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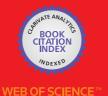
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Meet the editor



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Prior to his working as a highly skilled professional in Japan, he worked as a faculty member at the University of Colorado, Denver, USA, and the National Kaohsiung University of Science and Technology, Taiwan. He received his PhD in Finance and Economics from the Imperial College London, UK, and his MBA in Finance and Management Information System (MIS) from the University of Connecticut, USA.

Dr. Wang's main research areas are investment appraisal, corporate finance, and corporate social responsibility (CSR). He has several research publications in international journals indexed in SCImago, EI, EconLit, SCOPUS, Taiwanese CSSCI (TSSCI), and Chinese SSCI (CSSCI). His recent research papers include a paper investigating the relationship between political connections and risk-taking behavior, published in *Frontiers of Economics in China* (indexed in SCOPUS, EconLit, ESCI, and CSSCI) and a paper on CSR as growth strategy, published in *Annals of the Japan Society for the Study of Business Administration* (indexed in Japan National Library Index).

Dr. Wang has also received several government research grants, including two in Japan, four in Taiwan, and one in the United States. His current research project, sponsored by Japan Society for Promotion of Science (JSPS), aims to investigate the relationship between CSR, sustainability reporting, and corporate financial performance.

Dr. Wang also has extensive university experience in administrative and community services. He served as Academic Director of China Program, University of Colorado, Denver, USA. He was also Director of International Affairs and Director of Continuing Education while serving at the National Kaohsiung University of Science and Technology, Taiwan. Prior to his commitment to higher education, he has taken several positions in industry, such as financial director at a public-listed manufacturing firm, vice general manager at a consulting firm, and investment analyst at a public-listed insurance company.

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Preface

Globalization is a fascinating word as well as a popular topic for research. If one looks up this word on any internet search engine, he or she can find many different definitions of globalization. In general, it is fair to define globalization as a process of interaction and integration among people, businesses, institutions, and governments of different countries in many aspects surrounding human lives. In its 2008 Globalization Issue Brief, the International Monetary Fund (IMF) related globalization to international investment, spread of technology, strong institutions, sound macroeconomic policies, educated workforce, and existence of market economy and global economy. Figure 1 shows the volumes of international trade, including merchandise and services, during the period 1990–2017. If international trade can be seen as one of the indicators for globalization from the international economic perspective, this trend appears to be upward in the long run.

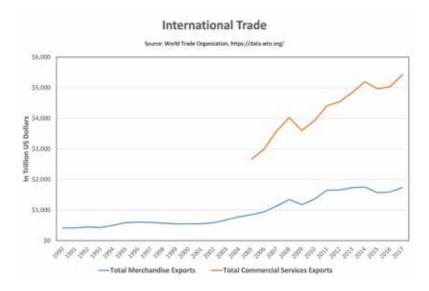


Figure 1. World International Trade by Exports (1990-2017) Data source: World Trade Organization (WTO), https://data.wto.org/

In fact, the impacts of globalization are not only on business or international trade, but also on other formal and informal institutions, such as politics, culture, and value. For instance, with a higher level of globalization, one may argue that people tend to increase international

migration. Figure 2 depicts an upward trend of immigration rate by regions for 2005, 2010, 2015, and 2017. Furthermore, Figure 3 exhibits an increasing trend for the top 10 countries with the most immigrant stock by regions for 2005, 2010, 2015, and 2017.

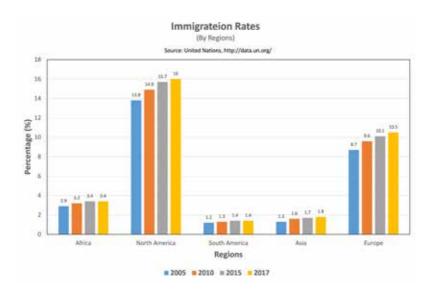


Figure 2. Immigration Rates by Regions for the Years 2005, 2010, 2015, and 2017 Data source: United Nations, http://data.un.org/

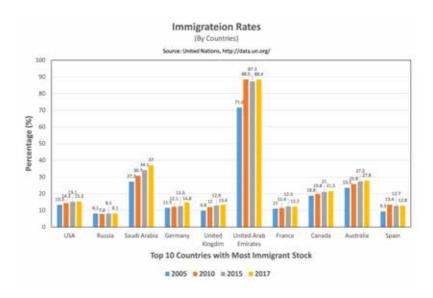


Figure 3. Immigration Rates by Top 10 Countries with Most Immigrant Stock for the Years 2005, 2010, 2015, and 2017

Data source: United Nations, http://data.un.org/

Although many studies support the idea that globalization facilitates international trade, global or regional integration, technological advance, and economic welfare, globalization does not come without any costs. Empirical studies sponsored by IMF indicate that income inequality as well as poverty in most regions and countries has failed to improve with this growing trend of globalization. It is therefore important to ensure the benefits from globalization can be more equally distributed across people in different countries.

This book addresses the issues and investigates the impacts of globalization. Of a variety of topics in globalization, four aspects particularly catch our attention and thus form the main sections of this book. These are: international economics and globalization, global business strategies, business ethics and corporate social responsibility (CSR) from a global perspective, and impacts of globalization on human lives.

Section 1 discusses the impacts of globalization on global economy and includes two chapters. Chapter 1 addresses the issues of technological evolution along the path of global economic development. The author stresses the necessity for revising some important perspectives in the existing technological system and suggests a new approach to reenergize economic growth and international cooperation. Chapter 2 discusses the role of labor income share in global value chains (GVCs). The author describes a declining change of labor income share from a dynamic setting, and concludes the importance of intersectoral production linkage between the service and non-service sectors in explaining the decline of labor income share.

Section 2 centers on discussion of global business strategies. For example, in Chapter 3 the author explains a phenomenon in which multinational corporations (MNCs) in emerging economies tend to commit more foreign direct investment (FDI) in order to enhance their competitive advantages, as well as catching up with the trend of globalization. On the other hand, Chapter 4 emphasizes the needs to develop a corporate culture of innovation to promote internal and external entrepreneurial behavior.

With an increasing level of globalization, there is also a call for re-examining business ethics and CSR, which is the main focus of Section 3. In this section, both Chapter 5 and 6 are centered on business ethics while Chapter 7 and 8 are related to CSR as well as corporate governance (CG). Chapter 5 explores the impacts of an MNC on a developing country. The authors present both positives and negatives with a case study of an MNC in Namibia and then discuss business ethics in such a setting. Chapter 6 extends the discussion on moral dilemmas of an MNC. Building on business ethics in the contemporary world, Chapter 7 conducts a qualitative inductive approach to CSR perceptions and practices in six countries of the Gulf Cooperation Council (GCC) and suggests how CSR can be conducted in the local context. In addition, Chapter 8 explores the relationship between environmental reporting and CG, based on a corporate database in Pakistan. The implication for policy-makers is that improved CG may encourage transparency of environmental reporting.

As suggested earlier, globalization impacts not only on business and international trade, but also on other areas of human lives. Section 4 thus consists of two chapters. Chapter 9 discusses how globalization, as well as other international factors, may influence and help to explain the structural regime of democracy. Finally, Chapter 10 examines how technology impacts higher education in the trend of globalization. The author concludes that technology helps to enrich academic contents and therefore enhances students' learning experiences.

On completion of this book, the editor would like to express the highest appreciation to all the authors for their contributions and the publisher's staff for their assistance. Thanks again!

George Yungchih Wang Faculty of International Liberal Arts Soka University California, USA

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International Economics and Globalization

Technological Reconstruction of the Global Economy

Irina Boiko

Additional information is available at the end of the chapter

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Abstract

The chapter addresses the technological evolution of global economy since the yearly post war years until the beginning of world crisis in 2008. The author explains spectacular growth, demonstrated in the world economy, by implication of technologies, invented during "the golden age of technologies", the dual-use peculiarity for the majority of them and their subsequent transfer from the leading countries to the less developed, enforced the extension in scale of production and markets. It should be recognized that the technological system, launched after the World War II represents the backbone of the contemporary global economy, despite the different role of its main drivers: manufacturing production, trade in goods and services or foreign direct investments. The theoretical model of the steady-state growth most appropriately describes how the increments in capital and investments enforce the economic growth, no matter of where there are originating from. The 2008 global crisis reveals the exhaustion of the "technological source" for continuing growth of the world economy, reflecting in many ways the emerging discrepancy between technological development and economic growth: deindustrialization of the leading economies, "bubble effect", eroding the foundation for economic sustainability, "Dutch disease" for the oil-dependent countries, the bias toward the energy resources in the world trade in general and, of course, worldwide growing militarization. The chapter highlights the necessity for the revision of that states of affairs in the world economy and proposes in where to start creating the new global technological system as the new backbone for restarting the economic growth and international civil cooperation.

Keywords: technological change, epochal innovations, steady-state growth model, economy of scale, economy of scope, dual-use technologies, regional comparative advantage, creative destruction, localization of technological change



1. Preface

Globalization means that world has been functioning as a single system, where any country-specific fluctuations spread over the other countries and being substantial in scope and scale urge them to adjust, even through revision of the domestic policy. The increasing circulation of resources – labor, financial and physical among regions, countries and continents makes the "resource scarcity" senseless, thus impeding the overall technological development and on that way – the global economic growth. In terms of technological and local diversities, the world became more standardized and less unique, which, in turn, engenders its fragility. Undoubtedly, diversity makes the world stronger and, on the contrary, squeezing diversity makes the world weaker!

Scientists, monitoring the economic development, could be, probably, divided on those, who are formally or informally followers of the "steady-state growth" theory and denies the most evidently approaching destruction of the existing global economic system, and those, who recognizes the realities of the Schumpeterian "creative destruction" epoch, similar or even more profound that of the Great Depression in 1930. The different standpoints are reflected in the different insights into economic development and its prospects: "followers" preserve the existing order of things (through reallocation of financial and labor resources, application of the austerity measures, confronting the national identification processes) and "Schumpeterians", who recognize the cyclical mode of economic development, with its essential downturn stage and depression (leading further to the new highs in growth and prosperity, enforced by the application of technological innovations); the emergence of new innovative companies, replacing the "old champions"; and the new individuals-innovators coming to the scene and taking a lead over societies with their exceptional ability of taking a risk of novelty rather than exploiting the way things go on.

Among the multifaceted contradictions of our epoch, the profound transformation of global economic and technological system spurs any other political, ecological, social challenges confronting the global society. Probably the new and more sustainable global politicoeconomic system will originate from the technologically transformed local societies intersected in between and on that way establishing a new model of interregional and subsequently international division of labor as the core of the renovated market economy¹. This is our main standpoint underpinning our further insights into globalization.

^{&#}x27;The market economy foundation is explicitly explained by A. Smith in his famous investigation "An Inquiry into the Nature and Causes of the Wealth of Nations". He starts his insights into the market economy with the analyses of the division of labor, which enforces gradual technological improvements, leading to the labor productivity growth and hereupon increasing the volume of tradable goods as contribution into the wealth of nations. In his first chapter, entitled "Of the Division of Labor" he writes: "This great increase of the quantity of work, which, in consequence of the division of labour, the same number of people are capable of performing, is owing to three different circumstances;

first, to the increase of dexterity in every particular workman;

secondly, to the saving of the time which is commonly lost in passing from one species of work to another;

and lastly, to the invention of a great number of machines which facilitate and abridge labour, and enable one man to do work of many". (A. [19]). Actually, A.Smith treats the division of labour and technological change as the market foundation in controversy with the "laissez faire, laissez passer" principle, which is usually refers to his name.

2. Creating the global economy after the World War II

The twentieth century historically is unprecedented in terms of economic growth, elevated by the growth in production output, trade, emergence of new business in services, tourism and information, spreading over the countries, involving their population into economic activities, therefore increasing personal incomes and consuming capabilities almost in all over the world.

Peaking point in the global economic development after the World War II was reached in 2008, before the first sign of the incoming economic downturn has appeared. During the period 1950–2007 the Gross World Product has increased from \$5.3 trillion to \$65.6 trillion. – more than 12 times. During the same period the World export has increased from \$295 billion. to \$12 trillion. - more than 40 times. About the growing welfare has been witnessing the following fact: in 2007, at the eve of the world economic crisis the world car sales have reached its highest level of \$1183 billion (or 8.7% of the whole world export) or over 2 times higher than the trade in textile and clothes. The other spectacular fact – the pace of growth of the average income in China, one of the poorest countries in the twentieth century: in 1952 with only 445 CNY per year while in 2016 it amounted 67,569 CNY per year, increasing almost in 152 times!

The explanation of that fabulous global economic growth would be inappropriate without mentioning the critically low level from which it originates. After the World War II, the manufacturing capacities, transportation systems, houses in many countries in Europe and Asia were almost totally destroyed. Margaret MacMillan writes: "In Germany, it has been estimated, 70% of housing had gone and, in the Soviet Union, 1700 towns and 70,000 villages. Factories and workshops were in ruins, fields, forests and vineyards ripped to pieces. Millions of acres in north China were flooded after the Japanese destroyed the dykes. Many Europeans were surviving on less than 1000 calories per day; in the Netherlands they were eating tulip bulbs. Apart from the United States and allies such as Canada and Australia, who were largely unscathed by the war's destruction, the European powers such as Britain and France had precious little to spare. Britain had largely bankrupted itself fighting the war and France had been stripped bare by the Germans" [1]. The twentieth century economic story is, the most probably, about the post war recovery, steady growth in production output, successive extension of trade and markets, appearance of new profitable business in services with the involvement of new countries and companies into the global trade.

Figure 1 shows the linkage between the World GDP and growth in manufacturing output, revealing the key role of industrial production in driving the economic growth, creation of new jobs and extension of markets, supplying producers with raw resources and materials and providing sales of final and semi-final goods. Figure 2 displays the increasing role of trade in the development of global economy beginning from 1990. Elimination of trade barriers, pursued by the World Trade Organization (successor of the General Agreement on Tariffs and Trade, established in 1947 with the inclusion of 164 member states up to 2017 among 196 total number of states in the world²), has played significant role in developing the world trade and global economy in general.

²Some controversy might happen here. The United Nations, for example, recognizes more than 240 countries and territories. The United States, however, officially recognizes fewer than 200 nations. Ultimately, the best answer is that there are 196 countries in the world. The number of the countries in the world. https://www.thoughtco.com/ number-of-countries-in-the-world-1433445

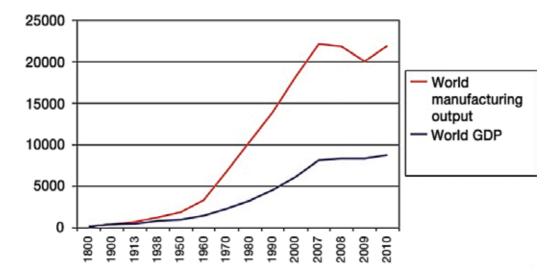


Figure 1. World manufacturing output and GDP (rebased, 1800 = 100). Source: HIS global insight, Paul Bairoch, World Trade Organization. https://pt.slideshare.net/geoffriley/tutor2u-global-economy-peter-marsh-on-a-new-industrial-revo lution?ref=&smtNoRedir=1.

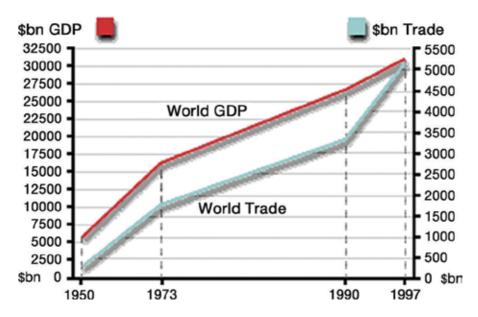


Figure 2. The development of world trade. Source: WTO.

At the same time the circulation of the production factors – capital and labor – among the countries has intensified substantially. Gross cross-border capital flows rose from about 5% of world GDP in the mid-1990s to about 20% in 2007, or about three times faster than

world trade flows³. According to the International Labour Organization, in 2015 the migrant workers accounted for 150.3 million of the world's approximately 232 million international migrants. The vast majority of migrant workers are in the services sectors, with 106.8 million workers accounting for 71.1% of the total, followed by industry, including manufacturing and construction, with 26.7 million (17.8%) and agriculture with 16.7 million (11.1%)⁴.

The interdependence among the countries became critical. The United States, for instance, being the dominated country for the rest of the world, depends substantially on the inflows of foreign capital. According to Kames K. Jackson, the US direct investment at the current cost in 2015, included into the "net international investment position of the United States" amounted \$7280.6 billion.⁵ The other case of the increasing dependence of national state from its international disposition demonstrates Russia with its crucial dependence on trade in oil and gas. And almost every country in the world has been falling under the Chinese economic dependence in terms of trade, investment and world economic growth in general. The fragility of the global economy became so high that a minor fluctuation somewhere in the world might be a trigger for dismantling the whole post war economic architecture.

3. Technological system: the backbone of the post war economy

Economists often treat the monetary policy, embracing manipulation of interest rates, exchange rates, taxes as the main regulation intervention of state to the market economy and the means for spurring the economic growth. Charles I. Jones writes on that matter: "...it is helpful to think of the economist as a laboratory scientist. The economist sets up a model and has a control over the parameters and exogenous variables. The 'experiments' is the model itself. Once the model is setup, the economist starts the experiment and watches to see how the endogenous variables evolve over time" ([2]).

On the contrary, our perception about economic growth is based on the assumption that it is driven by the technological nucleus, endogenously created within the economic system. Technological systems overlapping with economic systems could either facilitate the economic growth or impede it. After the World War II and until 2008, the technological input into economic development has produced an output - explosive economic growth, gradually spreading over the increasing number of countries.

The technologies, invented during the so-called "golden age of technologies" (the period embracing the second half of the nineteenth century and the first decades of twentieth century), have composed the technological backbone for the post war recovery and forthcoming economic growth. In his book, entitled "Creating the Twentieth Century" Vaclav Smil

³International capital flows: Structural reforms and experience with the OECD Code of Liberalization of Capital Movements Report from the OECD to the G20 Sub-Group on Capital Flow Management June 2011 https://www.oecd. org/economy/48972216.pdf

⁴http://www.vitainternational.media/en/article/2015/12/17/150-million-migrants-in-the-global-workforce/139/

^{5"}T James, K. Jackson. The United States as a Net Debtor Nation: Overview of the International Investment Position" October 7, 2016. https://fas.org/sgp/crs/misc/RL32964.pdf

states that: "The greatest technical discontinuity in history took place between 1867 and 1914. This era was distinguished by the most extraordinary concatenation of a large number of scientific and technical advances the synergy of which produced bold and imaginative innovations as well as ingenious improvements of older ideas, by the rapidity with which these innovations were improved after their introduction, by their prompt commercial adoption and widespread diffusion, and by the extent of the resulting socio-economic impacts. Even the most rudimentary list of these epoch-defining innovations must include telephones, sound recordings, light bulbs, practical typewriters, chemical pulp, and reinforced concrete for the pre-1880 years. The astonishing 1880s, the most inventive decade in history, brought reliable electric lights, electricity-generated plants, electric motors and trains, transformers, steam turbines, gramophone, popular photography, practical gasoline-fueled internal combustion engines, motorcycles, cars, aluminum production, crude oil tankers, air-filled rubber tires, steel-skeleton skyscrapers and pre-stressed concrete. The 1980s saw Diesel engines, x-rays, movies, liquefaction of air, and the first wireless signals. And the period between 1900 and 1914 witnessed mass-produced cars, the first airplanes, tractors, radio broadcasts, vacuum diodes and triodes, tungsten light bulbs, neon lights, common use of halftones in printing, stainless steel, air conditioning, and the Haber-Bosch synthesis of ammonia (without which at least 40% of humanity would not be alive)" (Vaclav [3]). The mismatch between these technologies, requiring the long-term investments into capital-intensive production and the gradual extension of sales, on the one side and the "market shortemism" on the other side was overcome by the state intervention. During the War economies of twentieth century the leading countries: the United States, the USSR, Germany, the United Kingdom, Japan and many others pursued the state intervention policy, replacing the market in terms of provision the long-term financial resources, state military procurement, R&D facilitation and protection of national companies from the international competition. Margaret McMillan writes: "Under the stimulus of war, governments poured resources into developing new medicines and technologies. Without the war, it would have taken us much longer, if ever, to enjoy the benefits of penicillin, microwaves, computers - the list goes on. In many countries, social change also speeded up" (Margaret [1]).

After the World War II, the enormous intellectual capital and R&D capabilities, accumulated during the war in order to facilitate the production of armaments, were shifted to the non-military production, especially in the countries, in which the military spending were prohibited (Japan, Germany and alike). In coincidence, the world was divided on the fast growing countries, competing on the market of non-military production (the most spectacular was the rise of the so-called "catching up countries" of the East Asia), and the countries, producing innovations regardless their predominantly military application, the United States and the USSR to mention here.

That was the time of permanently cumulating welfare around the globe: the scale and diversity of production output in the leading countries was growing steadily, the international trade, propelled by the gradual elimination of the trade barriers expanded quite rapidly. The emergence of the new comer countries, "producing the same at less cost", filled out the fast

growing market of consumer goods, first emerged in the leading countries and then – in the rest of the world. Besides, the new economic activities, such as tourism, logistics and transportation, appear. The technological backbone, created at the beginning of twentieth century, gave a birth for the enormous varieties of economic activities, embracing countries, companies and ordinary people.

4. Endogenous insight into the technological input into production output

There are two different theoretical insights into the role of technologies in economic development: one considers technologies as the exogenous input into production output and economic growth, the other considers technologies as the endogenous input into production output and economic growth. The critics of the "exogenous theory" writes: "Growth has occurred not by producing more of the same, using static techniques, but by creating new products, new processes, and new forms of organization" [4].

The general principles of the endogenous theory are reflected in the "steady-state growth model". Smriti Chand explains the essence of that model in the following way: "The concept of steady-state growth is the counterpart of long-run equilibrium in static theory. It is consistent with the concept of equilibrium growth. In steady-state growth all variables, such as output, population, capital stock, saving, investment, and technical progress, either grow at constant exponential rate, or are constant [5].

To some extent the Cobb–Douglas production function, based on the assumption that output increases by the labor and capital increments would be referred as the endogenous theory of economic growth, based on the steady-state principles. Peter Howitt writes: "The first version of endogenous growth theory was AK theory, which did not make an explicit distinction between capital accumulation and technological progress" ([6]). Charles I. Jones explains that theoretical model in the following way: The production function describes how input such as bulldozers, semiconductors, engineers, and steel-workers combine to produce output. To simplify the model, we group these inputs into two categories, capital, K, and labor, L, and denote output as Y. The production function is assumed to have the Cobb–Douglas form and is given by

$$Y = F(K, L) = K^{\alpha}L^{1-\alpha}$$

where α is some number between 0 and 1. Notice that this production function exhibits constant returns to scale: if all of the inputs are doubled, output will exactly double [2].

