). The impact of internationalization on performance and innovation: The moderating effects of ownership concentration. *Asia Pacific Journal of Management,29*(3), 617-642. doi:10.1007/s10490-010-9217-5

Uhlenbruck, K. (2004). Developing acquired foreign subsidiaries: The experience of MNES in transition economies. *Journal of International Business Studies,35*(2), 109-123. doi:10.1057/palgrave.jibs.8400070

Vujakovic, P. (2010). How to Measure Globalization? A New Globalization Index (NGI). *Atlantic Economic Journal*, *38(2),* 237–237., doi:10.1007/s11293-010-9217-3.

W. (n.d.). The New Wave of Globalization and Its Economic Effects. Retrieved from http://documents.worldbank.org

Wang, C., Hsu, L., & Fang, S. (2008). The determinants of internationalization: Evidence from the Taiwan high technology industry. *Technological Forecasting and Social Change,75*(9), 1388-1395. doi:10.1016/j.techfore.2008.03.002

Went, R. (1996). Globalization: Myths, Reality, and Ideology. *International Journal of Political Economy*, *26(3),* 39–59.

What is a subsidiary? definition and meaning. (n.d.). Retrieved from http://www.businessdictionary.com/definition/subsidiary.html

What is Upper Echelons Theory. (n.d.). Retrieved from https://www.igi-global.com/dictionary/upper-echelons-theory/58132

World Trade Organization. (n.d.). Retrieved from https://www.wto.org/english/res_e/statis_e/wts2017_e/wts17_toc_e.htm

Yester, K (2009). Measuring Globalization. *Foreign Policy*.

Youndt, M. A., Snell, S. A., Dean, J. J., & Lepak, D. P. (1996). Human Resource Management, Manufacturing Strategy, And Firm Performance. *Academy of Management Journal,39*(4), 836-866. doi:10.2307/256714