In other words, to produce more output the additional input of labor and capital is required – this is the core of the "steady-state" visioning of economic growth. Is there any other theoretical justification for the large corporations exploiting more and more resources all over the world, absorbing more and more people, ignoring their national identities and personal dignity?

The Cobb-Douglas model was further developed by the Nobel laureate in economics Robert Solow, by adding a technology variable, A, to the production function:

$$Y = F(K, AL) = K^{\alpha}(AL)^{1-\alpha}$$

where A represents the technology variable.

Charles I. Jones writes: "An important assumption of the Solow model is that technological progress is exogenous: in common phrase, technology is like 'manna from heaven', in that it descends upon the economy automatically and regardless of whatever else is going on in the economy" [2]. Evidently, the "steady-state growth model", based on the exogenous insight into the role of technology in the production function and in economic growth in general, is not coinciding with the "new reality" of increasing economic flexibility.

Exogenous insource of technological changes in economies was further criticized by the followers of the endogenous economic growth theory. Paul Romer, Kenith J. Arrow, Lucas and others proposed their quite different insight into the role of technologies in economic growth. As Peter Howitt underlines: "The neoclassical growth theory of Solow (1956) and Swan (1956) assumes the rate of technological progress to be determined by a scientific process that is separate from, and independent of, economic forces. Neoclassical theory thus implies that economists can take the long-run growth rate as given exogenously from outside the economic system. Endogenous growth theory challenges this neoclassical view by proposing channels through which the rate of technological progress, and hence the long-run rate of economic growth, can be influenced by economic factors. It starts from the observation that technological progress takes place through innovations, in the form of new products, processes and markets, many of which are the result of economic activities". ([6]). However, the both theories consider labor and capital as the dominant factors for economic growth even when explaining the role of the "technological input" into the production output to quote here James Morley who writes for the World Economic Forum: "Economist Paul Romer has developed a theory of economic growth with 'endogenous' technological change - that is, it can depend on population growth and capital accumulation" ([7]).

Assumedly, the notion "endogenous" for explaining the modern economic development based on technological innovations precisely is what the new economic mainstream should have as its core. However, the theories, shortly described above, have a critical shortage – they are academic. Robert L. Heilbroner describes this shortcoming as the economic irrelevance: "As a rule, the aspect of economics that upsets those who begin to study it is its abstractness, its seeming removal from life, but any instructor worth his salt can reassure his students that this abstract quality is a strength and not a weakness if we are to study large-scale questions, and that the "unreality" of many economic conceptions conceals a sharp cutting edge" [8].

Perhaps there are at least two main aspects of the "endogeneity" of the modern technology-driven economic development stemming from the real life and practice:

 technological innovations represent the main tool, invented by the human being, for overcoming various obstacles, restricting economic development or even worse – threatening the humans existence. Probably, the J. Watt steam engine was never invented unless the deforestation, encountering by England in seventeenth and eighteenth centuries. In this sense, the successful technologies starts not when they are supported by the government but when they are focused on overcoming the very precisely identified economic necessities;

 emergence of the technological innovations per se results from a very complicated economic configuration. This is not an easy deal to produce fabulous tune on that piano! Only a few remarks on that matter: the technological innovations (from its start in basic research as a part of the overall R&D) are very unattractive for the private investments (they require substantial long-term investments with low portion of commercially successful outcomes with high "spillover" and immense number of "imitators" "waiting at the door"). Moreover, successful technologies embraces not only the stage of their creation in the R&D laboratories, but their selection by the private companies, their adoption in the production processes, their commercialization on the market, their diffusion among as much as many national companies (for cumulating the national economic growth in general), their technological feedbacking from the markets. That is why it is a substantial simplification to consider technological development within a narrow framework of the government financial support for R&D and education.

In fact, the intersection between technologies and economy represents one of the most significant theoretical and practical shortages. In this exploration we would like to explain only two among many others distinctive features of the core twentieth century technologies: their dual-use capabilities and the large-scale character.

The majority of the key technologies in twentieth century initially was applied in the production of armaments and then were diffused into the non-military production. VernonW. Ruttan in his book "Is War Necessary for Economic Growth? Military Procurement and Technology Development" writes about the dual-use properties of the military technologies: "It is difficult to overemphasize the importance of the historical role that military procurement has played in the process of technology development. Knowledge acquired in making weapons was an important source of the industrial revolution" [9]. The Scandinavian scientist T. Cronberg underlines the role of state in the R&D development in the United States: "State expenditure on research and development for the military has been the way the US government created a national technology base. In contrary where industrial policy and state intervention in the affairs of commercial companies are not accepted, military technology has been a way to go around this sensitive theme. Military research and development has constituted the industrial policy of the US, the very nature of the spin-off paradigm bears witness to this. The dual-use handshake is simply a new way of defending industrial policy" [10].

The military procurements from the United States Department of Defense gave rise the basic industries, such as triangle - Aerospace, Communications and Electronic industries (ACE), incubating large American companies Rockwell, Lockheed, McDonnel-Douglas, General Dynamics, Huges, Northrop and others. The number of the new industries emerged in consequence of the advance in the military technologies and their spin off to the civil production: computers, jet aircraft, nuclear power and space communication.

From the graph, depicted on **Figure 3** [11] the changing role of military and civil aircraft manufacturing during the wars and in between is seen. However, there would be no doubt that the military aircraft production fertilizes civil aircraft manufacturing in terms of technologies, R&D capabilities, graduation of personnel, provision of equipments and in terms of the other common production characteristics.

Similar to aircraft manufacturing the other industries in the United States acquired advantage from the dual-use capabilities of key technologies. To mention electronic industry, about which T. Cronberg writes, "Early military and space programs helped the US electronic industry to achieve research and production superiority over its competitors through the early 1970s. The military requirement-for example, for miniaturization and lower power consumption- coincided almost exactly with the likely needs of commercial uses in the computer industry" [10].

Undoubtedly, the war economy had been dominating through the entire twentieth century and it cross fertilized the other industries and countries through the process of technology spin off. However, the impact of the military technology on the civil production has changed since then. Ann Markuzen and Joel Yudken underline: "The military requirement no longer coincides with the likely needs of commercial users. This is due to the more complex nature of the military technology, its special product development environment and the general dynamics of the military-industrial complex itself. Innovation in the military becomes scrutinized and leads only to incremental improvements.... Submarines become faster and faster, quieter, bigger and with longer ranged instead of becoming simpler and more efficient. At the

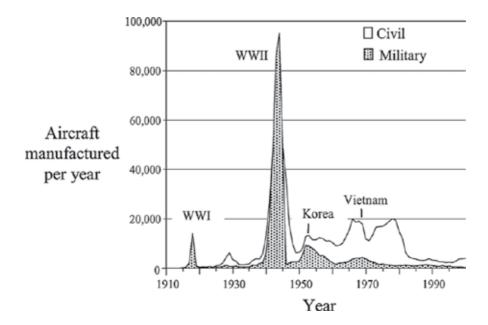


Figure 3. U.S. aircraft production in the twentieth century. Source: Paul D.Collopy. Military technology pull and the structure of the commercial aircraft industry. 2004 https://www.researchgate.net/figure/U-S-aircraft-production-in-the-20th-century-9-10_245430534.

same time the military industry becomes more dependent on commercial technology, such as computers" [12]. Therefore, the military technologies could not play a role of the technological drivers for the national and global economic growth any more.

The other economic peculiarity of the core technologies in twentieth century, which we would like to mention in our investigation, is their consistency with the "economy of scale". In other words, in terms of capital turnover, profitability and cost competitiveness, their implication in industry requires gradual extension in production scale and subsequently in market sales scale. In case of issuing only a few copies, as it has happened with the aircraft manufacturing in Russia at the beginning of 1990, the industry could not exist.

The extension of production scale makes the cost of unit less, requiring expansions of the products sales on the international markets, conquering competitors and advocating the free trade regime. Ultimately, large corporations take the lead on the markets, swallowing up the competitors through mergers and acquisitions, launching the "entry barriers", establishing the multinational network in production and sale. The offshore production launched in the countries with cheap labor, tax holidays and devaluated currency, enables the large corporations to reduce costs of production through the exploitation of "geographic advantage" rather than application of process technologies. Logistically, the offshore production finds its sales in the United States, Europe and the other countries with high average income, large number of consumers and in the countries, where the domestic production was replaced by import (to mention here Russia and the other ex-USSR countries). The advantage of "large" became more lucrative and less risky than testing something new. The technological drive is not what the large corporations would like to accept. Needless to say, that that path of economic development became resource consuming, ecologically unfriendly and leads to suppression of the own national business in as much number of countries as never before. The most probably "national identity" agenda, which has been accepting today in many countries and usually referred by political establishment as "populism of political opposition" has its fundamental nucleus - the exhausted capacities of "large", whether they are corporations or any other actors, in their mission to lead the global world. The global world needs to reconstruct the whole economic architecture, reconsidering the role of large and small as its important chains.

5. Changing role of technological system: from driving to impeding the global economic growth

The global crisis has interrupted the spectacular economic growth in 2008. As many experts agreed, the main causes of the beginning economic downfall were emerged in the financial sector. That is why the economic crisis was denoted as the global financial crisis. We have quite different standpoint on the nature of the global economic crisis, explaining it by the technological reasons. Generally speaking, large companies as the main actors in the global economy are not technological drivers any more, as we noted it before. The theoretical conceptualization of that fact is yet insufficient, that is why we are quoting the participants of the Davos forum 2017, who had expressed a strong concern about the emerging "shortemism"

in the global economic affairs, which is essentially inconsistent with the long-term nature of the technology-driven development. We would like to quote the British businessman Martin Stuart Sorrell, who has evaluated the technologies, applied by the global companies as: "big companies made incremental, but not fundamental innovations". Sharing that vision on large business the Ivorian businessman TidjaneThiam says: "Once you became big your natural impose is to be incrementalist and conservative and protect your position"6. Therefore, the most probably the large multinational companies has been acting today as the opposition rather than supporters to technological change of society.

Among the other reasons, restricting the further technological development and therefore negatively effecting the growth of global economy are the following:

- 1. The deindustrialization of the leading economies, which is denoted in the increasing share of services in the GDP and employment. For example, when the global economic crisis starts in 2008 the share of services in the GDP composed: over 80% in the United States, about 69% in Germany, 77.4% in France and 72.3% in Japan. It means that manufacturing production, whether it is knowledge-intensive or not, has been losing its common ground. Among many circumstances are increasing cost of labor, favoring consumption rather than production, stringent ecological requirements elaborated for the manufacturing production, import-favorable exchange rate of the national currencies in many leading countries.
- 2. The "Dutch disease phenomenon", affected Russia, Saudi Arabia, Venezuela and the other oil-dependent countries. The Russian economic drama emerged since the early 1990th, when the market-driven insight on the way the country should follow, has ignored a substantial pool of R&D capabilities, accumulated during the Soviet times. As a result today the Russian dependence on oil and natural gas is enormous: 33% of total export, refined oil and gas products estimated as 24% of total export and natural gas estimated as 14% of total export (three articles in sum composes 71% of the total export), which is depicted in Figure 4. It is worth remembering that the second half of the twentieth century was marked by a strong technological confrontation between the United States and the USSR, enforcing the worldwide move forward in science, technologies and education. When Russia, as the main USSR successor and one of the leading global technology race participant, has left its disposition it negatively affected the other countries.
- 3. The general global economic biases toward increasing role of raw, specifically energy, resources in trade, which is depicted on Figure 5.

In 2015 the crude oil sales overflow any other trading items, reaching \$786.3 billion., the third position in the global trade was occupied by the processed petroleum oil, estimated as much as \$605.9 billion. The car sales, estimated as \$672.9 were on the second position⁷.

Davos 2017 - Size Matters: The Future of Big Business https://www.youtube.com/watch?v=0dT3D3Ip7xo&t=370s ⁷List of countries by export. https://en.wikipedia.org/wiki/List_of_countries_by_exports

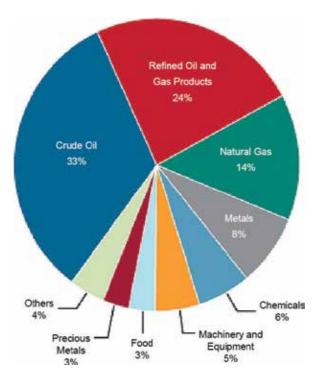


Figure 4. Russian export breakdown (as of 2013). Source: Federal Customs Service. Renaissance capital. US global Investors. http://www.valuewalk.com/2016/06/brexit-sanctions-russia/.

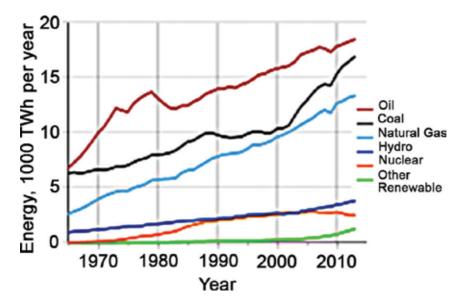


Figure 5. World consumption of primary energy by energy type. Source: Peak oil. http://en.wikipedia.org/wiki/Peak_oil.

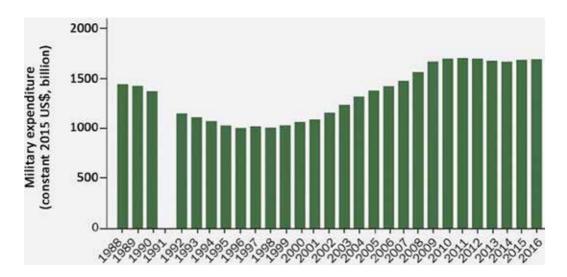


Figure 6. World military expenditure, 1988–2016. Source: World military spending: Increases in the USA and Europe, decreases in oil-exporting countries. https://www.sipri.org/media/press-release/2017/world-military-spending-increases-usa-and-europe.

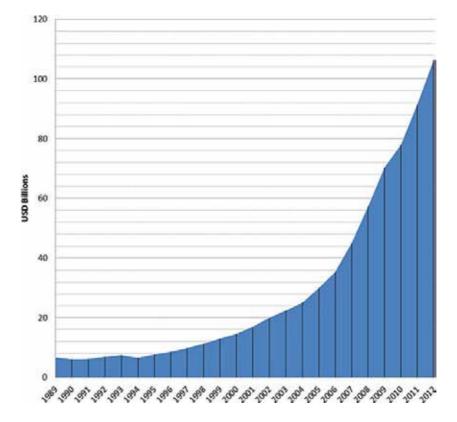


Figure 7. China published military budget. Source: Military budget of China https://en.wikipedia.org/wiki/Military_budget_of_China.

4. The escalation of military spending and defense procurements represents not the last factor, undermining the further technological development and growth in global economy. Figures 6 and 7 depict the military spending in the world, specifically fast growing in China.

The growing militarization of the economies means that commercial technologies are gradually replaced by the military, the state has been replacing the market in the processes of creation and application of new technologies and the companies are forced to compete for the state military contracts rather than market share and cost reduction. Besides, the cost of the new type of armaments is growing rapidly, negatively affecting the state budgets, which has been undermining the financial stability in the military dependent countries. In his article "The Jet That Ate the Pentagon: The F-35 Is A Boondoggle. It's Time to Throw It In the Trash Bin (excerpt)" Winslow Wheeler writes: "The F-35 will actually cost multiples of the \$395.7 billion cited above. That is the current estimate only to acquire it, not the full life-cycle cost to operate it. The current appraisal for operations and support is \$1.1 trillion - making for a grand total of \$1.5 trillion, or more than the annual GDP of Spain" [13].

Therefore, the modern economy, flourished on a substantial technological base, became unfriendly for the further technological development.

6. Creating new technological system in twenty-first century

The challenges, encountering the global society, have been steadily multiplying in scale and variety: escalation of trade wars, financial flexibility, disintegration processes in Europe, migration crisis, militarization of economies, global warming - these and many other problems have been undermining sustainable life of human beings. To cope that challenges the governments, pursuing the monetary paradigm in regulation, are spending more from their budget (at least mentioning 50 billion pounds, which the UK will pay for their leave the EU), rather aggravating than improving the state of affairs. The entire global system has been badly working provoking manifold disruptions as it is listed above. What would be more useless than the efforts focused on improvement the obsolete, ill working politico-economic system? Let us recall here the Simon Kuznets statement, which he made in his Nobel lecture in 1971: "... the changing course of economic history can perhaps be subdivided into economic epoch, each identified by the **epochal innovation** with the distinctive characteristics of growth that it generates" ([14])⁸.

Epochal innovations and epochal transformation of the global economy requires new knowledge, new mindsets and new individuals, pursuing the novelty in theory and practical decision makings. When Charles Jones explains economist "as a laboratory scientist, setting up a model..." [2] we could not agree. Economics in accordance with our perception is a kind of

⁸S. Kuznetc explains the epochal innovations as the following: "The major breakthroughs in the advance of human knowledge, those that constituted dominant sources of sustained growth over long periods and spread to a substantial part of the world, may be termed epochal innovations". From: Simon Kuznets. Modern Economic Growth: Findings and Reflections. http://www.nobelprize.org/nobel_prizes/economics/laureates/1971/kuznets-lecture.html

social engineering science [15], and economists are social engineers, occupied in creation a building of new economy, rather than manipulating data, drafting economic scenarios or just only criticizing governments.

What should we know about technological adjustment to the ongoing processes of global disruption? Let us make some preliminary insights, which, probably will be reflected in the further investigations.

First, the general evolution leads to a gradual replacement of labor-intensive and capitalintensive by respectively labor-saving and capital saving mode of production. In this regards, any labor-intensive or investment-intensive decisions in economy should be treated as inconsistent to the general trend and prospective. Once when we have made our investigation for the prospects of economic development of the Russian Far East, we were brought to the conclusion that for that specific region, peculiar in terms of shortage in population, substantial dependence on external energy resources and scarcity of capital resources, the laborintensive and capital-intensive (energy intensive as well) model of economic development is inapplicable. It led us searching the new technologies, substituting the scarce regional resources and they were found. Only one case among many others: three scientists and five engineers had started to produce extracts from Holothuroidea, which brought them substantial benefit and contributed into improvement of the regional economic performance in general. Production of that kind brings substantial export revenues, accumulate financial resources to pay salaries, taxes and making further own investments into extension of production facilities. Besides, it is energy, capital and labor saving technologies and what is also very important - environmentally friendly [16]. This important finding encouraged us to learn the technology-intensive capabilities, existing in some other Russian regions. In fact, the reserves for technology-driven economic growth even in the lagged behind regions are enormous. Who knows, probably, the other countries also endowed with that kind of "hidden" localized capabilities.

Second, the other decisive characteristic of the prospective key technologies for restarting the economic growth stems from the technology life-cycle shortening. It increases the rapidity with which the new technologies has been replacing the already applied, requiring the close cooperation (face-to-face interaction) between scientists from various fields of knowledge (cross-discipline interaction), small and medium innovation companies, local administration, financial institutions, universities and the other "innovation stakeholders". The higher flexibility of small and medium companies appropriate to the increasing rapidity of technological change makes that companies a new technological drivers, replacing the large companies in that mission. The "economy of scope" when production of technologically unique products dominates over the exploitation of the given technologies within the "economy of scale" paradigm, signifies about the appearance of the new stage in technological development.

Third, there are no justifications anymore for the development of military technologies neither in terms of their spin-off effect on the civil production and employment nor R&D advancement and multiplication of investments. Militarization represents a resource consuming process, harmful for the environment and risky for the financial stability of the national states. Explaining the necessity of elevation the armaments production, accompanied by anticipating job creation, R&D facilitation and investment growth, the politicians should be clear enough about its long-term destructive consequences.

Fourth, we would like to emphasize specifically the process of "technological localization", which is not common, but would enable understanding the new role of regions in the global reconstruction. Perhaps, regions would be a new nutshell for incubating not only specific technologies and technological innovations, but new technological systems, embracing S&M innovative companies; universities, providing the R&D and education capabilities; and local administrations. Simon Kuznets denotes a special technological advantage of small nations in the following statements: "Obviously, community of feeling, a sense of common destiny, and subordination of individual or group interest to that of the whole, are far easier to attain in small and homogenous nations than in large nations with their regional, racial and other diversities".... "Another possible advantage of small units is the rapidity with which they can adjust to changing situations. In a sense this rapidity is related to the greater possible ease of reaching secular decisions. And since economic growth is a process of continuous adjustment to a changing technological potential and a changing constellation of national structures, the speed with which small nations may be able to make such an adjustment is a great advantage" [17].

Obviously, regions are endowed with specific resources, making them different from each other. Usually that regional specification is indicated as "regional comparative advantage". Technologies represent a means with which regions overcome their specific "comparative disadvantage" and resource scarcity, develop their specific "comparative advantage" and within their specific niche accumulates R&D capabilities to produce technologically complicated products for increasing value-added production, spurring the economic growth, making the local society more sustainable, wealthy and adjustable to the exogenous turmoil.

Localities or regions would be a space, where technologies are strongly related with the real economic needs, which is quite different from the vision of technologies as some know-how, produced in R&D laboratories and transferred into innovation companies with the assistance of venture capital. Our perception of the technology-oriented networking local communities, clusters considers them as a new "drivers" for technological change and global economic growth, replacing large companies – "old champions" in that mission. From that standpoint the phenomenon of "Brexit" or "Katalonia's challenge" could be explained as the first signs of the forthcoming technological transformation of the national and local societies, based on their specific "national (regional) comparative advantage" or "national (regional) economic identity". These processes need to be carefully governed in a proper economic, rather than political, manner. No doubt technologically advanced local societies, pursuing technology-based economic growth, will make the global community more interactive, sustainable and civilized.

7. Instead of conclusion

The growing contradictions in international and economic relations between countries lead to the destruction of the established world order, which can produce a negative impact on humanitarian stability in the world. Overcoming of the world's major problems should be sought not in the military sphere, or even in the political dialog, but in the economy, in its transformation to a new stage in development. Today, as never before, intellectuals from various countries of the world should gather together for proposing a new agenda for the global development based on new fundamental principles [18].

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The Declining Labor Income Shares Revisited: Intersectoral Production Linkage in Global Value Chains

Fumihide Takeuchi

Additional information is available at the end of the chapter

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Abstract

The decrease in labor income share has gained worldwide publicity given that it may affect income inequality and other macroeconomic aggregates. This chapter focuses on global value chains (GVCs) as an important determinant of changes in the labor income share and indicates the mechanism responsible for the share decline under GVCs, which has not been documented in prior studies. The mechanism of developing countries is of particular research interest. In such countries, the services sector promotes capital deepening and increased involvement in GVCs because nonservices (especially manufacturing) tasks are offshored from developed to developing countries, creating demand for services as intermediate input to these tasks in the recipient developing countries. As a result, capital deepening is promoted in the services sector, and this results in lower labor income share. We conclude that the intersectoral production linkage between the services and nonservices sectors plays a major role in the downward trend of labor income share in developing countries.

Keywords: labor income share, GVCs participation, capital deepening, intersectoral production linkage, developing economies

1. Introduction

The decrease in labor income share has received worldwide attention given that it is frequently associated with income inequality and also affects macroeconomic aggregates. At the enterprise level, wages represent a cost and affect firms' investments. At the household level, wages are a determinant of household consumption [1]. Many studies that have documented the fall in the share have tried to understand the causes. Possible determinants of the changes include



globalization (the expansion of international trade and capital flows), technological change, capital deepening (the amount of real capital present in relation to labor increases), product and labor market institutions, and the bargaining power of labor, among others. This chapter focuses on the global value chains (GVCs) as an important determinant of changes in the labor income share and indicates the mechanism responsible for the share decline under GVCs, which has never been documented in prior studies. We analyze the mechanism by measuring the labor income share at the sectoral level in developing and developed countries.

The important point is that the amount of services input for nonservices production increases in developing countries where the nonservices production has started to be conducted by multinational enterprises (MNEs) from developed countries in GVCs. As a result, the services sector in developing countries actively accumulates capital to supply quality services to the nonservices sector effectively while the nonservices sector also promotes capital accumulation under severe international competition. The consequent macro-based capital deepening decreases labor income share in developing countries. In developed countries, on the other hand, many tasks of the nonservices sector with low elasticity of substitution between capital and labor are offshored to developing countries and the remaining nonservices sectors with relatively high elasticity of substitution accumulate capital at a rapid pace in an environment of low local relative cost of capital.

This mechanism of worldwide labor share changes can be analyzed by utilizing the data of sectoral labor income shares of developing and developed countries. Preceding studies have rarely used this kind of comprehensive dataset and rarely discussed intersectoral linkages between services and nonservices sectors as important determinants of the changes in macroeconomic labor income shares in developing countries.

2. Trends in the labor income share and basic drivers of the change

As summarized by Brada [2] and Young and Tackett [3], we find that labor income shares of world economies have shown a downward trend since the 1980s (especially since the 1990s), and this decline trend is shared by developed and developing countries equally. This chapter focuses on the period from 1995 to 2011 for which related data are available. The ratio of labor income share in 2011 to that in 1995 for developed countries (32 OECD countries) is 0.956 on average, and 0.932 for 23 developing countries (data source is Penn World Table Ver.9.0).

Theoretically, the key parameters that influence the factor shares of income are the elasticity of substitution between capital and labor, the accumulation of production factors, and labor- and capital-augmenting technology or directed technological changes [4]. If capital and labor are gross complements, as most empirical evidence suggests, and if the directed technological changes are not taken into account, then the labor income share increases as long as a relative cost of capital to labor decreases, as would be the case in many economies. However, this is not reality. The evolution of income shares thus depends especially on the above two factors: factor-augmenting technological changes and the rate of capital deepening. According to Alvarez-Cuadrado et al. [5], the basic theoretical overview is as follows.

Assuming that the elasticity of substitution within each sector is constant, the output for sector i is produced using the production function

$$Y_{it} = \left[\alpha_i (B_{it} K_{it})^{\frac{\sigma_i - 1}{\sigma_i}} + (1 - \alpha_i) (A_{it} L_{it})^{\frac{\sigma_i - 1}{\sigma_i}} \right]^{\frac{\sigma_i}{\sigma_i - 1}}$$
(1)

where α_i governs the relative importance of the two inputs, K_{it} and L_{it} are capital and labor used in sector i at time t, and σ_i is the elasticity of substitution between these two inputs. A_{it} and B_{it} are the levels of labor- and capital-augmenting productivity, respectively. With this production function, the ratio of the factor income shares in sector i is given by

$$\frac{KIS_{it}}{LIS_{it}} = \frac{\alpha_i}{1 - \alpha_i} \left(\frac{B_{it}}{A_{it}} \frac{K_{it}}{L_{it}} \right)^{\frac{\alpha_i - 1}{\sigma_i}}$$
(2)

if the factor markets are competitive and firms choose inputs optimally. Here, KIS_{it} and LIS_{it} represent the capital and labor income shares, respectively, in sector i at time t.

The bias of technical change is given by $g(B_{it}/A_{it})$, where g() denotes a growth rate. If the bias is positive (negative), technical change is labor-biased (capital-biased) in the sense that it increases (decreases) the marginal product of labor (W) relative to that of capital (R) as indicated from Eq. (3).

$$\frac{R}{W} = \frac{\alpha_i}{1 - \alpha_i} \left(\frac{K_{it}}{L_{it}}\right)^{-\frac{1}{\sigma_i}} \left(\frac{B_{it}}{A_{it}}\right)^{\frac{\sigma_i - 1}{\sigma_i}} \tag{3}$$

The expression of Eq. (2) is potentially consistent with observed trends: if capital and labor are gross complements, that is, $\sigma_i < 1$ as most empirical evidence suggests, then the labor income share in sector i decreases as long as technical change in that sector is sufficiently capital-biased relative to the rate of capital accumulation, that is, $g(B_{it}/A_{it}) < 0 < g(K_{it}/L_{it})$ and the absolute value of $g(B_{it}/A_{it})$ is larger than that of $g(K_{it}/L_{it})$.

As Acemoglu [4] has noted, from about the 1980s, when the labor share started a decline, the capital-augmenting technical change has dominated the labor-augmenting technical change. Using this theory and empirical evidence, one could predict that the high growth rate of capital accumulation coupled with capital-augmenting technical improvement may contribute to a downward trend of the worldwide labor income share.

Economic global integration, in terms of trade, finance, and international fragmentation of production, is widely viewed as a significant determinant of the evolution of labor shares. How is this global integration related to the abovementioned theoretical framework of the labor income share?

The Heckscher-Ohlin model predicts that trade integration will lead labor-abundant developing economies to specialize in the production of labor-intensive goods, leading to a rise in the labor income share in developing countries and a decrease of the share in developed countries. This model is at odds with the decline in labor shares of developing economies.

Financial integration, on the other hand, may play a major role in the evolution of the labor income share. Dao et al. [6] describe two distinct channels through which labor income share declines. First, capital mobility lowers labor's bargaining power. This is because globalization has made capital much more mobile internationally, while labor remains trapped behind national borders. The greater international mobility of capital has reduced the bargaining power of workers and increased that of the owners of capital. Second, financial integration lowers the cost of capital in capital-scarce countries, facilitating capital deepening and inducing greater substitution of capital for labor.

The economic globalization-based explanation for falling labor shares in developing countries thus rests on the relative size of the impact that trade and capital flows have on labor shares because increases in trade between developed and developing countries would increase labor income shares in the developing countries.

Financial integration includes two important capital flows: portfolio investment and foreign direct investment (FDI). Between them, FDI is closely related to the GVCs organized by MNEs that have been actively investing in developing countries through international fragmentation of production since the 1990s. The relation between labor income shares and international fragmentation of production through GVCs is discussed in detail in the next section.

To assess the contribution of these globalization factors to the evolutions of labor income shares, we present some stylized evidence of the relation between them (Figures 1–3). In the following analyses, the growth rates of two different variables are compared in each figure because the main objective of this study is to identify the cause of labor income share changes. Moreover, variables used in this study, such as economic globalization, labor income share, capital deepening, and intersectoral production linkages, show that most variations are seen not over time but across countries and industries (fixed effects attributable to countries and

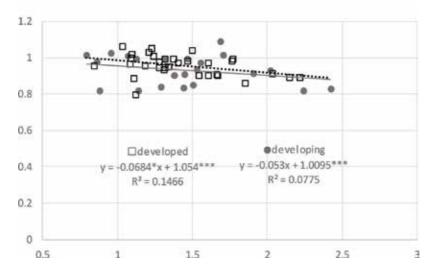


Figure 1. Changes in export GDP ratio (x-axis) and changes in labor income share (y-axis) for developed and developing countries.

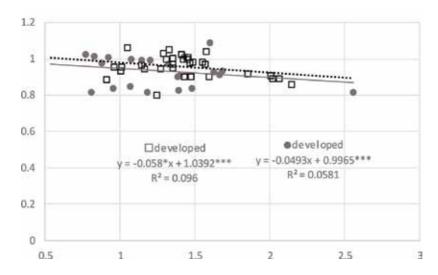


Figure 2. Changes in import GDP ratio (x-axis) and changes in labor income share (y-axis) for developed and developing countries.

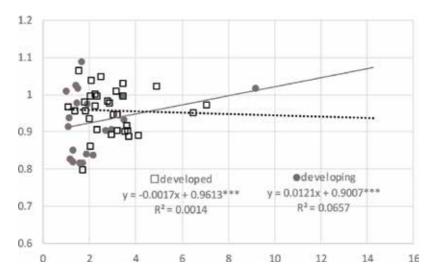


Figure 3. Changes in the external assets and liabilities GDP ratio (x-axis) and changes in labor income share (y-axis) for developed and developing countries.

industries). Thus, it is reasonable to compare growth rates of these variables to detect causal relationships. The available data cover the years 1995–2011.

Figure 1 illustrates the relation between changes in export GDP ratios (horizontal axis, gross rate between 1995 and 2011) and changes in labor income share (vertical axis, gross rate between 1995 and 2011) for 55 countries. These 55 countries include 32 developed and 23 developing countries. We can find significant negative relation between the two variables in

developed countries; however, we cannot find any relation in the case of developing countries. The same conclusion is obtained in **Figure 2**, which compares the import GDP ratio and labor income share changes.

Figure 3 indicates the relation between the external assets and liabilities GDP ratio (financial globalization index) and labor income share in the same manner as in Figures 1 and 2 (data source is [7]). In this case, we cannot find any significant relationship. These three figures are a very simple analysis that just compare one economic globalization-related variable and labor income share. One reason to take such a simple method is that it is difficult to consider these variables as distinct drivers of labor shares. In reality, the effects of these three factors on labor shares cannot be fully isolated. More elaborate studies should be conducted in the future. At this moment, it can be concluded that trade and financial integrations as economic globalization factors do not affect labor income share evolution with the exception of trade (export and import) in developed countries. The negative relation between changes in trade GDP ratios and those in labor income shares is consistent with the prediction of Heckscher-Ohlin model as mentioned earlier in this section.

3. GVCs and labor income share

Participation in GVCs is regarded as another important factor in reducing labor income share; several works have focused on this issue (e.g., [6, 8]).

A value chain is a series of value-added processes that are involved in the production of any goods or service. GVCs or production networks are divided into discrete steps—moving from upstream to downstream production stages—and locate in different countries that actively trade intermediate (partially finished) goods. This type of production is known as fragmentation, and the trade of intermediate goods is categorized as intraindustry and intrafirm trade.

The degree of GVCs expansion is usually measured by the "GVCs participation index." This index is calculated as a sum of the forward participation index—the share of exported goods and services used as imported inputs to produce other countries' exports—and the backward participation index—the share of imported inputs in the overall exports of a country. In GVCs, a supplier in a country exports and imports half-finished goods; therefore, the extent of its participation in the GVCs can be measured as a sum of its forward and backward linkages. These data are derived from the OECD-WTO Trade in Value-Added (TiVA) database.

As Takeuchi [9] has documented, GVCs have been expanding worldwide since the late 1990s, especially in East Asian countries. This coincides with the period of a significant downward trend of labor income share, as pointed out by Young and Tackett [3]. This chapter also analyzes the same period.

Figure 4 indicates the relation between the changes in the GVCs participation index and those in labor income share in the same manner as **Figures 1–3**. The R-squared values are relatively higher than those in the previous figures, and it is observed that expanding GVCs has a significant negative impact on labor income shares in developed countries.

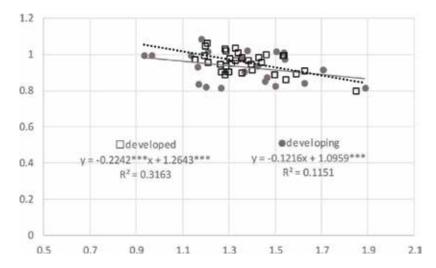


Figure 4. Changes in the GVCs participation index (x-axis) and changes in labor income share (y-axis) for developed and developing countries.

In the case of developing countries, the R-squared value is low and GVCs do not have a significant impact on labor income shares. This does not mean there is no relationship between GVCs and labor income shares in developing countries. In fact, the participation index should be modified to make a comparison with labor income share evolution. This aspect will be discussed later.

What is the mechanism whereby GVCs expansion changes labor income shares? Dao et al. [6] hypothesize that a participation in GVCs can reduce labor income share through the mechanism described as follows:

- 1. In developed countries, many tasks for which labor is substitutable by capital are automated with a steep decline in the relative price of investment goods. Thus, the degree of capital deepening increases and the labor income share decreases. This implies that tasks with low elasticity of substitution between capital and labor are likely to be offshored in GVCs.
- 2. In developing countries, the offshored tasks from developed countries with low substitutability between capital and labor will have a high capital share. It follows that GVCs can shift the composition of production to tasks with higher capital shares, thus lowering the average labor share in developing countries.

Dao et al. [6] examine the empirical relation between the trend in labor shares and technology, economic global integration, and other factors. As explanatory variables, they adopt (1) the relative price of investment goods to proxy for firms' incentives for capital-labor substitution, (2) the extent of initial exposure to routinization (high initial exposure to routinizable jobs will lead to greater adoption of routine technology and thereby lower labor income shares), (3) the evolution of globalization (exports and imports in percent of GDP, GVCs participation, and changes in financial globalization), and (4) policy and institutional factors (e.g., changes in labor union density, employment protection legislation). As for

economic globalization factors, financial integration and GVCs participation appear to matter for labor shares, but trade factor does not.

The researchers' regressions examine the empirical relationship between labor shares and GVCs by adopting only the GVCs participation index and not including other variables like the elasticity of substitution between capital and labor, factor-augmenting technological changes, and the rate of capital deepening, which are theoretically related to labor shares as previously mentioned. Instead, their paper compares changes in GVCs participation and those of the rate of capital deepening for developed and developing countries separately. The result shows that a rising GVCs participation is associated with rising capital deepening in both developed and developing countries, but the degree of impact of GVCs is larger in developing countries. What could be the reasons for that?

This study examines the mechanism of how GVCs participation works to promote capital deepening in developing and developed countries. This is an important innovation and contribution of this study. We use data of labor income shares and capital deepening for two different sectors (services and nonservices) for this analysis. For developing countries, there are significant data constraints; however, by using GDP, GDP deflators, and employment data for each industry, we can analytically calculate sectoral factor shares and relative capital deepening rates. The details of calculation procedures and data sources are presented in Appendix.

Figure 5 shows the relation between changes in the relative rate of capital deepening of the services sector to the nonservices sector (horizontal axis, gross rate between 1995 and 2011) and relative labor income shares (vertical axis, gross rate between 1995 and 2011) for 22 countries (South Africa, China, India, Japan, South Korea, Malaysia, Philippines, Taiwan, Thailand, Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, the United States, Denmark, Spain, France, the United Kingdom, Italy, and the Netherlands). Among them, 11 countries are OECD members (categorized as developed countries).

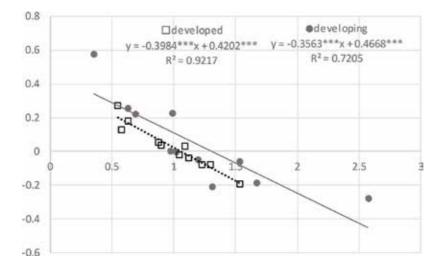


Figure 5. Changes in the relative rate of capital deepening of the services sector to the nonservices sector (x-axis) and changes in the relative labor income share (y-axis) for developed and developing countries.

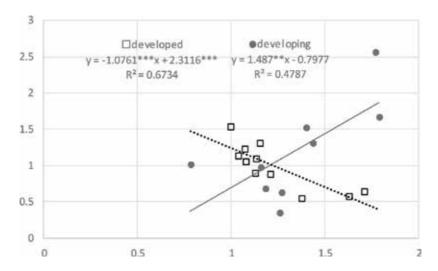


Figure 6. Changes in the GVCs participation index (x-axis) and changes in the relative rate of capital deepening of the services sector to the nonservices sector (y-axis). Gross rate between 1995 and 2011.

The estimated coefficients are almost identical between developed and developing countries, as shown in the figure. Also, the relation between the two variables is statistically significant and the R-squared values are relatively high. We have already overviewed the theoretical relation between the rate of capital deepening and labor income shares in the previous section. These results affirm the importance of analyzing this relationship by separating the services and nonservices sectors.

In comparison, what is the relationship between expansion of a GVCs and the relative capital deepening rate of the services sector? There is a positive relation between these two in the case of developing countries, and conversely, there is a negative relation in the case of developed countries. These opposite results between the two country groups seem to be important in the light of their statistical significances and high R-squared values (as shown in **Figure 6**).

The analytical results can be summarized as follows. The expansion of GVCs has a potential to account for a decline in the rate of capital deepening and thus increases the labor income shares of the services sector relative to the nonservices sector in developed countries. In the case of developing countries, the opposite mechanism works: the GVCs participation increases the relative rate of capital deepening and decreases the relative labor income shares.

4. What are reasons behind the differences between developed and developing countries?

Why are there differences between developed and developing countries in terms of the relations among GVCs participation, capital deepening, and labor income shares? To answer this question, we analyze the effect of GVCs participation on the rate of capital deepening in the services and nonservices sectors separately. The results are as follows. In developed countries,

GVCs participation raises the rate of capital deepening only in the nonservices sector and not in the services sector. (The correlation of the coefficient between the GVCs participation change and the capital deepening change is 0.8129 in the nonservices sector and -0.072 in the services sector.) In developing countries, the opposite relationship is observed. The rate of capital deepening in the services sector increases along with GVCs participation, but in the nonservices sector, it does not. (The correlation of the coefficient between the GVCs participation change and the capital deepening change is 0.097 in the nonservices sector and 0.739 in the services sector.) If GVCs expansion is measured by a backward index (the share of imported inputs in the overall exports of a country), not by participation index (the sum of backward and forward indices) in the case of developing countries, it is revealed that GVCs participation raises the rate of capital deepening of both the services and the nonservices sectors. For developing countries, the main contributions of being involved in GVCs are making them depend on imported foreign intermediate goods to make exports. This is just a role of backward linkage. In this respect, we can conclude that developing countries can increase the rate of capital deepening of both sectors by becoming involved in GVCs. Figure 6 indicates that the impact of GVCs on capital deepening is larger in the services sector than in the nonservices sector in developing countries. As a result, there is a positive correlation between GVCs participation and the relative capital deepening rate of the services sector to the nonservices sector in developing countries. There is a negative correlation between them in developed countries because GVCs participation raises the rate of capital deepening only in the nonservices sector in developed countries.

Consequently, the next question is why does GVCs participation have a different impact on capital deepening between developed and developing countries? The results found for developed countries are intuitive. Tasks in the nonservices sector are relatively labor intensive and are likely to be offshored from developed to developing countries. For developed countries, the composition of production in the nonservices sector becomes more capital intensive.

What needs careful examination is the mechanism for how GVCs enhance capital deepening of the services sector in developing countries. The key is the intersectoral production linkage in which nonservices, especially manufacturing sector activities, are increasingly service dependent. This close production linkage between services and nonservices sectors is called "servicification" [10].

On the supply side, the increased internationalization of production has intensified reliance on services. When products can be sourced, made, and sold anywhere in the world, services become especially critical. For example, design, R&D, and prototyping services help decrease the cost of production failure and shorten the product development cycle. For sourcing of intermediate inputs, logistics and transportation services, as well as supply chain management services, make the geographic dispersion of GVC operations possible [10].

This study uses the Trade in Value Added (TiVA) database to measure the shares of inputted services embodied in the total final demand. This database contains indicators measuring the value-added content of international trade flows and the final demand. We check the relation

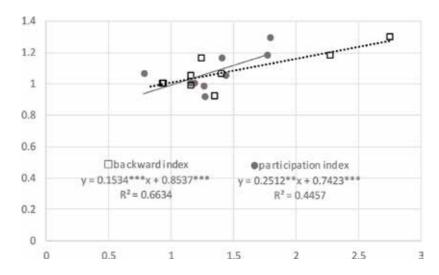


Figure 7. Changes in the GVCs participation (participation and backward indices, x-axis) and changes in the share of inputted services embodies in the total final demand (y-axis) in developing countries. Gross rate between 1995 and 2011.

between the changes in services value added share to total final demand and the changes in GVCs participation throughout the years of 1995 until 2011. The results are shown in **Figure 7**.

As indicated in **Figure 7**, services input shares to final demand and the degree of GVCs participation have a positive correlation in developing countries. The R-squared value is higher when the degree of GVCs participation is measured by the backward index rather than by the participation index (backward + forward indices). As mentioned before, the forward index is a measure of domestic value added embodied in foreign exports and the backward index is a measure of foreign value added embodied in domestic exports. Many developing countries in GVCs are primarily involved in backward linkages with developed countries. This is why the positive correlation between the services input shares and GVCs participation is clearly recognized when using backward index. The same positive correlation between the degree of services input and that of GVCs participation can be observed when shares of services input are measured not only to total final demand but also to the demand of the nonservices sector and exports.

This intersectoral input-output linkage between the services sector and the nonservices sector works to enhance the relative capital deepening of the services sector in developing countries. (The correlation of the coefficient between the degree of intersectoral linkage and the relative rate of capital deepening of the services sector to the nonservices sector in developing countries is 0.776.) From these analyses, we can conclude that for the nonservices tasks offshored from developed to developing countries, demand for services as intermediate input to these tasks increases and this enhances capital deepening in recipient developing countries.

Figure 8 describes the mechanism by which GVCs participation decreases labor income shares in developing and developed countries as a summary of the previous analyses. Tasks that are relatively labor intensive and low elasticity of substitution between capital and labor are likely

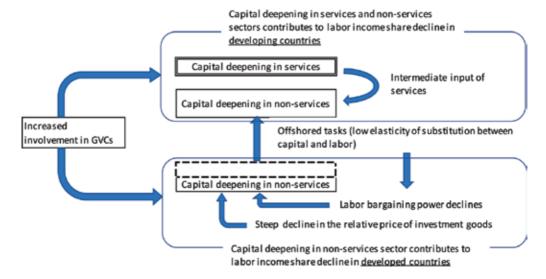


Figure 8. The mechanism by which GVCs participation promotes capital deepening and decreases labor income share in developed and developing countries.

to be offshored from developed to developing countries. For developed countries, because the offshored tasks are labor intensive, the composition of production in these countries becomes more capital intensive. As Dao et al. [6] point out, many tasks left in developed countries are substitutable by capital, contrasting to offshored tasks with low elasticity of substitution between capital and labor. As a result, the tasks left in developed countries are automated with the help of a steep decline in the relative price of investment goods, and thus, the labor income share decreases.

On the other hand, in developing countries, the services sector promotes capital deepening and an increasing involvement in GVCs. This is because nonservices tasks are offshored from developed to developing countries and demand for services as intermediate input to these tasks increases in recipient developing countries. The capital deepening is promoted also in the nonservices sector, and thus, total economy experiences a progression of capital deepening. As discussed in Section 2, capital deepening results in lower labor income share.

In Figure 4 indicating the relation between the changes of GVCs participation index and those of macrolabor income shares, we found that expanding GVCs has a significant impact on labor income share in developed countries. In developing countries, however, the same negative relationship cannot be clearly observed. The reason for this result can be interpreted as follows. In developing countries, GVCs have a profound capital deepening effect on the services sector but not the nonservices sector. Developing countries vary in terms of the share of services in the total economy, and thus, the capital deepening effect that GVCs have on the macroeconomy may become large in economies with a large share of services and small in economies with a small share of services.

As a modified version of Figure 4 in which changes in labor income shares are compared with the changes in the GVCs participation index, the following estimation for developing countries includes the interaction term in which the changes of GVCs participation index and those of the share of services in the total economy are multiplied as follows:

$$\Delta \log \left(labor \ income \ share\right) = \underbrace{1.064}_{(.000)} + \underbrace{0.016\Delta \log \left(GVCs\right) - 0.108\Delta \log \left(GVCs\right) \times \Delta \log \left(services \ share\right)}_{(.044)} \times \underbrace{\Delta \log \left(services \ share\right) - 0.108\Delta \log \left(GVCs\right) \times \Delta \log \left(services \ share\right)}_{R-squared:0.3712} \tag{4}$$

Figures in parentheses are *p*-values. As clearly shown in this estimation, the modified explanatory variable (the changes in GVCs participation index multiplied by changes in services share of GDP) explains the change in labor income share well. Also, the R-squared value escalates from 0.1151 to 0.3712. From these analyses, we can conclude that intersectoral production linkage spurred by GVCs between the services sector and the nonservices sector plays a major role in the downward trend of labor income share in developing countries.

5. Conclusion

This chapter focuses on GVCs as an important determinant of changes in the labor income share and analyzes the mechanism responsible for the share decline under GVCs in developing countries. This mechanism has not been documented in prior studies. The crucial mechanism is that intersectoral production linkage between the services and nonservices sectors promotes capital deepening in the services sector, and this leads to the decline of the macrolabor income share. In developing countries, labor-intensive nonservices (especially manufacturing) tasks have been offshored from developed countries in GVCs since the late 1990s. The services sector in developing countries actively accumulates capital to supply quality services to the inflowing nonservices tasks, while the nonservices sector also promotes capital accumulation under severe international competition. As a result, a developing country raises its rate of capital deepening significantly in this period and thus, decreases the labor income share, as the theory predicts. This mechanism can be analyzed by utilizing the data of sectoral labor income shares and the sectoral rate of capital deepening for developing and developed countries. Preceding studies have rarely used the kind of comprehensive dataset used in this study and have rarely discussed intersectoral linkages between the services and nonservices sectors as important determinants of changes in macroeconomic labor income shares.

A. Appendix

This appendix describes the calculation procedures and data sources for labor income shares and the rate of capital deepening for two different sectors (services and nonservices) in developing and developed countries. We use a static growth model, and by using GDP, GDP deflators, and employment data for each industry, we can analytically calculate factor shares of income and the rate of capital deepening for the two sectors. We review the effectiveness of the model by comparing the actual data with our calculations for developed countries and some developing countries where these data are available to use.

A.1. The model

Our model focuses solely on the implications for optimal consumption and production behavior within each period. The advantage of this static approach is that the first-order conditions for the stand-in household and the stand-in firm are given only by observed current variables and we do not have to take a stand on the exact nature of intertemporal opportunities available to households and firms (i.e., the appropriate interest rates for borrowing and lending). In what follows, subscript *t*, which indicates time period, is omitted in each variable.

The model has two sectors of activity—the nonservices sector (T) and the services sector (S). The nonservices sector includes agriculture and manufacturing. The production function in each sector is assumed to be Cobb-Douglas with constant returns to scale. The static approach allows all variables to change in each period without any exceptions. Then, capital income shares of two sectors, θ_T and θ_S , are also assumed to change in each period. The output of services can be used for consumption (C_S) and investment (C_S). The output of the nonservices sector can be disaggregated into consumption (C_T), investment (C_T), and net exports (C_T). The shares of investments and net exports in each sector are exogenously determined in this model. The production structures and their market clearings in the product markets are as follows:

$$Y_{S} = A_{S} K_{S}^{\theta_{S}} L_{S}^{1-\theta_{S}} = C_{S} + I_{S}$$

$$Y_{T} = A_{T} K_{T}^{\theta_{T}} L_{T}^{1-\theta_{T}} = C_{T} + I_{T} + NEX_{T}$$
(5)

where Y_i , A_i , K_i , L_i are the value added, total factor productivity (TFP), capital stock, employment in i = T, S, respectively. All resources for production (K_i , L_i) are fully used, as shown:

$$K_S + K_T = K$$

$$L_S + L_T = L$$
(6)

We assume the period utility function, $u(C_S, C_T)$ is of the form:

$$u(C_S, C_T) = \left[\omega^{\frac{1}{\epsilon}} C_S^{\frac{\epsilon - 1}{\epsilon}} + (1 - \omega)^{\frac{1}{\epsilon}} C_T^{\frac{\epsilon - 1}{\epsilon}}\right]^{\frac{\epsilon}{\epsilon - 1}}$$

$$(7)$$

A.2. Optimality conditions for production side

Production side efficiency that is used for deriving factor shares of income and the rate of capital deepening for the two sectors is now derived. There is perfect factor mobility across the two sectors if sector-specific distortions to production factors (capital and employment) are cleared. The first-order conditions for the stand-in firm in sector *i* are given by:

$$R = \frac{1}{1+d_S} P_S \theta_S A_S \left(\frac{K_S}{L_S}\right)^{\theta_S - 1} = \frac{1}{1+d_T} P_T \theta_T A_T \left(\frac{K_T}{L_T}\right)^{\theta_T - 1}$$

$$W = \frac{1}{1+d_S} P_S (1-\theta_S) A_S \left(\frac{K_S}{L_S}\right)^{\theta_S} = \frac{1}{1+d_T} P_T (1-\theta_T) A_T \left(\frac{K_T}{L_T}\right)^{\theta_T}$$
(8)

 P_i is the price of sector i, while R and W denote rental rates of capital and employment, respectively, both expressed in nominal currency. The term d_i ($d_i \ge 0$) denotes a sector-specific distortion.

Dividing these two equations by each other gives:

$$\frac{1 - \theta_S}{\theta_S} \left(\frac{K_S}{L_S} \right) = \frac{1 - \theta_T}{\theta_T} \left(\frac{K_T}{L_T} \right) \tag{9}$$

From the second equation in Eq. (8), the implications for relative prices can be derived as:

$$\frac{P_S}{P_T} = \frac{1 - \theta_T}{1 - \theta_S} \frac{A_T}{A_S} \frac{k_T^{\theta_T}}{k_S^{\theta_S}} \frac{1 + d_S}{1 + d_T}$$
 (10)

In the above equation, $k_S = K_S/L_S$ and $k_T = K_T/L_T$ (the rates of capital deepening for two sectors). The labor income shares of two sectors, $1 - \theta_S$ and $1 - \theta_T$, and the rates of capital deepening for two sectors, k_S and k_T , are calculated analytically using the model and some basic sectoral data.

From Eq. (10) in the model, relative labor income share, $(1 - \theta_T)/(1 - \theta_S)$, can be calculated by dividing relative price P_S/P_T by relative labor productivity $(Y_T/L_T)/(Y_S/L_S) = A_T (K_T/L_T)^{\theta_T}/A_S(K_S/L_S)^{\theta_S}$ with the assumption $d_i = 0$. The relative price P_S/P_T should be the absolute relative price in order to obtain relative labor income share $(1 - \theta_T)/(1 - \theta_S)$.

With macroeconomic labor income share (θ_N) , the ratio of the nonservices sector GDP to total GDP (α_T) and the ratio of nonservices sector labor compensation to total labor compensation (β_T) , β_T is obtained as $\beta_T = \theta_{LT}/\theta_N^*\alpha_T = \theta_{LS}/\theta_N^*\alpha_T + (1-\theta_{LS}/\theta_N)$. Then, α_T is obtained as $\alpha_T = (\theta_N - \theta_{LS})/(\theta_{LT} - \theta_{LS})$ where θ_{LT} and θ_{LS} are the labor income shares of the nonservices and services sectors, respectively. Among the variables in this equation, $\alpha_T = (\theta_N - \theta_{LS})/(\theta_{LT} - \theta_{LS})$, α_T and θ_N are the known data. Then, by solving the system of equations involving two variables, θ_{LT} and θ_{LS} or $\alpha_T = (\theta_N - \theta_{LS})/(\theta_{LT} - \theta_{LS})$ and θ_{LT}/θ_{LS} (= $(1-\theta_T)/(1-\theta_S)$), the labor income shares of the two sectors, θ_{LT} and θ_{LS} , are obtained. By substituting these labor income shares into Eq. (9), the relative capital deepening rate $(K_T/L_T)/(K_S/L_S)$ can be calculated. The two sectors' employment data, L_T and L_S , are available and then the capital ratio, K_T/K_S , across the two sectors can be calculated. By using total capital stock data K ($K = K_S + K_T$), the capital stock of the sectors, K_T and K_S , are obtained. At this stage, we can calculate the rates of capital deepening of two sectors, $k_S = K_S/L_S$ and $k_T = K_T/L_T$, respectively.

We calibrate the distortion parameter (d_i) as follows. As mentioned above, $d_i = 0$ is set with the assumption that there is perfect factor mobility across the two sectors, and we factorize the relative price changes into relative labor income share and relative labor productivity changes, referring to Eq. (10). The result is disappointing, especially for the period up to the 1970s in Japan and up to the 1980s in Korea, when the per-capita incomes of these countries were relatively low. The analytically calculated relative labor income share and the relative capital deepening differ greatly from the actual data. Based on the result of this simulation, we assume that the degree of distortion depends on the per-capita income level (x) and redefine $(1+d_S)/(1+d_T)$ in Eq. (10) as follows:

$$\frac{1+d_S}{1+d_T} = \exp\left(\alpha x + \beta\right) \tag{11}$$

where α assumes a negative value as the degree of the distortion diminishes along economic development. We calibrate values of α and β to dissipate the difference between the simulated results and the real data of relative labor income share and relative capital deepening. The results are $\alpha = -0.0001$ and $\beta = 0.4$. Eq. (11) is called the "implied distortion index" and is applied to all sample countries.

A.3. Data

We use the datasets for 22 countries for which all of the below data are available. The 22 countries are South Africa, China, India, Japan, South Korea, Malaysia, Philippines, Taiwan, Thailand, Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, the United States, Denmark, Spain, France, the United Kingdom, Italy, and the Netherlands. Among them, 11 countries are OECD members.

Numerous data sources support the calculations. Sectoral relative prices and relative labor productivity are calculated using the sectoral nominal GDP, real GDP, and employment data from the 10-Sector Database provided by the Groningen Growth and Development Centre. The available data cover the years 1950-2012; however, depending on the country, the periods are different. The 10 sectors are agriculture, mining, manufacturing, utilities, construction, wholesale and retail trade, transport services, business services, government services, and personal services. In accordance with the sectoral assignment by the World Development Indicators (the World Bank) and Inklaar and Timmer [11], which provides the data of absolute relative valueadded prices (P_S/P_T) , agriculture, mining, manufacturing, utilities, and construction combine to categorize the nonservices sector and the other sectors comprise the services sector.

Inklaar and Timmer [11] provided data of absolute relative value-added prices of 2005 for 42 countries. Other countries' data which are not provided by Inklaar and Timmer [11] are obtained by estimation. Absolute relative price of services sector to that of nonservices sector can be linearly estimated by log-transformed per-capita income for sample countries owing to the Balassa-Samuelson effect.

The macro-based data of labor income share, and capital stock are obtained from Penn World Tables version 9.0 (Groningen Growth and Development Centre) and UNCTAD STAT (United Nations Conference on Trade and Development).

For calibration of the distortion parameter (d_i) , we take per-capita income data (x) from Penn World Tables version 9.0 by Groningen Growth and Development Centre. Per-capita income is calculated by dividing expenditure-side real GDP at chained PPPs (in millions 2011 US\$) by population (in millions).

Finally, we demonstrate the comparison results between the analytically calculated variables from the model and the actual data for relative labor income share $\theta_{LT}/\theta_{LS} = (1 - \theta_T)/(1 - \theta_S)$, the

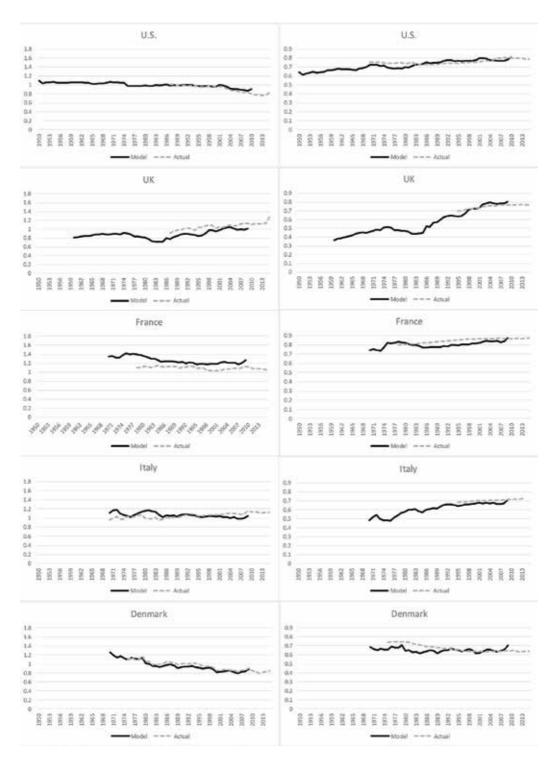


Figure 9. The relative labor income share (left) and the capital stock share of services (right).

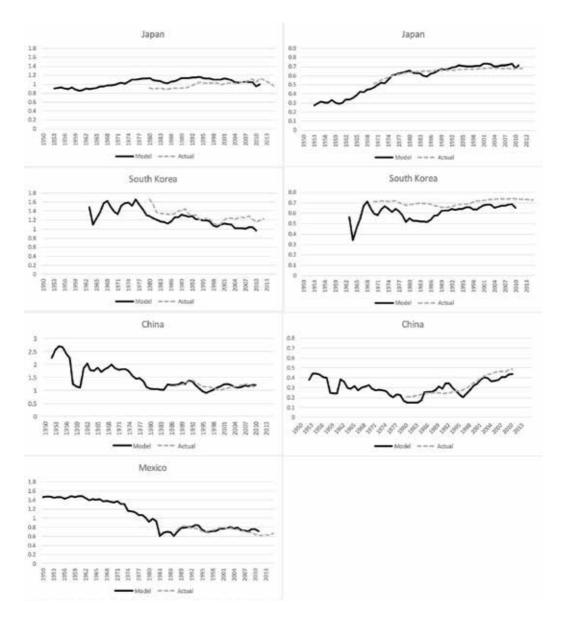


Figure 10. The relative labor income share (left) and the capital stock share of services (right).

capital stock share of services (K_S/K) to ascertain the usefulness of the model. **Figure 9** indicates the comparison results for the United States, the United Kingdom, France, Italy, and Denmark. Actual data are obtained from EU KLEMS (The Conference Board). The data of these five countries are available in the newest version of EU KLEMS (September 2017 release). **Figure 10** makes comparisons in the same manner for Japan, South Korea, China, and Mexico, using different data sources, including the STAN database (OECD), the JIP database (RIETI), and EU KLEMS (2012 release) for Japan, the World KLEMS, the STAN database (OECD), and EU KLEMS

(2008 release) for South Korea, the CIP database 2015 (RIETI) for China, and the STAN database (OECD) for Mexico. Due to data constraints, we compare actual and model-derived series only of relative labor income share for Mexico. We find that the model with the distortion factor can explain the actual data well in almost all countries.

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Global Business Strategies

Latecomer Challenge: African Multinationals from the Periphery

Grietjie Verhoef

Additional information is available at the end of the chapter

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Abstract

Multinational corporations have commenced foreign direct investment (FDI) activities since the 1960s by moving operations to resource-rich, low-cost labour and capital markets. Successive waves of outward foreign direct investment (OFDI) since the 1960s and 1970s were motivated by efficiency and market-seeking factors. Since the 1990s, China, Brazil, India, Russia (the so-called BRIC countries), Malaysia, Turkey and South Africa are among the countries expected to add significantly to OFDI growth. The emergence of Emerging Market Transnational Corporations (EMTNCs) makes up a growing proportion of outward FDI, and they acquire an increasing share in foreign affiliates from developed markets conducting business in their regions. This chapter reflects on the transformation of businesses and business practice in Africa, from isolated peripheral actors to global players. This chapter investigates the history of leading emerging market multinational corporations from Africa since the 1980s and points to the implications for future globalisation of EMTNCs.

Keywords: outward foreign direct investment (OFDI), emerging market transnational corporations (EMTNC), globalisation, strategy, market-seeking, state, change management

1. Introduction

Global FDI has been characterised recently by the rising proportion of OFDI from developing countries. By the first decade of the twenty-first century, the United Nations Conference on Trade and Development (UNCTAD) acknowledged the importance of the internationalisation of enterprises as essential to strengthen the competitiveness of firms from developing countries ([1], p. 3). The OFDI growth trend from developing economies continued, growing



by 8% since 2012, culminating in 32.2% of total global OFDI by 2013 ([2]: xiv; 6; 39). African OFDI of US\$ 12 billion or 0.9% of global OFDI lagged dismally behind the contribution by developing countries in Asia, Latin America and other transitional economies. Transnational activities commenced in the 1960s as multinational enterprises moved operations to resource-rich, low-cost labour and capital-rich markets [3–7]. The first wave of OFDI during the 1960s and 1970s was motivated by efficiency and market-seeking factors. This wave was dominated by firms from Asia and Latin America. A second wave of OFDI followed in the 1980s, led by strategic asset-seeking enterprises from Hong Kong, Taiwan, Singapore and South Korea (Dunning et al., 1996; [8]: 3s). Since the 1990s, China, Brazil, India, Russia (the so-called BRIC countries), Malaysia, Turkey and South Africa were among the countries that made significant contributions to OFDI growth ([1]: 4). The growing involvement in international investments by more and more African companies follows from slightly more open markets in Africa, a more positive inclination towards private business by African Governments, as well as the sustained economic growth of the continent. This chapter investigates the latecomer challenge presented by African TNCs, their globalisation strategies and the direction of globalisation.

2. Africa rising to global markets

Since the launch of the New Partnership for African Development (NEPAD) in the early 1990s [9, 10] and the acceptance of the Lagos Plan for regional economic integration in Africa, the actual economic integration of regional economies was less than impressive. OFDI by African economies was delayed as governments struggled to transform their economies. The strongest drive towards globalisation came from South African businesses that sought to enter the world markets after many years of sanctions and isolation which ended in 1990 as the country prepared for its first democratic election in 1994. As illustrated in **Table 1**, OFDI from Africa commenced from low levels of US\$659 million OFDI in 1990 compared to Asia OFDI which already stood at US\$11,024.3 million in 1990. African OFDI showed stronger growth off the low base than the rest of the world: world OFDI grew by 8.36%, Africa by 14.2% and Asia by 16.6% between 1990 and 2013 ([2], Web Annex Table 2).

The strongest growth in African OFDI occurred in East Africa, with 118% growth (coming off a very low base as is reflected in **Table 1**). Central Africa posted 112% growth and Southern Africa 25.1% annual compound growth between 1990 and 2013 (with South Africa leading the growth rate by 27.3%), while West Africa grew only by 7.8% and North Africa by 11.4%. The GFC affected OFDI trends from Africa adversely, but with the exception of North Africa, which grappled with the aftermath of the 'Arab Spring', all the regions in Africa surpassed pre-2007 levels of OFDI by 2013. These developments were supported by the sustained growth of Africa's economy at a rate of 7.1% between 2004 and 2008 and 5.3% between 2008 and 2014 ([2], p. 63; [86]).

An analysis of the composition of African OFDI since 1990 shows a doubling of outward stock as a percentage of gross domestic product. OFDI stock in Africa rose from 4.8% of GDP in 1990 to 8.6% in 2013, but in North Africa, the ratio only rose beyond 2% during the late 2000s to reach 4.4% in 2013 [86].

	1990	1995	2000	2005	2007	2008	2010	2011	2012	2013
Africa	659.0	2975.7	1533.9	1925.3	9115.5	4974	6659.4	6772.9	11,999.7	12,418.1
North Africa	135.2	132.5	222.9	288.6	5415.4	8751.9	4846.6	1575.3	3273.4	1481.3
West Africa	411.5	189.2	964.9	418.1	1275	1708.7	1292.3	2730.8	3155.2	2184.9
East Africa	3.7	38.6	20.4	9.06	110.8	108.9	140.5	174.2	204.7	147.8
Central Africa	51.2	34.9	33.5	173.6	81.4	148.6	590.4	365.9	222.1	634.1
Southern Africa	57.4	2580.5	292.2	954.3	2232.8	5771.0	-210.4	1926.8	5144.3	7970.1
South Africa	27.4	2497.7	270.6	930.3	2965.9	3133.7	75.7	-256.8	2987.6	5619.9
Source: UNCTAD WIR [11], p. 214;	TR [11], p. 214	2	, Web Annex Table 2.							

Table 1. OFDI, Africa by region and South Africa, 1990–2013 (\$m).

	1990	1995	2000	2005	2010	2013
Africa	4.8	6.7	7.2	4.7	8.2	8.6
N Africa	1.1	0.9	1.3	1.4	4.4	4.4
W Africa	3.4	7.9	8.2	2.0	3.1	3.7
Nigeria	3.5	9.7	8.9	0.3	2.2	3.0
C Africa	1.7	2.5	2.8	1.5	2.0	2.7
E Africa	1.0	1.6	1.8	1.8	2.1	2.3
Kenya	0.9	1.0	0.9	0.7	0.9	0.7
Sd Africa	10.8	13.5	16.7	10.3	17.9	19.8
South Africa	13.4	15.4	20.6	12.6	22.9	27.3

Source: WIR [2], Web Table 8; [94–96].

Table 2. OFDI stock as percentage of gross domestic product, 1990–2013 (%).

In North Africa, Nigeria was most active in OFDI stock acquisition, while in East Africa, Kenya was the leading nation, although Mauritius (13.1% in 2013) and the Seychelles (19.4% in 2013) transacted higher ratios than the rest of the regional economies. In Southern Africa, the OFDI by South African companies was the highest in African OFDI stock acquisition, illustrating the dominance of South African business in OFDI on the continent. The important aspect of the stock acquisitions is the cross-border merger and acquisitions which point towards the business acquisitions outside the home country (Tables 2 and 3).

South African businesses have dominated the cross-border M&As throughout the period [84, 85]. North African M&As were higher than South African M&As only in 2008. No M&A activity was recorded of significance in Southern Africa, except for Mauritius, where business sustained M&A activity throughout the period. Moroccan companies became more involved

	2007	2008	2009	2010	2011	2012	2013
Africa	10,356	8266	2577	3792	4393	629	3019
N Africa	1401	4729	1004	1471	17	85	459
Egypt	1448	4678	76	1092	_	16	_
Morocco	_	_	324	_	17	101	147
Other Africa	8955	3537	1573	2322	4376	543	2560
Mauritius	253	136	16	433	173	418	65
Nigeria	196	418	25	_	1	40	241
South Africa	8646	2873	1504	1619	4291	825	2246

Source: WIR [2], Annex Table 3, pp. 213-214; [94-96].

Table 3. Value of cross-border M&As, by region of purchaser, 2007–2013 (US\$m).

in M&A since 2009. In West Africa, Nigerian companies were active in expanding their operations, but Ghanaian companies did not engage in such M&A of any significance. Egyptian companies were relatively active between 2007 and 2010, but the only sustained activity was that of South African companies. The level of cross-border M&As of African businesses was nevertheless significantly lower than that of companies in Asia and Southeast Asia. The M&A activity in that region increased from US\$98,606 m in 2007 to US\$10,7915 m by 2013, which surpasses the African achievement significantly ([2], p. 214).

The domination of South African conglomerates is further substantiated by the ranking of South African, and African, companies on the list of the world's top 100 nonfinancial TNCs, ranked by foreign assets in 2013. Only two African corporations are listed on the 2012 ranking list—they are Anglo American Corporation PLC (ranked 43rd in terms of foreign assets, with a TNI of 2), which currently holds a primary listing on the London Stock Exchange and is no longer assigned to South Africa as its home economy, and the other company is SABMiller PLC (ranked 55th in terms of foreign assets, with a TNI of 7), which has the same domicile (the United Kingdom) after acquiring its primary listing in London, although the company originated in South Africa. There are no African companies ranked under the world's top 100 nonfinancial TNCs ([2], web Table 28). Both AAC and SABMiller maintained their ranking among the world's top 100 corporations since 2008 [12, 13] but with substantially reduced TNIs. African companies are better represented on the list of the top 100 nonfinancial TNCs from developing and transitional economies, ranked also by foreign assets, in 2012. There are eight South African companies, one from Egypt and one from Algeria (**Table 4**).

Ranked by foreign assets	Ranked by TNI*	Corporation	Home economy	Industry
31	31	MTN Group Ltd	South Africa	Telecommunications
43	27	Steinhoff International Holdings	South Africa	Other consumer (furniture and home ware)
49	25	Gold Fields Ltd	South Africa	Metal and mining products
51	72	Sonatrach	Algeria	Petroleum
53	74	SASOL Limited	South Africa	Chemicals
63	35	Naspers Limited	South Africa	Other consumer services (Media)
67	34	Orascom Construction Industries SAE	Egypt	Construction
83	41	Med-Clinic Corp Ltd	South Africa	Other consumer goods (health care)
97	60	Netcare Ltd	South Africa	Other consumer goods (health care)
98	33	Sappi Ltd	South Africa	Wood and paper products

Source: WIR [2], Web Table 29. TNI = Transnational Index, which is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

Table 4. African top 100 non-financial TNCs, ranked by foreign assets, 2012.

The world ranking of some of these South African corporations is changing consistently. In 2008, Sasol was the highest ranked South African conglomerate on the top 100 ranked list of nonfinancial corporations—at the 22nd position, with a TNI of 31.6% ([12], p. 231). In 2012, the company failed to make the ranking of the top 100 nonfinancial corporations in the world but increased its TNI significantly to 74%. New corporations entered the top 100 non-banking companies in developing countries since 5 years ago, and this list keeps changing. When the largest companies in Africa in 2014 are compared to the top 100 rankings of UNCTAD, South African companies made up 71% of the top 50 companies. Based on market capitalisation in 2014, the largest African company is BHP Billiton, a mining and metals company, followed by SAB Miller, then Sasol, Naspers (the media conglomerate) and MTN. The African Business Magazine listed under the top 10 African companies by market capitalisation, 9 South African and 1 Nigerian companies in 2014 [102]. The top non-South African conglomerate is the Dangote cement group of Nigeria, with a market capitalisation of US\$22.7 billion (www.africabusinessmagazine.com/ sector-reports/africa-top-250-companies) [100]. These are the private conglomerates, but the largest companies on the continent are still SOEs. The African Business Review ranked Sonatrach, an Algerian petroleum company, as the largest with a turnover of US\$58.7 billion, followed by Sonangol, an Angolan petroleum SOE with US\$22.2 billion turnover. The third largest company in Africa by turnover is Sasol, with a turnover of US\$18.3 billion, followed by the MTN Group at US\$17.2 billion [14, 15] (www.theafricareport.com/top-500-companies-in-africa-2013; www.africanbusinessreview.co.za). About 26% of the top 50 conglomerates in Africa conduct their business in finance and insurance; 22% in consumer goods and retailing; 14% in mining; 12% in media and telecoms; 1% each in diversified enterprises, health care and construction, respectively; and 3% in manufacturing. When considering the 'globalisation' of African business, OFDI does not only refer to OFDI outside the African continent, but also OFDI outside the African home market into neighbouring countries or into more distant regions in Africa: the African continent is home to 56 countries and comprises a land mass of 30,221,532 km².

3. How do we explain business internationalisation? Theory and experience

The interest in the expansion of EMTNCs commenced more than 25 years ago when it became apparent that firms from emerging markets were gradually penetrating global markets. Matthews noted that the accelerated internationalisation of latecomer firms from the periphery, as well as the innovative strategies through learning and resource acquisition [16], added a dynamic nature to the EMNCs' participation in global markets. The interest became more systematic as the trend in OFDI reversed the dominant position of the developed markets' MNCs to OFDI from developing markets. Internationalisation theory developed from the initial economic model [17] with the emphasis on economic cost considerations of doing business abroad, such as transaction costs and uncertainty in markets [18, 19, 84], to the eclectic paradigm of the successive Dunning models depicting components or phases of internationalisation [81, 27–29], to the process model of the Uppsala school [18, 20–22, 98]. The 'economic man' was gradually replaced by the 'behavioural man' in the process model by explaining

internationalisation based on organisational theory [18, 69]. Dunning's OLI model of firm expansion through ownership (O) advantages (firm-specific resources) and location (L) (host country natural resource endowments) allows for the internalisation of those advantages (I) to improve firm efficiency and competitiveness, rather than exploiting those advantages in other markets through arms-length transactions. Dunning [23, 81] identified a set of motives for OFDI. These include market-seeking investments targeted to access to third markets, efficiency-seeking investments to improve efficiency through specialisation, resource-seeking investments seeking natural resources unique to specific foreign locations and strategic assetseeking investments to add to the existing proprietary resources of the firm. Rugman and Sukpanich argued that firm-specific advantages (FSAs) [91, 92], complemented by countryspecific advantages or CSAs [24], which resembled the ownership and location advantages in the OLI model, determined international expansion of firms. Rugman and Verbeke [25] added the advantage of proprietary knowledge as contributing to FSA. Dunning later added alliance capitalism and firm networks that augment ownership advantages by incorporating knowledge shared in networks and alliances [23, 26, 27]. The organisational structure of internationalising firms subsequently changed from the hierarchical mode of integration, based on the transaction cost theories, to new forms of ownership domains created through networks and alliances. Utilising these networks and alliances, firms internationalised their operations by seeking strategic assets to augment their existing proprietary resources. The Dunning followers later on also acknowledged the importance of institutions in strengthening CSAs at each variable of the OLI hypothesis [28, 29, 91, 92].

The 'static' approach to EMTNC internationalisation moved on to an understanding that '... internationalisation becomes a strategy aimed at strengthening the firms themselves thanks to the accumulation of resources previously not available' ([30], p. 5). Internationalisation is explained by firms supplementing existing O by what Matthews [31] called a more dynamic acquisition of capacity and experience to overcome latecomer effects and technology gaps ([32, 33], p. 237; [34], p. 81). Internationalisation now becomes an evolutionary process ([30], p. 5; [31, 35]) in which firms without O to exploit abroad, find resources, internalise them and finally develop linkages or partnerships or networks to leverage against the risks involved in such outward strategies. Matthews thus suggested an LLL framework—Linkage, Leverage and Learning framework. Firms become increasingly integrated in international economic activities through not only asset-exploiting but also by asset-exploring, thus linking OFDI with the EMTNC strategies. Emerging market enterprises establish networks with foreign firms and learn from them (capability enhancement) - which is 'experiential learning' [87, 88]. Firms in the developing country thus acquire knowledge, experience in equipment manufacturing, joint ventures and participation in GVC [89]. Depending on the ability of the emerging market firm to internalise or 'absorb' ('identify, assimilate and exploit') the new skills, technology or resources, the EMTNC is able to venture into the global market [36–38]. Renewed emphasis is hereby placed on country-specific analyses and the Gerschenkron effect, that is, the ability of latecomers to access and take over advanced technologies and catch up faster through linkages, collaboration and the leveraging of resources [97, 99].

The dominant process model of internationalisation does not explain the entire set of internationalisation strategies of emerging market firms, since the latter are often reactive, incremental

and opportunistic. EMTNC often acts to avert constraints in the domestic market. EMTNC internationalises also for reasons such as the efficient utilisation of resources, to generate economies of scale, market expansion, diversification, risk reduction, cross-subsidisation of markets, learning, flexibility in operations, market share protection and avoiding domestic competition [39, 40]. Recently, Arndt et al. [41] also added possible friction in factor markets (labour markets) and financial constraints as possible push factors towards internationalisation strategies. Ibeh et al. found that emerging market firms in Africa did 'quota hopping' — relocated from certain locations to areas where favourable quotas incentivised the setting up of export firms [42]. These views place new emphasis on managerial capabilities such as leadership, strategy formulation and implementation and organisational change. These are the critical endogenous factors firms need to venture into multiple complex contexts [43].

Internationalisation has also benefitted from the insights of new growth theory, considering endogenous sources of growth. Entrepreneurial capabilities are emphasised as the critical factor in growth and expansion of the enterprise [44]. The focus is on entrepreneurial orientation (EO) and international entrepreneurship (IE) (see [45-50]). EO is mostly associated with corporate entrepreneurship, which is the set of firm activities. These include venturing into new businesses, exploring and implementing innovation and elements of self or strategic entrepreneurship. EO is less explicit than IE—EO refers to the qualities of risk-taking, innovative and proactive behaviour. Some theorists also see EO as a multidimensional construct where each of the elements of EO is an independent behavioural construct that defines the space in which EO operates ([47], p. 4) IE is the discovering, enactment, evaluation and exploitation of opportunities across national borders. Some of the research focusses on international new ventures (INVs) or the so-called born globals, while others explore the international activities of established firms. According to Freeman and Cavusgil ([51], p. 3), "International entrepreneurial orientation" is the behaviour elements of a global orientation and captures top management's propensity for risk taking, innovativeness, and pro-activeness'. The attention thus shifts to the vision of management as an important driver of internationalisation, strengthening the EO and EI explanation. Singal and Jain [52] found that clear corporate vision and strategic focus in Indian firms contributed to the successful development of globalisation strategies and successful international operations of Indian MNCs.

But the question remains: Whereto? Into which markets are MNCs expected to expand their operations? The literature developed explanations around the importance of institutions in the host market in providing stability, minimising market failures, reducing uncertainty and alleviating information complexity in economic exchanges [53, 54]. The notion that institutions matter has become axiomatic, particularly those formal institutional structures that, through written laws, regulations, policies and enforcement measures, prescribe the actions and behaviour of people, systems and organisations. In terms of geography, which geographical location will be optimal? The semi-globalisation literature noted the importance of not only considering conditions in the host market [55, 56] but also institutional strengths in region into which expansion is contemplated. The semi-globalisation approach suggests that a firm's foreign investments follow patterns exhibiting regional aggregation and arbitrage logic to cope with the opposing pressures of globalisation (i.e. integration) and local markets (i.e. localisation) [57]. Semi-globalisation involves partial cross-border integration

whereby barriers to market integration are high but not inhibitive. These situations cannot be fully understood through purely country-level analyses but require an evaluation of operations across multiple locations (e.g. within a region) that are distinct from but not entirely independent of each other [55]. Therefore, the region composed of geographically proximate countries becomes an important level of analysis when examining MNEs' internationalisation and institutional influences [55, 57]. This perspective has become increasingly relevant to the expansion of South African firms into Africa.

4. The nature and direction of African business globalisation

The international expansion of business from Africa, and specifically from South Africa, occurred primarily by means of mergers and acquisitions ([1, 8, 58, 59], p. 324–330; [60], pp. 253–257; [82, 83]) as expansion occurred incrementally as part of corporate entrepreneurship venturing into Africa. As South African OFDI constituted the bulk of African mergers and acquisitions between 2007 and 2013, market and asset-seeking strategies were thus pursued. New investments were relatively small - below US\$ 1 million in most transactions - and were stimulated by the unbundling strategies of conglomerates and the simultaneous refocussing strategies, as well as the privatisation policies of African governments after the early 1990s ([9], pp. 16–18; [85]). The geographical direction of business internationalisation of African enterprises was at first not aligned to the Uppsala model of Johansson and Vahlne [98]. This model predicted the direction of internationalisation of firms from developing countries through exports into neighbouring ethnically similar countries and only later into non-ethnically related countries but only as a much later strategy into developed markets. The history of African EMNC, of which most were South African companies, expansion into foreign markets shows more than half of OFDI entering European and UK markets (56% in 2013), 17.5% into North and South American markets, 16.2% into Asian markets and only 8.2% into the neighbouring markets of African countries ([61], pp. S96–S99). During the last few years, a marked increase in regional economic integration and subsequent cross-border business transactions are occurring, but the official OFDI from South Africa into other African countries remain below 10%.

The internationalisation strategies of the EMTNC from Africa were different and in response to firm-specific advantages, which varied between sectors. The semi-globalisation literature argues that not only conditions in the home market impact on internationalisation decisions [55, 56] but also the nature of the markets into which expansion is planned. The nature of developed markets in terms of similarity of demand, structure and operations was an important consideration in the direction of South African corporate internationalisation strategies. As pointed out by Ghemawat and the semi-globalisation literature, global expansion must be understood not only as a country-level analysis but as determined by conditions in the entire region. The region, which consists of a number of geographically proximate countries, becomes a determining level of analysis when explaining EMTNC globalisation.

Among the early globalising companies, the eclectic process model of Dunning explains the market-seeking and asset-seeking activities, but not the timing or direction of globalisation. The political changes in South Africa unleashed opportunities to overcome the restrictions

of the domestic market: the limited size of the market (slow GDP growth and low per capita GDP), the stratified nature of demand and the necessity of risk aversion strategies considering the history of the country, the alliance between die new ruling party and the Communist Party of South Africa, the official policy of 'Reconstruction and Development' (RDP) as well as the cost-spiralling potential of a rigid labour dispensation. Efficiency-seeking motives also ran high, since operations outside the restrictions of the domestic market offered opportunities to reduce costs (or be more cost-effective) inter alia through flexible employment policies and enhanced productivity strategies ([62], pp. 236–240; [9], pp. 24–26; [90]). An important explanation was the FSA and CSA nurtured in endogenous growth. These constituted the entrepreneurial and managerial capabilities of the EO and IE of the first movers. These capabilities were developed in the domestic market under conditions of international isolation and sanctions [13] and later were applied strategically towards globalisation.

When considering the globalisation strategies of Anglo American Corporation (AAC) and SABMiller, both companies had developed diversified conglomerate structures since the mid-1960s, whereby the mining company ventured into a number of different business activities, as did SAB. By the late 1970s, AAC as a group consisted of more than 656 companies operating in mining of a wide variety of metals and minerals, finance, exploration, property development, administration of businesses, housing, industrial manufacturing, food production, engineering, etc. ([63], pp. 273-324). Even before the political changes of the 1990s, entrepreneurial management had already established AAC operations in Australia Canada, Indonesia, Malaysia and various African countries, which shows the degree of IE in place. After 1994, AAC unbundled its diversified holdings in non-mining sectors and moved the headquarters of De Beers (the diamond mining and distribution company controlled by AAC and the Oppenheimer family) to Switzerland and Luxemburg and in 1998, after the merger with Minorco, listed on the London Stock Exchange as AAC PLC. The restructuring of the group with a firm focus on international mining operations entrenched the company in the OECD and is currently no longer seen to be a South African TNC [13, 64, 65]. AAC is currently ranked among the top 100 nonfinancial TNCs globally by UNCTAD on the World Investment Report, which is an improvement of 13 positions on that ranking since 2008. The 'globalisation' of AACs' business operations has not improved the company's TNI index, since it fell from 83.7% in 2008 to 20% in 2013. In the case of AAC, the initial CSA of the abundance of natural resources was reversed by the new political dispensation. Mines were not nationalised as in other African countries after independence, but ownership of natural resources was returned to the state, which with a system of licences regulated access to mining opportunities based on so-called transformation charters. These charters were 'negotiated' with the mining companies to secure compulsory transfer of ownership and management control to blacks. Large domestic enterprises that sought the internationalisation of their operations were described as instituting 'political risk management' [64]. The move to London and other OECD locations despite being involved in mining operations in developing regions is not as predicted by the Uppsala model, but underlines the FSA advantages in managerial expertise, access to capital and advanced mining technology. The AAC group has appointed a non-South African chairman in 2002 and American CEOs in 2004 to display the true global non-South African nature of its business ([65], p. 558; [85]). This entrepreneurial orientation (EO) enhanced the market and asset-seeking operations of the group, and the international entrepreneurship (IO) of the new leadership escalated the evaluation and exploitation of opportunities outside the original home country.

In SABMiller, globalisation strategy was driven by the EO of its management, who despite being locked into the domestic market until the 1990s strategically embarked on asset-seeking internationalisation. The first breweries acquired were in neighbouring countries such as Zimbabwe and Tanzania and other East African breweries and finally in Central America after 2001, China and the USA. The success of SABMiller's globalisation was grounded in the FSA of SABMiller's managerial global orientation, the knowledge of the African market (both beer and soft drinks) and subsequent ability to integrate its knowledge of both developed markets (in South Africa) and developing markets (also in South Africa and the other African locations) into a successful management and marketing strategy. The SAB decision to list in London in 1996 was a resource-seeking move—to raise capital towards further international acquisitions. It is not a case of the company having benefitted from its experience in 'overcoming institutional voids' (such as the absence of specialised intermediaries, regulatory systems or developing unique contract enforcement mechanisms – [66]), which gave it its competitive advantage and facilitated global expansion. The FSA lays in the incremental nature of mergers and acquisitions of the asset-seeking internationalisation strategies of SABMiller, which ultimately secured global market access. The disadvantage of the domestic political dispensation prior to 1990 was transformed into a distinct CSA—business was protected from foreign competition and could accumulate capital resources and diversify operations into different sectors, thereby building managerial capabilities in managing diversified conglomerates. The expansion on the African continent developed through an alliance with the Castle Group, which had vested interests in West Central and North Africa (primarily francophone countries—[58], p. 326). Globalisation strategy was used to manage the growing domestic risk (inflexibility in factor markets, empowerment costs, HIV/AIDS and brain drain) and relocate to London. In 2004, SAB was 20th on the UNCTAD non-banking company ranking, with a TNI of 55%, but by 2013, SABMiller was ranked 55th with a TNI of 70%. SABMiller has enhanced its TNI but was overtaken by other TNCs in the global ranking position. The company migrated out of the developing country ranking list and is no longer perceived as a South African company.

5. Internationalisation strategies from the developing market

The diversity of operations among the African companies on the UNCTAD top 100 non-banking companies from developing countries complicates the identification of general internationalisation strategies that could result in the globalisation of business operations. South African companies dominate the list, followed by two companies from other parts of Africa—Sonatrach, as the SOE from Algeria, and the Orascom Construction Group from Egypt. The international expansion of Sonatrach is purely driven by market-seeking strategies, since the oil and gas deposits of the country mandate distribution outside the borders of Algeria. The company was established in 1963 with Algerian independence and extracted oil, built pipeline infrastructure for transportation and gas, conducted explorations, distributed petroleum products and monopolised the

market for the production and distribution of all related production after the nationalisation of the industry in 1967. Sonatrach acquired critical mass in the domestic Algerian petro-chemical industry, because in 1971 all hydrocarbon resources were also nationalised. Algeria joined OPEC in 1969. In 1986, legislation was passed to allow joint ventures with Sonatrach, on a condition that companies are incorporated and maintain head offices in Algeria. Foreign investment and expertise infusion in Sonatrach changed the inward-looking SOE perspective towards opportunities outside Algeria, such as the construction of the Pedro Duran Farell pipeline delivering 11 billion cubic metres of gas per annum to Spain and Portugal via Morocco. Since 2000, Sonatrach engaged in operations outside the home market—in Portugal, Spain, Italy, Britain, Peru and the USA [67] (www.sonatrach.com). Sonatrach is ranked 51 by its foreign assets but only 72nd by TNI ([2], p. 39). Sonatrach did not expand operations outside Algeria to link, leverage and learn from companies outside its borders (as suggested by Matthews, was the strategies of the 'Dragon Tigers'—[31, 33, 35, 68]), but the SOE allowed foreign expertise to enter operations in Algeria, under government control, and transfer skills and experience to the SOE, which ultimately allowed Sonatrach to expand into foreign markets.

The other ranked African company on the developing country list is Orascom, a building materials and chemical industry business in Egypt, especially noted in the WIR 2014 as engaging increasingly in OFDI in Africa ([2], p. 39). Orascom started as a family-owned construction company of the Sawiris family in the 1950s, but nationalisation caused the migration of the founder to Libya in 1961, where he continued his career in construction. On Onsi Sawiris' return to Egypt in 1976, he re-established Orascom Onsi Sawiris & Company. The EO of Onsi Sawiris took him to Virginia in the USA in 1985 to establish his company, Contrack, on American soil, hoping to benefit from USAID and winning building contracts from the US Government in Egypt. Under close family control, Orascom developed into the leading private sector building materials and construction contractor in Egypt. The Sawiris family collaborated with local and foreign partners to establish building materials outlets across Egypt. As the founder stepped down in 1995, the successor son, Nassef Sawiris, embarked on extensive diversification into related enterprises. In 1998, the name was changed to Orascom Construction Industries (OCI S.A.) and listed on local bourses in 1999 (currently the Egyptian Stock Exchange). The order book of the company expanded significantly, and OCI had acquired the BESIX Group with extensive operation exposure in Europe and the Gulf. Business expansion occurred as suggested by the Uppsala model—into neighbouring ethnically similar countries. Further operational expansion led to the establishment of OCI subsidiaries in Saudi Arabia, as well as the acquisition of US construction companies (Watts Construction in 2013 and Weitz Company in 2012), and in 2015 OCI listed on the Nasdaq Dubai the EGX. OCI's initial international expansion was aimed at escape from risks and limitations in the home market, but operational efficiency resulted in business expansion across North Africa as well as the Middle East, the UK and the USA. The market distortion in the home market served as a push towards international expansion, but globalisation was only actively pursued from the beginning of the twenty-first century. The initial markets targeted were Tunisia, Algeria and Qatar. The OCI Group diversified into the chemical industry, fertiliser production, hotel industry [101], recreational facilities and financial services (mortgage lending, leasing and insurance) [70, 71] (www.forbes.com; www.orascom.com). During the 2011 uprisings, the company listing was moved to Euronext in Amsterdam. The globalisation

strategy consisted primarily of expansion into neighbouring markets as part of the market and asset-seeking strategies of management—still firmly in the hands of the Sawiris brothers.

Different factors contributed to the globalisation of South African companies. At first FSAs developed in production sophistication, management and product innovation. This mandated expansion beyond the confines of the small domestic market. Market constraints as a result of domestic conditions undermined efficiency enhancement. In contrast to the Asian experience described by Matthews, South African companies did not seek access to new technology but owned advanced production methods and implemented new technology, which they exported into the new markets, especially in Africa. The globalisation of Gold Fields Limited is a case in point.

Gold Fields was one of the first gold mining companies in South Africa, established in 1887 in London and by 1892 consolidated its operations in South Africa under the name of Consolidated Gold Fields of South Africa Ltd. (CGFSA). CGFSA operated in the gold mining sector and diversified operations into manufacturing, finance and property. After the AAC relocation to London, Minorco (owned by AAC) acquired the London-based Consolidated Gold Fields Ltd. in 1989. This left the South African CGFSA an independent company, firmly rooted in the Witwatersrand. The South African company then expanded its gold mining operations by the acquisition of the Tarkwa gold mine in Ghana, in 1998 merged its gold interests with the gold interests of Gencor after that mining house's unbundling and acquired a 21.6% share in the former AAC Driefontein Gold Mine in South Africa. The new gold mining company was renamed Gold Fields Ltd. Gold Fields used its superior managerial skills and technology in gold mining to expand into other gold mining operations, primarily in West Africa. The company explained the mergers and acquisitions as occurring '...against the background of a tough commercial environment where costs are outstripping the price of finished gold' ([72], p. 4). By 2000, Gold Fields was the largest gold mining company in the world. The company acquired more gold mines in Ghana (Aush Agnew mine, St. Ives mines) to gain access to international capital Gold Fields listed on the New York Stock Exchange in 2002 and subsequently expanded operations into Venezuela (acquired in 2006 but sold again in 2009—managing contextual risk), Peru and the Philippines. In 2011, Gold Fields bought out minorities in Ghana and the Philippines and in 2013 expanded its operations into Western Australia through the acquisition of three gold mines [73, 98] (www.goldfields.co.za/au-history.php). Gold Fields remained active in the South African gold mining industry but restructured its ownership by unbundling some mines and listing them separately as Sibanye Gold in 2012 and listing Sibanye separately in the JSE as well as the NYSE. Gold Fields was leading in cyanide technology, which was introduced at all the gold extraction plants at its mines world-wide. In 2009, Gold Fields was the first gold mining company to sign the Cyanide Management Code, of which the company had been a leading compiler. Globalisation of Gold Fields was to seek new markets and assets in response to the limitations in the domestic market but also because the company owned FSA in mining technology.

The role of leading technology as driver of globalisation was also critical in the globalisation strategies of Sasol and Sappi. Sappi (the South African Paper and Pulp Industries) acquired an international footprint utilising its locally developed knowledge base. Industrial protection policies implemented since the early 1920s assisted Sappi (established in 1936) in acquiring

market domination. In 1987, Sappi acquire Saicor, then the world's largest producer of chemical cellulose and developed excess production capacity. Sappi commenced paper exports to European markets towards the late 1980s and in 1986 established an international selling subsidiary, Sappi International. International sales rose to half of Sappi sales even before the international acquisition drive. Since 1991, Sappi embarked on M&As in the UK (five paper mills), Germany (Hanover Papier) and Hong Kong (specialised pulp services), a majority stake in the US company SD Warren, the world leader in coated paper, and in 1997 the largest coated paper company in Europe, KNP Leykam. By 2000, Sappi was the world leader in the manufacturing of coated wood-free paper. Sappi listed on the London, Paris and New York stock exchanges but maintained its primary listing in Johannesburg (Economist, 13/7/2006; www.sappi.com). In 2004, Sappi expanded into the Chinese market by acquiring a 34% stake in a joint venture with Jiangxi Chenming. The reason for the joint venture was technology and expertise transfer: Sappi assisted with the building of paper machines, a mechanical pulp mill and a deinked pulp plant [13]. Sappi was ranked 50th on the list of the top 100 nonfinancial companies in the developing world in 2008, with foreign assets of US\$ 4001 million, and by 2013 was ranked 98th by foreign assets and 33rd in terms of its TNI ([2], web Table 29). The market and asset-seeking strategies of Sappi were facilitated by the company's ownership of proprietary knowledge and its ability to establish networks and alliances (joint ventures) to map out its global footprint.

The South African synthetic fuel producer, Sasol, could use its ownership of advanced leading technology to drive its globalisation strategy. Sasol was established in 1951 as a SOE to develop the German Fischer-Tropsch process of manufacturing synthetic fuel from coal commercially. Pioneering technology was developed, and South Africa became the first country in the world to produce fuel from coal commercially since the last half of the 1950s. In 1979, Sasol was privatised and listed on the JSE, because by the early 1980s, expansion was mandated by the threatening international oil crises unleashed by the OPEC price hikes of the early 1970s. Sasol built two additional manufacturing plants, Sasol 2 and Sasol 3. Sasol soon developed an extensive downstream chemical by-product business and by the turn of the century was a diversified chemical conglomerate. Sasol diversified operations from the start, e.g. into mining, in order to supply in its coal demand; it ventured in chemical products, oil and the development of chemical technology. In 1996, Sasol announced its Slurry Phase Distillate (SPD) technology internationally and by 2001 its world leading gas-to-liquid (GTL) technology. By 2008, international accreditation was received for the innovative research by Sasol Technology, in developing fully synthetic jet fuel ([74], p. 26; [93]). The global positioning of Sasol was inevitable. Businesses built around natural resources are usually global, because they serve international customers in advanced markets, they seek alternative sources of resources due to the saturation or cost of domestic materials and such 'companies move up the value chain, selling branded products or offering solutions to niche markets' ([66], p. 67). The improved SPD technology offered the opportunity for the global development of gas-to-liquid (GTL) technology. Sasol pioneered the first GTL plant in Qatar, another in Nigeria, and works in JVs around the world to apply its GTL as well as its coal-to-liquid (CTL) technology. Sasol was a strategic industry for South Africa during the international sanction era and developed a competitive advantage in the chemical industry through innovative technology. Early in the new millennium, Sasol started global acquisitions and joint ventures, following the Dunning [48] model of expansion driven by OLI advantages. An added rationale for globalisation was

the limitation of the domestic market considering the advanced nature of the technology developed. Domestic market constraints added further motivation for globalisation. Joint venture expansion strategies are often motivated by the ownership by the local interests of resources, such as oil, gas or coal. Sasol contributed its technological expertise to the project in a joint venture. By 2009, Sasol was ranked the highest of the South African companies in the WIR top 100 non-banking companies ([94–96]; [12], p. 223). With a market capitalisation exceeding ZAR317,687 million (or US\$30.89 billion) by 2013, Sasol added a second listing on the New York Stock Exchange in 2006 but maintained its primary listing in Johannesburg. By 2013, Sasol ranked 53rd on the top 100 nonfinancial companies in the developing world and ranked 74th in terms of its TNI.

In the telecommunications industry, two South African EMNCs have established an undisputed global footprint. The first is Naspers. This company was established in 1915 as the holding company of an Afrikaans newspaper De Burger. As international sanctions and isolation placed serious restrictions on expansion ambitions of the print media, the electronic media opened opportunities to the early birds. Naspers started the first pay-television business M-Net in 1985 and listed it on the JSE in 1990, but that alone could not salvage the media company. In 1993, M-Net split into two companies: M-Net, which was the pay-television company, and MultiChoice Limited, which took over subscriber management, signal distribution and cellular telephone services. In 1994, Nasionale Pers listed on the JSE and changed its name to Naspers in 1997. In 1995, Richemont S. A. Switzerland and MultiChoice merged their pay-television operations into NetHold BV, held through the Naspers subsidiary MIH Ltd. These transition into the electronic media occurred because a Naspers manager in the newspaper division, JP 'Koos' Bekker, disagreed with the old-fashioned management style of the company. Bekker completed an MBA at Columbia University, with a short dissertation on the electronic media, resigned from Naspers and started his own electronic commerce/news company. In 1997, Bekker was recalled to Naspers to address the problems of falling profits and drastically declining market share. Bekker transformed the newspaper and book print company into a multimedia company. At first the pay-television interests of NetHold were merged with pay-television interests of Canal+ in France, Irdeto Access in France, 30.1% of UBC, the Thai pay-television company, and ended up managing NetHold Africa, Mediterranean and Middle East pay-television business. In 1997, MIH Ltd. listed on the NASDAQ. MIH Ltd. then established an Internet service provider MWeb and then ventured in a shopping spree of acquisitions in the instant messaging and Internet service sectors in China (Tencent in 2001), Brazil, Russia (Mail.ru in 2007) and other Eastern European countries. Naspers also acquired a controlling interest in, and media groups in Brazil (Editora Abril in 2006), a 9.1% stake in the Chinese Beijing Media Company, in March 2008, the Tradus company (formerly QXL and listed on the London Stock Exchange), which provides an online auction platform and Internet portals in Central and Eastern Europe. Naspers acquired Allegro.pl., the leading online auction site in Poland. In 2008, Naspers also acquired a controlling stake in BuzzCity, a mobile media company providing access to a global advertising network on the mobile Internet for brand owners and agencies [75]. In November 2009, Naspers bought BuscaPé, provider of comparison shopping systems for more than 100 portals and Web sites in Latin America, including Microsoft, Globo and Abril. Soon the company expanded into eMag, a major e-commerce portal in Romania, a 79% stake in Netretail in the Czech Republic in June 2012 and in November 2012 a minority stake in Souq.com, a similar portal in Iran. In 2013, Naspers acquired a stake in Konga.com, the largest Nigerian online marketplace, and in 2013 redBus, the largest Indian bus ticket portal.

These massive expansions made Naspers the leading emerging market electronic communications company. The focus of Naspers shifted to electronic trade and communication and is the largest emerging market company with a market capitalisation exceeding US\$40 billion. Naspers is still listed on the JSE, from where it generates more than 70% of its revenue. Naspers occupies the 63rd position on the top 100 nonfinancial developing country companies, with a TNI of 35% [2]. Naspers owned innovative leadership, who engineered strategic business repositioning and e-commerce acquisitions. Naspers operates on all the continents of the world in e-commerce. The strong growth flows from the emerging markets in Asia, Central and Eastern Europe, India, the Middle East and Latin America.

The highest-ranked emerging market nonfinancial company is the Mobile Telephone Network (MTN). MTN is 72.1% owned by the Johannesburg Stock Exchange-listed company M-Cell, 23% by Transnet and 4.9% by black empowerment groupings. It runs a GSM 900 technology in its mobile telephone network and grew to a market share in South Africa of approximately 40% by 2001. By 2005, MTN was locked in a slow-growing South African cellular market with two competitors, Vodacom and Cell-C. The expansion strategy in Africa occurred through the use of local partners' branding. This reduced the recognition of the MTN brand and management embarked on a brand consolidation strategy to cut marketing costs and develop a global brand. To deliver a single quality global brand, a new logo was accepted as 'Y'ello'—the MTN logo on a bright yellow square. The single brand logo was negotiated with all stakeholders in each of the countries where MTN operated. A new marketing concept was developed: glocalisation. The meant regional communication focussed on local needs and culture but nevertheless still reflected the MTN global brand essence, the brand greeting, the brand personality and the band values ([76, 77], p. 306). The innovative brand marketing strategy proved highly successful, both as a marketing strategy as well as a management tool, since the South African management strengthened managerial control and the working relationship with the local partners in the different countries.

Within only 10 years, MTN expanded operations to 28 countries in Africa and the Middle East. Its TNI is 31%, and its ranking on the top 100 nonfinancial companies in the developing world is 31—the highest of all South African companies in the ranking list in 2013. MTN market expansion was driven by FSA based on ownership advantages in exceptional management strategic vision, knowledge of the African market, the innovative application of brand marketing and the use of leading technology. The control of the company is in the hands of black South African businessmen, who integrated a loose network of single country operators into a single emerging market cellular phone giant.

The health-care expansion of both the Mediclinic Group as well as Netcare was driven by the FSA of medical expertise, the advantage of proprietary knowledge, in seeking new markets. Serious shortages in medical services and the rise of the middle class in Africa alerted medical doctors to the opportunity to expand private health care outside South Africa. The entrepreneurial opportunity was observed, and both health-care groups, established in the early 1980s, established hospitals in Namibia, the Middle East and the UK. These health-care groups target the higher end of the market and have therefore also penetrated the UK and Middle East markets.

6. The trend emerging

In contrast to the internationalisation of the Asian Tigers described by Matthews, the internationalisation strategies from the African periphery were motivated primarily by market, asset and efficiency-seeking strategies and less by resource-seeking motives. The observation of the internationalisation of the leading corporations that have diversified operations significantly to gain revenue from operations outside the home country, as discussed in this paper, seem to display the following dominant trends , as will be discussed below.

Internationalisation of the first movers was motivated by **market and asset-seeking** considerations. The long period of international isolation resulted in 'pent-up' capacity at South African firms. The size of the domestic market is small—GDP growth has slumped from 5% to below 2% in the last few years and is not likely to improve any time soon as a result of domestic political constraints. Market-seeking strategies offered access to the new fast-growing markets in Africa, with competitive labour resources. The market-seeking strategies were coupled by the mining companies' asset and resource-seeking strategies. The diversification of mining operations from South Africa by BHP Billiton, AAC and Gold Fields was motivated by resource-seeking and efficiency-seeking considerations. Access to new mineral resources and new mining companies outside South Africa assisted in reducing the risks associated with empowerment policies, domestic labour market rigidities and associated cost pressures. New explorations uncovering mineral deposits outside South Africa offered potentially higher efficiency and links to emerging markets. The expansion of Sasol into Mozambican gas fields was both motivated by resource-seeking considerations as well as the proprietary technology advantage of its GTL technology.

The expansion of the retailer Shoprite and MTN into African markets was purely market-seeking but facilitated by strategic managerial capabilities and knowledge of the context and complexities of the African market. In this respect South African companies possess a competitive advantage over non-African multinationals aspiring to enter the fast-growing African markets. Knowledge of the African cultural diversity, the different languages and consumption patterns was key to the success in the consumer market but also in the mobile telephone market and money transfer market. Therefore Shoprite linked up with MTN, and later also Vodacom, in supplying access to mobile telephone services and money transfer facilities at the shop outlet.

The export-driven international operations of most African firms are market-seeking without exception. The exports by Sonatrach (Algeria) and Sonangol (Angola) are purely market-seeking. The large number of medium-sized African firms engaging in purely commodity exports described by Ibeh et al. [42] only represents the beginning of business globalisation. It is the beginning of revenue stream diversification through foreign sales, but not yet the expansion of operations outside the home market. This type of emerging internationalisation occurs in the exports of food, flowers, wood and textiles. An important observation in this category of emerging internationalisation is the tendency of foreign investment in local enterprise, which then results in export initiatives. This is particularly the case in the floriculture operations in East and Southern Africa, the coffee exports from Ethiopia and Mozambique and the textile exports from East Africa and Mauritius. In this category the so-called 'quota hopping' practice by foreign firms seeking to diversify the location of their operations to

bypass US export quota restrictions resulted in Southeast Asian textile manufacturers establishing subsidiary operations in African countries in order to export from 'Africa' and not from their home markets ([42], p. 418). These collaborative efforts may well in the future build local enterprise and result in extensive internationalisation.

The second trend is that market and asset-seeking initiatives were driven by the competitive advantage of FSAs, found in **proprietary knowledge and managerial capabilities**. The proprietary knowledge of the locally developed technologies, such as the world leading CTL and GTL technology developed by Sasol or the mining technology of the mining conglomerates AAC and Gold Fields or the mobile telephone technology MTN, is injected into the African and Middle East markets. The expansion of the health-care companies Netcare and Mediclinic is also representative of advanced health-care technology as a vehicle for internationalisation. These technologies provided a strategic tool to access new markets and simultaneously address the growing constraints in the domestic market.

Technological advantages were underpinned by strategic managerial capabilities. The managerial capabilities of South African corporations constitute a vital element of the successful globalisation of their operations. Strategic leadership and dynamic capabilities in change management placed them in an advantageous position with respect to expansion into global and neighbouring developing markets. The diversified conglomerates of pre-1990 South Africa were multidivisional firms, managed by professional managers and not only family members (as is still the case in most of the emerging African conglomerates in other African countries such as Uganda, Tanzania, Ethiopia and Kenya). These competitive advantages were enhanced through the international orientation of South African management. Local managers are well travelled, have extensive business network links outside the country, possess ability to manage operations under conditions of political instability and social turmoil—as persisted in South Africa during the 1980s and 1990s – and take and manage risk in such markets [42, 78]. The internationalisation of Sappi, the paper conglomerate, was both motivated by market-seeking considerations as well as the Asian Tigers type of learning and leveraging motives where Sappi acquired advanced fine paper production technology through the acquisition of the European and US paper corporations. The success of the sustained internationalisation operation was dependent on the management of the integration of the newly acquired technology into the existing knowledge base of the conglomerate. The opening up of markets offered strategic options conditioned by contextual constraints.

In this category of internationalisation, the fast-growing e-commerce and e-business markets are penetrated by innovation managerial activity [90]. The cases of the expansion of Naspers and MTN were engineered by strategic management vision. Innovative management proactively sought to leverage existing knowledge in the media and mobile telephone business to penetrate the e-commerce market. Naspers restructured the company and used organisational capabilities at firm level to refocus the media company to emerge as the largest emerging market conglomerate by 2013. Naspers' restructuring enabled the MTN expansion, and the electronic technology of the mobile company was leveraged by the retail company Shoprite, to offer electronic money transfer and payment services. Market-seeking strategies are strengthened by the international orientation of management.

On the back of the trends identified, it is to be expected that **efficiency-seeking** motives will in the future become a stronger consideration for South African firms. The emerging diversified corporations from African countries will join those ranks as soon as professional management replaces or supplements family control and acquires a strong international orientation and develop alliances or networks outside the home country. As the bulk of private enterprise in Africa still falls within the category of SMMEs (up to 40% of Africa's GDP is still contributed by informal economic activity—[79, 80]), African enterprises are growing in size and capabilities to challenge competitors on the basis of cost and resource advantages. The strongest private African corporations expanding across African home borders are the Simba Group, the Dangote Group and the Orascom Group.

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The Need to Develop a Corporate Culture of Innovation in a Globalization Context

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Abstract

In recent years, the globalization of markets combined with the Industry 4.0 revolution has brought increasing competition among enterprises. Nowadays, organizational success is measured by leadership in the market share, revenue growth, level of competitiveness supported by customer satisfaction, and innovation capacity. Therefore, companies need to develop new products and/or services faster and better than their competitors to stay "alive." In order to respond quickly to market needs, enterprises should operate more efficiently reducing and/or eliminating activities that make up the actual processes that do not add value but also they need to develop a "healthy" cultural environment within the organization that allows the implementation of new ways of work. In this context, the innovation capacity assumes a decisive importance in the level of competitiveness of an organization, and the entrepreneur plays an important role in launching new business. Based on this perspective, the innovation processes within an organization are obtained through entrepreneurial initiatives that have their origin in the existence of an organizational culture that promotes an entrepreneurial behavior.

Keywords: culture, innovation, innovation culture, entrepreneurial culture

1. Introduction

In general, there is now increasing competition in markets on a global scale. In order to be competitive, organizations must innovate to respond quickly to market needs. Currently, when the topic of innovation is addressed, there are several pertinent questions that many SME managers ask, such as: Why are not all organizations entrepreneurial? Why are not all



entrepreneurship initiatives successful? Why the success formulas do not apply equally in all organizations? What does it mean by culture of innovation?

The term "innovation" means the development of anything new from its initial idea to becoming viable in the marketplace.

However, in a global market and according to some authors [1, 2], it is possible to identify three distinct types of economic environment in relation to the level of competitiveness between organizations: markets "blue ocean," "red ocean," and "purple ocean." Using a metaphor from thermodynamics field, an analogy might be established between the phase diagram (showing the conditions necessary for the existence of the various states: solid, liquid, and gaseous as a function of the pressure and temperature conditions) and the possible admissible levels of entrepreneurial culture associated with each market to not jeopardize the survival of an organization depending on the value of the opportunities and threats, as illustrated in Figure 1.

The markets called "blue ocean," stable environment, correspond to the solid phase where the number of competitors is reduced and, in some situations, could be null. In this favorable environment, which is characterized by the ease of accessing many opportunities in contrast to the reduced number of threats, the development of an innovation culture is not a concern of top management which leads to the proliferation of a conservative culture that acts as a barrier to the promotion of innovation activities.

As opposed to the "blue ocean" market, we have the markets called "red ocean," context of crisis, which corresponds to the "gaseous" state where the level of competition is extremely high. In this adverse context, the opportunities are scarce and the threats abound. In this context, the role of the entrepreneur in launching new businesses from inside the company is crucial. This phenomenon is called "corporate entrepreneurship" and differs from "entrepreneurship." "Entrepreneurship" refers to new businesses created from the root or developed outside (or separate) from an existing business.

As an intermediate state, between the "blue ocean" market and the "red ocean" market, there are markets "purple ocean," unstable context, that corresponds to the liquid state. This market is characterized by the fact that coexists with two distinct situations: business opportunities where competition is virtually nonexistent or null and business opportunities where competition is fierce.

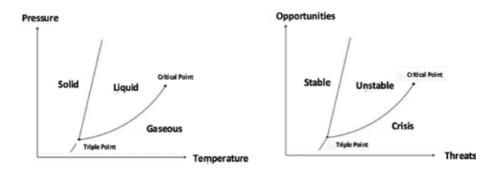


Figure 1. Diagram of phases versus diagram of market states.

Although in thermodynamics, there are very well-defined equations and rules that allow to explain the conditions necessary for a given element to exist "to survive" in the solid state, in the gaseous state or in the liquid state, it has been difficult to evaluate the real relevance of organizational culture in innovation processes.

This work aims at contributing to better understand the culture role to explain the production and exchange of knowledge in terms of capacity for creating new ideas, products/services, and processes.

This work is organized as follows. Section 2 provides the background needed to understand the culture role in promoting innovation processes. Section 3 discusses the development of a culture to support corporate entrepreneurship. Section 4 provides some concluding remarks.

2. Promoting innovation through the culture

Globalization requires companies to create new products and businesses faster and better than their competitors. This calls for, on the one hand, highly efficient operating processes (although in themselves they do not ensure the competitiveness of companies) and, on the other hand, an organizational culture that allows the implementation of new operational methods.

Innovators (acting at product level) and entrepreneurs (acting at the level of the business) should have an organizational structure that favors innovation even without waiting for the verification of the appropriate culture. The innovation process itself is one of the best ways to perfect the company's innovation culture. The "organizational structure" consists of the modus operandi of the company based on operational configurations influenced by the organizational climate. The "operational configurations" translate cross-functional teams consisting of several knowledge specialists according to the specificity of the tasks. By "organizational climate," we mean working conditions that foster personal autonomy and responsibility by influencing individual motivation.

In the next steps, we first examine the culture of the company, then identify the characteristics of the innovation culture, and finally see how the culture of support for corporate entrepreneurship is developed.

2.1. What is the company culture?

Each organization has its own culture. "Organizational culture" is similar to the personality of individuals, that is, it is an intangible, always-present fundamental characteristic that provides a meaning, a direction, and a basis for individual action. "Culture" lies in shared values, beliefs, and expectations, and in the norms seized as a part of the work in the company over time.

As much as the personality influences the behavior of the individual, the shared culture exerts a predominance in the pattern of activities, opinions, and action within the company. Company culture influences how employees and managers surface problems, serve consumers, deal with suppliers, respond to competitors, and conduct current and future activities [3]. In other words, culture is the basic assumption of what the organization is and how its members should proceed and define themselves in relation to their external environment. In a word, culture is the reality of organization. That is, it shapes everything that goes on internally, it represents unwritten (i.e., informal) norms that bind all elements in almost everything they do, and it is reflected in organizational philosophy, rules, climate, and symbols.

Schein and Schein [4] suggests that organizational culture is what a group learns over a period of time while solving their survival problems — that is, it is the pattern of pretensions discovered, developed, or established by a certain group while learning to face their problems of external adaptation and internal integration at the level of basic artifacts, values, and assumptions.

"Artifacts" are visible organizational structures and processes, include written and spoken language, physical space, operational plans, and attitudes of individuals, and can be divided into (i) physical artifacts (company logos), (ii) procedures (company rituals), and (iii) organizational histories and myths.

"Values" are the social principles and patterns possessed within culture that are of real importance, rooted in unwritten rules that allow members of the organization to know what is expected of them, and define what interests the stakeholders in a corporate culture. Organizational culture reverberates the values of individuals whose use enables them to make decisions and develop solutions to solve problems and functional issues.

"Basic assumptions" are accepted as true beliefs and habits of perception, thoughts, and feelings that are rarely made explicit. When the solution to a problem works over and over again, it becomes accepted as true, that is, assumptions begin to be learned responses that guide behavior and determine how members of the organization feel, think, and act.

These three elements are continually interacting, focusing on what artifacts and values reveal about basic assumptions. Thus, we are talking about a dynamic model in which all processes occur through continuous reproduction and production of culture under stable formal conditions or organizational change.

In other words, company culture can be described in two "levels": (i) "higher level," which is outwardly observable and contains phenomena such as artifacts, patterns of behavior, language, formal rules, technical knowledge, use and production of physical products and objects, and (ii) "lower level," which is hidden (deeper), since it is located in the minds of people, integrates the mental structures—such as ideas, beliefs, values, attitudes and assumptions and modes of understanding the environment, and contains internal processes by which the operation is determined.

These two levels of culture are easily distinguishable, but it is almost impossible to separate them. They are two parts of the same entity, being the hidden level of culture usually inferred by observing the behavior of organizational members (especially, top management). To make the two cultural levels consistent, collaborators instinctively modify their behavior and thinking.

Hofstedeet al. [5] consider culture as the software of the mind, that is, the operating system that enables individuals to share and understand the experience. "Experience" consists of a set of shared norms and attitudes possessed by the members of an organization. That is, culture is the means by which people communicate, develop, and perpetuate their attitudes toward life and work in order to interpret their experience and guide their actions.

It should be noted that the essence of culture is not what is superficially or clearly visible on the surface, the most important are the shared views through which people understand and interpret the events they face. In the figurative sense, the understanding of the culture resembles the peeling of an onion by layers.

The metaphor of onion, like that of the iceberg, illustrates the "culture structure" from the "explicit" (visible outside of artifacts and products) to the "implicit" (invisible, inner part of the constituents of culture). In the "outer layer," explicit culture is the observable reality of language, food, buildings, monuments, markets, fashion, and art. The "intermediate layers" contain rules, values, and attitudes invisible directly.

Culture consists essentially of basic assumptions about a fundamental question: what leads different groups of people, consciously or subconsciously, to choose distinct, right, or wrong definitions? Culture emerges in organizations because of the need, on the one hand, to address internal and external aspects of survival and, on the other hand, to obtain good results from the influence and options of their clients, suppliers, regulators, and other entities in their context of action [6].

To successfully address the external environment, companies must develop cultural solutions in order to (i) adopt a sense of purpose (i.e., a mission) and (ii) define both the objectives procedures for evaluating and reviewing the course of. As regards the adaptation of their internal environment, companies have to take into account factors such as the following: (i) delineate a long-term, shared vision; (ii) have a flexible organizational structure; (iii) adopt human resource management policies; and (iv) institute continuous improvement practices.

In short, we can speak of organizational culture as a dynamic mix of efforts that innovative companies enclose in support of new product or business development.

2.2. Culture of innovation

Culture can contain a perspective of continuous innovation, ranging from "incremental innovation" (doing better) to "radical innovation" (doing differently). This constitutes a basis for the development of "archetypes," which are introduced to facilitate the descriptive representation of the characteristics of incremental and radical innovations. Archetypes are of two types:

- i. Incremental application of innovation tends to maintain or improve in small incremental steps existing products or services, setting an attitude of "do better," which is typical of a company in the mature stage.
- ii. Radical application of innovation aims to explore and expand the strategic borders, setting an attitude of "do different," which is typical of an entrepreneurial company or "new company" (start-up).

Greenwood and Hinings [7] report that organizations tend to operate with structures and systems that "bring" the two types of archetypes. The passage between archetypes (i.e., organizational change) is less common than the stability of the archetype (i.e., organizational inertia), since organizations have specific institutionalized functions.

To some extent, this indicates that the transition from innovation culture type I to type II can be streamlined by managers' specific interventions at the level of artifacts and values (which are interrelated). However, change in culture must be undertaken by attempting to change the basic values and assumptions present in the organization. The values lead to the behaviour and this behavior will solve the problem that prompts him. Soon, values will be gradually transformed into basic assumptions about the reality of things. As assumptions are increasingly accepted as true, knowledge will disappear. Thus, a change in organizational culture is created.

As we see, archetypes provide a holistic perspective on the culture of innovation. As a consequence, the change from type I to type II must be conceived as a holistic process, that is, that it serves the various operational areas where the most significant characteristics of the innovation culture predominate.

In general, the chief executive officer (CEO) of an innovative company defines a long-term vision and develops a mission that is consistent, challenging, and realistic with respect to each other. To attract the voluntary commitment of employees for innovation projects it should be used convincing examples and persuasion in the performance of their duties. To this extent, the freedom to test new things is widely recognized as a prerequisite for innovation since it refers to the personal decision about "what to do" or "how to accomplish a task." The most important type of freedom is the autonomy of individuals, that is, freedom in the conduct of one's own tasks in the pursuit of the mission or the attainment of the firm's goals. Therefore, such openness to individual initiative is a key element in supporting successful innovation. The organizational receptivity to the new ideas and the proactivity of the employees generate new applications of knowledge and new ways to do things as a result of the good to take risks.

Nybakk and Jenssen [8] emphasize trust and openness as essential in modeling the climate for innovation where risk is related to the freedom to explore the unknown (e.g., ideas and experiences). However, in an "incremental environment," the degree of freedom can be reduced and replaced by functional systems and procedures. This means that routines and usual business systems can become inhibitors of the development of radical innovation [9].

The need to innovate and discover new commercial applications in the future requires the refining of the creative capacity of individuals in training as an integral part of the company culture. Actually, the risk attitude influences the way team members deal with uncertain situations. For example, risk-averse groups prevent radical innovation. Indeed, experimental attempts at radical innovation produce more failures than successes. Hence, it is not surprising that managers feel more comfortable with access to innovative technologies through acquisition operations or choose to be "fast followers" when new consumer-centric operational concepts emerge.

Employees of an innovative company recognize that each company and each person is part of a long chain of suppliers and consumers. In other words, each company is a customer of its suppliers and a supplier of its customers. Companies must understand consumers'

expectations and needs and, as such, employ systematic processes that bring together market information and help anticipate future consumption trends. In fact, managers use this information to evaluate and improve the production processes presented in the market, for example, by designing products that target customer preferences.

For Marquis [10], one of the lessons to be drawn from successful innovative firms lies in the fact that the main source of innovation is their human resources. The training and experience of the right people are the main source of innovation information. This implies that in an innovative organization it is expected to have an active involvement of all employees in the effort to continuously improve the quality of services and goods produced. Continuously improving quality will maximize customer satisfaction and minimize total operating costs. In this step, we can say that "total quality management" works internally as a horizontal application through functions and departments with the voluntary commitment of all employees and externally as a downstream of suppliers and "consumers" value chains, respectively. Individuals are encouraged to intervene beyond their "comfort zone," that is, to engage in work groups with learning and development tasks beyond organizational boundaries that increase the personal knowledge that can be used in innovation processes—"do better" as well as "doing differently".

The attenuation of the hierarchical structure in the company ensures its adaptability and operational flexibility, since it bases its activities in multidisciplinary teams with knowledge transversal to the various organizational sectors. Rather than responding to the requests of their immediate superior (typical of a vertical relationship), team members focus on satisfying the needs of the following people in the process of operation (typical of a horizontal relationship). The working groups or organizational units are dynamic in composition and activity and enjoy coordinated network autonomy in order to group the actions taken as a whole to achieve the company's objectives. The Director General's support and commitment to innovation projects is a critical factor in his success.

In other words, the role of innovation in the company's long-term objectives must be stated and strengthened at all functional levels. The motivation of the individuals, combined with the knowledge obtained from the learning, helps to instill an innovative spirit of work. Collaboration between people with different skills can lead to the creation of innovative solutions and products. Therefore, the success of the companies stems from the dedication and extraction of talent from individuals and their combination in teamwork. The direct intervention of the leaders ensures the verification of conditions conducive to the flowering of a sense of trust that generates enthusiasm for the common realization throughout the organization.

Hauser [11] points out that the 'enabling' culture of internal debate and prevention of emotional conflicts favors the early stages of innovation. This causes employees to express their appreciation and support of each other at work and not waste time, protecting their own ideas or feeling threatened by others. This provides an internal trust environment to which creative thinking is associated, which in turn depends on certain personality traits related to independence, self-discipline, tolerance of ambiguity, perseverance in the face of frustration, and lack of concern for social approval. With the project team having confidence, its elements will be more receptive to accepting an external perspective without causing a confrontation not invented here, that is, they have a distance from the invention of others.

Successful innovation requires the ability to gather ideas and competencies from a large number of sources. If the company is closed within its own internal reality, it will be unable to discover and exploit opportunities outside its existing business or beyond its current operational or technical capabilities. On this basis, the exposure of teams or firms to external technological knowledge is a valuable component in the innovation process [12]. On the other hand, innovative organizations adopt a style of participatory management with "empowerment." Empowerment means empowering employees. This represents a high commitment in decision-making and increased accountability in organizational results. Empowerment aims, on the one hand, to extract the creative energy of all the individuals in the company and, on the other hand, to assign them management responsibilities accompanied by resources in order to assert their leadership within the spheres of competence envisaged. In a word, the ultimate goal of empowerment is self-management, that is, workers are expected to have a responsible initiative based on monitoring their own work and accessing the support of specialized knowledge managers as mentors.

Ultimately, highly qualified human resources are the main source of competitive advantage for organizations through the implementation of action plans where they can play multiple roles and introduce continuous improvements in product quality and service to the consumer. Innovators tend to be dissatisfied and sometimes ignore or violate organizational rules when this is indispensable.

As we have seen, centralization and formalization must be reduced to provide continuous learning and organizational change. In other words, everything, at all organizational levels, at all times, must be improved. As information sharing throughout the organization is critical, timely, consistent, and accurate movement expedites the organizational response to rapidly changing according to the consumer desires. In this way, anyone who contributes with an idea to a new product or service can count with an internal feedback in a way that it is appropriated and incorporated into the production process. All ideas must receive clear attention to awaken creative discussion. This is initiated at the lower hierarchical level and terminated by efficient decision-making by managers, being important in this process the possession of useful information available in the operational circuit. Such a process places more emphasis on relationships in horizontal rather than vertical functional systems.

In short, we can say that the "culture of innovation" consists of a set of operational factors (e.g., organizational leadership, structure, and climate) that influence the organization's continuous learning and entrepreneurial process. In this perspective, we can understand entrepreneurship as a subsequent phenomenon of innovation. For example, the creation of a new product and its commercialization in the market is an entrepreneurial practice triggered by an innovation process.

In this alignment, the following question arises: who needs a culture of innovation?

Drucker [13] noted that entrepreneurship operates through the 'instrument' of innovation. But to encourage corporate entrepreneurship, it is necessary to identify the conditions required for it to occur in organizations. More specifically, several authors point out that the innovative and entrepreneurial behaviors of individuals and firms depend on cultural factors [14, 15].

3. Culture to support corporate entrepreneurship

By "culture of support for corporate entrepreneurship" we mean a set of operational standards, shared by individuals, which can be shaped, altered, or preserved through individual interaction under the accumulated influence of three types of culture. Professional culture and national culture represent more values (invisible, implicit) relative to the individual, while the culture of the company concerns rules and practices (visible, explicit) more related to its functioning.

Thus, it seems to be a logical step to conceptualize the culture of support for corporate entrepreneurship as a series of procedures based on professional, national, and company cultures that indicate a pattern of action. The culture of support for corporate entrepreneurship refers to a set of norms, values, attitudes, and perceptions shared by a group of individuals (e.g., the R&D department and new entrepreneurship teams). Next, we will analyze each of the components of the culture of support to corporate entrepreneurship.

The "national culture" is composed of five dimensions:

- **i.** *Distance from the power, low* versus *high*: how individuals perceive the power in society.
- ii. Uncertainty, low versus high: what people do to counter the ambiguity and doubt about the future.
- iii. Individualism versus collectivism: preference for individual action rather than group action.
- iv. Masculinity versus femininity: gender roles distinction.
- v. Orientation, long-term versus short-term: orientation of time in life and work [16].

The culture of the profession originates in the characteristics of the people who practice it and in the skills used in its practice. Professional cultures are specially formed by "work styles" performed by individuals in the execution of their routines. Sirmon and Lane [17] consider that there is a professional culture when a group of people, in a similar profession, functionally shares a series of norms, values, and beliefs. In these terms, we can say that "professional culture" develops through the socialization to which individuals are subjected during their education, training and professional exercise. It should be noted that professional culture does not only interact with the national culture, but also with the culture of the company in a certain work context, influencing the personal experiences and interpretations of organizational practices.

Company culture (i.e., organizational culture) is anything holistic, historically determined, socially constructed, and difficult to change, that is, it is something the organization has, but it can also be understood as what the organization is. Basically, we can define "company culture" as the personality evidenced by the company as a result of operating rules and assumptions, values, and behaviors of its employees. In short, company culture translates the way its employees think, talk, and work.

Underlying the culture of innovation, it is important to add that individuals develop their innovation activities in an institutional context conditioned by organizational, professional, and national cultures. Still, Shane [18] emphasizes national culture as a decisive element in organizations' output of innovation and performance. It should not be forgotten that the professionals admitted to the organization carry with them a repertoire of cultural knowledge obtained in society and in the previous professional exercise.

Even in companies with a strong culture, the differences in national culture are reflected, for example, in how problems are solved in the same company in different countries. Different national cultures have varied models of organizational structuring and employee motivation. It should be emphasized that company culture is both the determining factor and the result of structures, processes, and practices in support of innovation. Hofstede and colleagues [19] consider that the perceptions apprehended in the sharing of routines imply a less individual rooting and, therefore, a greater ease of change of the organizational culture in comparison with the professional and national cultures.

As we have seen, the culture of support for corporate entrepreneurship is formed through the interaction of national, professional and organizational cultures, since people are born in a context of national culture, acquire a certain professional culture, and are exposed to the culture of the organization where they work.

However, there is a set of factors that constitute the organizational reality on which the culture of support for corporate entrepreneurship is based, which are discussed in the following sections.

3.1. "Flat" power structure (hierarchical)

In cultures with a "high power distance," conception and decision-making emerge from the reality for which they are intended. The emphasis of functioning is on the values of "equality," that is, one chooses democratic leadership, cooperative strategies and consensus efforts. In contrast, in cultures with a "tiny power distance," operational solutions are imposed without physical proximity between the means of their design and application. It is accepted that power is not equally distributed, decision-making is centralized in authoritarian leadership, and labor relations are guided by obedience to hierarchical superiors.

However, innovation depends heavily on the sharing of information and open debate between people without regard to hierarchies. Along the same lines, McDermott [20] emphasizes that it is essential to develop communities of organizational knowledge without formalizing them, that is, organizations have to create conditions conducive to personal interaction and communication as an operational mode. The culture of support for corporate entrepreneurship is built on policies and practices that maximize people's ability to (i) contact each other, (ii) communicate openly (without rivalry between departments), (iii) share ideas and information, (iv) learn from each other, and (v) establish mutual support and trust mechanisms.

Innovation requires a broad base of support in the organization, that is, it must be a cross-departmental process in order to involve its members in a common goal with which they identify. Otherwise, innovation efforts fail manifestly when they are bureaucratic. That is, the definition of the objectives and the preparation of the operations are only limited to top management with subsequent transmission (from top to bottom) for execution. In other words, innovation must be based on a multidisciplinary process based on the discussion,

amendment, and deliberation of sectoral measures based on feedback deployed to all the company's management levels.

Leaders (CEOs, top managers) can play a driving role in shaping an innovative atmosphere by walking steadily through the organization's aisles to hear and ask questions in order to stay informed, find the unexpected, and encourage employees to pursue your new ideas. Consequently, the decision-making structure must be decentralized, that is, decision-making capacity must be based on (informal, occasional) networks of contacts at the places where it is to take effect. These operational dynamics will mobilize individuals, allow direct access to resources, unlock problem solving, evidence emerging entrepreneurial behavior, and spark an imitation effect among others.

This means that authority (i.e., decision-making) must be shared across the organization, rather than in hierarchical positions, thereby aiming to foster a real sense of delegation of responsibilities to employees as an incentive for innovation culture. More specifically, the perception that people have the support of top management is central in establishing a climate of confidence conducive to innovation, given the possibility to take risks without fear of penalty for any failure of the experiments carried out. This helps to signal the confidence of individuals, accelerates their active participation in finding viable competitive solutions or alternatives in the market, and stimulates their interest in achieving results.

In short, the culture of support for corporate entrepreneurship lies in (i) small distance to power supported by horizontal hierarchies, (ii) decentralized power and values of equality in order to facilitate communication, and (iii) individual interaction in the various levels of organization. Despite this, the organizational hierarchy will be inevitable in large companies, although there is still a need for decision makers to be close to the field that is the subject of their resolutions.

3.2. Controlled uncertainty

Innovation has an implicit uncertainty. The way in which uncertainty is addressed (i.e., its rejection or acceptance) has implications for the nature of the innovations undertaken—high risk versus low risk, radical versus incremental. Uncertainty can disrupt people by placing ambiguity and doubts in the future. Therefore, individuals who reject uncertainty in principle have anxiety of safety and prefer planned activities to reduce risk accordingly. On the contrary, in the accepting culture of uncertainty, the employees are more flexible, the rules are dispensable, and the decision-making is pragmatic and situational (i.e., emerges from the circumstances).

For Bingham [21], the survival of any organization depends on the culture that promotes risk investment in new technologies and products for unexplored applications or unfamiliar markets. Therefore, the process of developing new ideas is based on capturing and pursuing recent consumption trends in the global marketplace.

The willingness of individuals to accept risk and face uncertainty is a key aspect of the culture of supporting innovation. In addition, sponsorship of top management for research and development (R&D) projects and the commitment of intermediate management in order to reduce perceived risk are vital for the materialization of large-scale innovation.

Related to risk is failure. Not all new ideas lead to successful innovation, only a small part produces sustainable profits. Similarly, the identification of opportunities for innovation requires an iterative follow-up of the market, whose operation entails experimental failures.

However, in the culture of support for corporate entrepreneurship, failures are considered as lessons of learning and not as occurrences subject to punishment. Acceptance of failure is fundamental as a promoter of individual entrepreneurial behavior in the organization. Therefore, the culture of continuous learning places the emphasis on what is learned when the ideas tested have an unsatisfactory result. On this basis, the company's operational focus should focus on reducing rules, structured activities, and routines in order to establish greater informality, which is essential for R&D teams to act without waiting for superior hierarchical approval [22].

Basically, the culture of innovation support accepts the conflict (i.e., divergent thinking) and competition as the stimulus debate, as they are a means of sharing opposing views, in order to create various creative perspectives in the organization.

3.3. Individual initiative

The culture of support for corporate entrepreneurship is based on practices that foster personal autonomy and responsibility in the concretization of ideas.

The individualism instilled in people encourages them to think, be creative, take initiatives, and reveal responsibility, which are critical characteristics for innovation. However, individual freedom can also encourage employees to focus on their personal ambition to the detriment of the organization. Consequently, such contextual conditions give rise to a highly competitive climate that causes individuals some reserve in the transmission of their ideas, rather than sharing them in the various work groups or departments of the company. Wagner and Moch [23] suggest that individualist culture (too much) may be inappropriate for organizations despite the role played by "champions" or entrepreneurs in the innovation process, either by discovering business opportunities or by determining operations for their implementation.

Innovation is thus an interconnected process that involves several sequential stages of generation, evaluation, development, and implementation of ideas. In fact, the exchange of information and the combination of ideas seems to be decisive for the success of innovation. This means that the culture of support for corporate entrepreneurship basically requires psychological awareness, group spirit, a sense of belonging, a commitment to contribute, and strong cohesion among all the participants in the work groups or in the organization. Therefore, it is necessary for employees to commit themselves to the challenges of the company that go beyond their own interests [24], because in the innovation processes, the tasks are mainly collaborative and organized around groups of individuals with diversified specialized knowledge.

In this alignment, it is important to emphasize that leaders should stimulate and capture individual talent in order to have employees identified with the organizational philosophy and mobilized to achieve collective goals.

3.4. Gender supremacy

Hofstede [16] refers to the distinction of gender roles in culture. In the "male culture," the emphasis is on success and personal achievement, that is, people live to work, are goal-oriented, show ambition, and need to be distinguished. In contrast, in "feminine culture," the quality of life, harmony, and good professional atmosphere are central, that is, people work to live and value relational interdependence and education.

Individual creativity and recognition of business opportunities are encouraged through a culture of support corporate entrepreneurship, which promotes a relaxed organizational climate, with good interpersonal relationships and open communication (i.e., without reservation) among participants in projects of idea development.

Since innovation stems from a cooperative effort among individuals, the level of conflict must be low. That is, personal tension and differences of prestige or power should be avoided, while the setting of objectives and the guidelines for their implementation must be clear to all protagonists.

In short, innovation consists of a process that begins with the identification of new business, goes through individual creativity (i.e., R&D and design) and subsequent implementation of ideas (i.e., transition to production), and ends with the placing of new products or services on the market aimed at consumer needs and preferences.

3.5. Long-term guidance

Long-term oriented cultures have a mentality for future, which is open to the new and persistent at work. In contrast, crops focused on the short-term are based on more stable environments allied to the tradition and the current experience.

Basically, innovation focuses on change and the future. Therefore, the culture of support corporate entrepreneurship values the longer-time horizons [25], especially for innovations that take longer to develop, to be absorbed in the market, and to produce profits.

The innovation starts with the glimpse of business opportunities on the part of the company before its competitors. Hence, all employees should be led to seek and test business alternatives, given the present reality. In other words, the company, in developing a culture of support for corporate entrepreneurship, instills in people a proactive spirit focused on the creation and use of market opportunities.

The capture of evolutionary trends in markets results from (i) minds receptive to new information and (ii) thinking outside the mainstream. To some extent, people must be willing either to accept many truths or to change to take advantage of technological and contextual changes in the market. It is important for individuals to be flexible and agile in adapting to current rapid change, such as their perseverance to endure frustration and overcome the technical and commercial obstacles that often confront a new idea [26].

As we have seen previously, the culture of support for corporate entrepreneurship consists of an individual spirit open to the new, to the unknown, to the long-term orientation that accepts change and maintains persistence in iterative and prolonged work processes.

3.6. Open organization

In an "open organization," its members respond to changes in the external environment and establish relationships with the community and other organizations through operational modalities such as cooperation, networking, and interorganizational research.

In fact, companies need to overcome the natural tendency to focus on their internal environment and open themselves to the market (i.e., their external environment) [27]. It should be noted that the origin of innovation lies in the ability of individuals to discover new innovative businesses [28] that do not necessarily have to be found within the boundaries of the organization. To this end, managers must continually monitor and respond to changes in the environment (i.e., at the level of consumers, suppliers, business partners, and competitors) and ensure participation in the capital of innovative companies. Put another way, "market orientation" — understood as a sense of organizational action directed at the consumer through the value that is provided to it—is a key requirement of successful innovation. Therefore, market orientation is an antecedent component of innovation and, consequently, distinguishes the company's ability to innovate, that is, to successfully introduce new products or services in the market.

Market monitoring translates direct contact with consumers, which favors research, targeted production, and marketing activities. In addition to considering the sources of innovative ideas, the organization should also consider how innovation is funded, created and led to the market. In this step, the consolidation of the organizational innovation process derives both from internal R&D budgets and from external financial sources such as venture capital, angel investors, business angels, and state entities that promote R&D.

In this way, innovation gains value outside organizational boundaries. This means that the external orientation followed by the companies is (i) agglutinative of new knowledge (e.g., technical contributions from suppliers and customers to be incorporated in the development of new products) and (ii) technological updating human resources, which are the "keys" of innovation.

In conclusion, the culture of support for corporate entrepreneurship lies in the coexistence of internal and external factors that stimulate innovation throughout the company's value chain. Sharing the value chain of the organization with its suppliers, distributors, and customers configures an operational permeability of its boundaries called, in the terminology of Chesbrough, "open innovation" [27].

4. Conclusions

Utterback [29] states that the successful companies are usually efficient to respond to evolutionary changes in their markets.

The breakdown of technological, geographic, and political barriers has made competition at the local level in a global market. This new reality constantly questions the survival of companies by inducing the acquisition and creation of new organizational skills. In this context, it is important to develop a culture of innovation, which induces the flowering of innovation within the organization. That is, the formation of the culture of innovation is after the existence of innovation within the enterprise.

Innovation is continuous and consistent if the organizational culture encourages and supports it. Innovation results from knowledge of consumer needs, market trends, competitors' offerings, distributor relationships, technology changes, and, on the other hand, the combination of personal autonomy and responsibility. Innovation can be said to flourish in a culture conducive to free movement of information and to encourage individuals to participate in partnerships within and outside the organization (i.e., suppliers and distributors) to multiply innovative business ideas.

In order to become innovative, the company needs a cultural perspective in the internal (vision, mission, values) and external (community) aspects, in order to avoid competitive conditions that it does not control (economy, regulators, competitors, technology) but decisive for its success in the market. Thus, innovation activities are based on processes of interaction between individuals and the organization's surroundings across its national, professional, and cultural boundaries.

The limitations of this study are as follows. Firstly, the impact of corporate culture of innovation on internal entrepreneurship processes in several business activities such as product development, operational process, marketing, and so on is not discussed in detail.

Secondly, the development of a holistic model to gain a deep understanding of the innovation culture dissemination will not only help to comprehend the area but also contribute to companies to respond quickly to market needs. Thus, the scope of the future research can be started from the limitations mentioned above.

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Business Ethics and Corporate Social Responsibility from a Global Perspective

Ethics and Globalisation: A Namibian Perspective - Ramatex Case

Wilfred Isak April, Daniel Ileni Itenge, David Namalenga and Petrus Stepfanus Erwee

Additional information is available at the end of the chapter

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Abstract

Globalisation can bring about many positive and negative changes to any economy. Namibia has enjoyed stability since gaining independence about 3 decades ago. Today, Namibia is struggling to stay afloat amid financial crisis. Numerous international companies such as Ramatex from Malaysia entered the business sphere shortly after independence, with promises to improve the livelihoods of a young economy. However, this only lasted for a very short while, as most of the promises were not met. As with many global companies, Ramatex packed up and left Namibia in less than 10 years. This had a very big impact on Namibia, as the economy had to find new ways to survive. A substantial number of citizens lost their jobs, and the psychological impacts of recovery were very detrimental on the families. Namibians from all across the country flocked to the capital city Windhoek, with the aim of improving their lives, but all these dreams, hopes and aspirations were short lived. This chapter will make use of secondary research documents and in-depth interviews with some of the key stakeholders. On a positive side, the closure of Ramatex led to the birth local manufacturing giant Dinapama Manufacturing and Supplies, which is striving using lessons from the past to build capacity in the local economy.

Keywords: globalisation, business ethics, Dinapama, Ramatex, Namibia

1. Introduction

Since the 1990s, globalisation has been widely discussed due to its multifaceted impact on our everyday life. For the past 10 years the share of Namibian urban population increased with over 10% [1] as more people flock to urban areas in search of greener pastures. The Namibian government has been under pressure from the activists and the community



groups, due to its inability to provide basic services for the increasing population i.e. serviced land, clean water, sanitation, and electricity. The Namibian government has substantially cut its expenditure in efforts to remedy the economic downturn it has recently been facing, thereby compromising provision of basic services to its people. However, due to globalisation a lot of achievement in terms of cooperation has been made possible, as today Namibia has bilateral relations with over 38 countries and continues to advocate for greater regional integration. Efforts have also been directed at attraction of investors and calls for public-private partnerships intensified as the Namibian government cannot solely solve the economic and social issues the country is facing.

Globalisation has been praised and embraced all over the world, as it opens up barriers and increase trade and cooperation between nations. However, due to enormous implications of globalisation, questions regarding the ethics of globalisation are rife. The business world is faced with many ethical issues today i.e. companies breaking environment laws, unfair labour practices, consumer exploitation, intellectual property and patent thefts, etc. These issues are however more common in developing countries, as governments struggle to achieve compliance due to weak law enforcement. It has been widely reported that globalisation brings about imbalances between developed and developing nations. These imbalances stems from the fact that developed countries have developed advanced systems and products/services, and are wealthier, therefore in better bargaining position compared to developing countries. This position allows them to enter into bilateral agreements that are more favourable to them, at the expense of the developing countries. This creates loopholes for exploitation and self-advancement by some nations and/or profit driven multinational companies. Ramatex's investment in Namibia is one of a kind and has opened the eyes of Namibians about the real impact of globalisation. This paper focuses on the economic aspect of globalisation, and is further narrowed down to foreign direct investment (FDI), international trade, and the wellbeing of the Namibian poor.

The following section highlights the history of Ramatex and Dinapama. Thereafter, globalisation is defined, methodology outlined, and discussions and findings presented. The chapter concludes with a summary of discussions and conclusion and recommendations.

2. History of Ramatex and Dinapama

In 2001, Namibia successfully landed an investment in textile which was worth over N\$1 billion at the time, and was envisaged to create close to 10,000 jobs. Ramatex, a fully owned Malaysian company has chosen to open a production plant in Namibia after the Namibian Government offered a generous incentive package and spent over N\$100 million in public funds for the setting up of the infrastructure. The production plant was importing cotton from West Africa and turning it into textiles for the US market.

It has been claimed that the Africa Growth and Opportunity Act (AGOA) which allows for duty free exports to the US from selected African countries who meet certain conditions set by the US government was the motivation for Ramatex' decision to locate production in Southern



Figure 1. Ramatex factories in Windhoek, Namibia.



Figure 2. Dinapama Manufacturing and Supplies.

Africa. Ramatex successfully started production in 2002, and employed about 6000 workers. There has been series of labour unrest after alleged poor labour practices and environmental breaches. Eight years into operation, Ramatex claimed that they are experiencing reduced demand as some buyers allegedly withdrew from doing business with them due to labour concerns raised by the unions. Ramatex filed for bankruptcy, and many people lost their jobs when it shut down its operations in 2008 (Figure 1).

During Ramatex operation, many local entrepreneurs saw an opportunity to venture into textile and garment manufacturing to get their hands on the now locally available textile materials. Some of those entrepreneurs are Namalenga and associates who founded Dinapama Manufacturing and Supplies in 2006, a garment and clothing manufacturing company, in Windhoek, Namibia. The company started with 6 employees and today employs over 300 local employees, thereby filling the gaps left behind by the closure of the large-scale Ramatex factory.

With increasing demand and a customer base all over Namibia, Dinapama continues to thrive despite the financial constraints Namibia is facing, manufacturing a range of products, from clothing to bags and corporate items. It has secured business deals with notable institutions in Government, private, and NGOs due to the quality of their product. The company imports textile materials from abroad, as there are no reputable textile factories in Namibia at the moment (Figure 2).

3. Defining globalisation in the Namibian context

Globalisation is the growing interdependence of the world's economies, particularly the huge increase in capital movements and the rapid growth of world trade [2]. The adoption of trade policies and removal of trade barriers, leading to decrease in informational and communication costs due to information technology revolution, fosters the interdependence between nations and increasing internationalisation of trade and production. It is characterised by an intensification of cross-border trade and increased investment flows, and promoted by rapid liberalisation and advances in information technologies [3].

While globalisation was viewed in 1900s as a strategy by imperialists to advance their agendas, today globalisation is viewed as interdependence of the world's economies. Globalisation has various dimensions and are commonly grouped under five categories, namely: economic, political, social, technological, and cultural. Among the dimensions and aspects of globalisation, the focus of recent discussions besides wars and climate change has been centred on whether globalisation really help poor people of the world. Most scholars concluded that globalisation indeed benefit the poor, but only if appropriate complementary policies and institutions are in place [4], while others challenge the presumption of a positive relationship between globalisation and welfare of the poor [2].

Namibia was classified as an upper-middle income country in 2009, and after South Africa is the most unequal country in the world with a Gini coefficient at 0.572 (World Bank, 2017). The Namibian economic growth has averaged 4.5% over the past 10 years, but with a high unemployment rate of 34% (broad) and of 29.6% (strict), and poverty incidence of 27% (Namibia Statistics Agency, 2016).

The government's social safety net programme introduced at independence in 1990 helped to reduce absolute and severe poverty with over 32 percentage points. Despite this progress about 6.1% of the Namibian population still could not afford to buy the minimum calories per day (approximately 2000–2500 calories per day), and about 11% of the population were still below the lower bound poverty line and 17% below the upper bound poverty line. Experts

have suggested improvement of education system, attraction of investments that produces sustainable jobs, progressive tax system, and a comprehensive welfare system to address inequality and help scale-down high poverty rates.

To that end, Namibia has enacted policies to redress the income inequality—the New Equitable Economic Empowerment Framework, Black Economic Empowerment policy, and Affirmative Action policy, but only a few people have been benefited. Namibia has also enacted an industrial policy—a driving force to make Namibia a developed and industrialised nation by 2030. The industrialisation policy is geared towards openness, to ensure market access. Clearly, Namibia needs new pro-poor interventions to aggressively address wealth redistribution.

Nevertheless, the economic returns from open trade are unquestionable, but the perceptions about uneven distribution of returns between nations remain [5]. For some, globalisation is perceived as a vulnerability, while for others as an economic emancipation. Globalisation opened doors for multinational companies to practice what is termed "offshoring". Offshoring is when a company shifts the location of part of service or production to a location abroad. Many multinationals have adopted this strategy in order to avoid paying high labour and production costs. At the time, Namibia was struggling with the high unemployment rate of 20.2% [1], hence the Ramatex investment was highly commended because it was believed to positively impact Namibia's macroeconomic performance as the investment was said to create over 10,000 jobs, and raking in millions of dollars in taxes. Namibians from all across the country flocked to the capital city: Windhoek with the aim of improving not only their personal lives, but also those of their extended families. But, all these dreams, hopes and aspirations were short lived as the Malaysian company only operated for a little over 8 years. This had a very big impact on Namibia, as the economy had to find new ways to survive. A substantial number of citizens lost their jobs, and the psychological impacts of recovery were very detrimental on the families. The holes left behind by Ramatex are still haunting Namibians today, thus the fear among the people that despite the fact that globalisation is intended to open trade barriers for the betterment of economies, it brings with it social challenges such as unemployment and social collapse. Many a times, activists and anti-globalists have slammed transnational companies' disregard for the welfare of the people. Business ethics and moral principles supposed to be at the centre of every business' operation. But as was the case with Ramatex in Namibia, big corporations only seem to be interested in the profits. There does not seem to be a regard as to how their operations affect the lives of the people or communities in which they operate. Back then, the Namibian laws were somewhat lenient, as there was no pressure on corporations to fulfil their corporate social responsibility. Fortunately, the unions exerted pressure on Ramatex through orchestrated protests and strikes, causing reduced product demand in the US and eventual Ramatex shutdown.

4. Globalisation in Africa

There are two schools of thought regarding globalisation. One that perceive globalisation as the key to international trade which promotes global economic growth, jobs, and low prices, and another that perceive it as exploitation of domestic markets in the third world countries [2]. The ideal situation is that the utilisation of relatively cheap and abundant labour by transnational companies in the third world countries should increase demand, thereby increasing employment, raising wages and reducing poverty. Instead, most multinationals use this opportunity to capitalise on weaker labour laws, lenient policies, and corruption in poor countries.

This section evaluates the advantages and disadvantages of globalisation with a specific focus on the economic dimension of globalisation.

Advantages of globalisation

- Different countries, corporations, and individuals have competitive advantage over others either due to abundant resources, advanced technology, skills, superior quality, etc. Every party brings something on the table, and trade flows globally.
- The internet and social media made it possible for nations and companies to trade and compete globally (ecommerce). Competitiveness reduces commodity prices, making goods affordable, improving efficiency and innovation, and boost market growth. The days of monopolies are long gone as market penetration process became fast and smooth. Namibia is rich in diamonds and minerals, meat and livestock, and fish, among others, which contribute greatly to revenues through export to outside markets.
- Countries also benefit from globalisation through foreign capital and technology. The potential for growth helps poor countries get to "catch-up" faster with wealthy countries. Governments use new technology to improve public services and infrastructural development, while the business community has access to opportunities that enable them to automate their production lines to produce and/or provide efficiently and productively.
- Poor or slow growing economies have an option to converge. The European Union of 28 member states developed has developed one market through standardised laws and common policies. Countries also collaborate to tackle common problems such as global warming, terrorism, etc.
- Globalisation brings about cultural diversity, thereby learning from one another. The level of tolerance towards one another has also improved.
- Countries work with one another to solve issues concerning the world such as global warming, terrorism, outbreaks, etc. 193 out of 195 countries in the world today are member states of the United Nations.

Disadvantages of globalisation

 Today, the richest 1% owns half of the world's wealth and the situation is not changing. Globalisation tends to boost growth and increases wealth of the rich at the expense of the poor, and the environment. Developing countries are also having a hard time in efforts to reduce extreme inequalities that are attributed to colonial systems. For example, Zimbabwe embarked on a land reform in 1980, intended to balance inequalities in land ownership, followed by a "fast track" redistribution campaign in 2000 whereby white owned farms were forcibly confiscated without compensation. This led to detrimental economic consequences for Zimbabwe. South Africa has also been reported to be in the planning process of land restitution.

- Big corporations seek to set up production in developing countries with cheap labour, and non-regulated markets. Consequently, job opportunities are lost in developed countries and shifted to developing countries thereby putting pressure on government's ability to provide social safety nets in those countries. Transnational corporations also set up production facilities in tax havens to avoid paying taxes.
- Profit-driven transnationals disregard environmental laws, are always accused of unfair labour practices, and neglect their corporate social responsibility. Ramatex in Namibia has been accused of violating labour laws, illegal dumping of chemical and waste, and pollution.
- Due to their bargaining power, multinational corporations encourage corruption in developing countries due to their ability to influence, power, size, and status.
- Multinationals corporations with advanced technology and the benefit of economies of scale drives out smaller domestic companies as they do not have the capacity to compete at that level.
- Globalisation offers less intellectual property protection, as competitors can easily steal
 technologies and produce counterfeit products. The Chinese business people have been
 accused of stealing product ideas and counterfeiting.
- There have been claims that globalisation does not work for the majority of the world as
 inequality keep worsening. The UN Development Program reports that the richest 20%
 of the world's population consume 86% of the world's resources while the poorest 80%
 consume just 14%.
- Globalisation greatly contributes to the spread of epidemics, pandemics, and outbreaks
 of contagious diseases. The Severe Acute Respiratory Syndrome killed about 800 people
 worldwide; The Ebola outbreak killed nearly 11,000 people from 2014 to 2016 in West
 Africa; the influenza killed over 50 million people in Spain, Asia, and Hong Kong around
 1950s; about 37 million people are living with HIV and resulted in over 1 million deaths,
 just to mention a few.
- Brain drain has also been attributed to globalisation. Professionals, especially in the health sector, leave their countries to work abroad for greener pasture, safer working environments, and to countries with better standard of living.
- The migration of people from rural to urban areas is also rife, more especially in third world countries, in search for employment opportunities and perceived better life in the cities.
- Globalisation brought with transnational corporations with little consideration for the welfare of the poor, subjecting them to unethical and socially unacceptable behaviours. Safety standards are disregarded for cheaper production thereby subjecting workers to hazardous

working environment, and uses child labourers. About 11% of overall child population is engaged in child labour, of which nearly 60% is in agriculture. This also leads to human trafficking. About 800,000 people are trafficked across international borders annually, of which half are children and 80% are female.

 Co-movement of domestic politics with international political risk is also common today. The Arab spring that began in 2010 in Tunisia spiralled all over North Africa and Middle East with protests, coups, and civil war that is responsible for massive civilian displacements, terrorism, and killing of innocent civilians.

Evidently, globalisation is good for the world as countries have access to global markets, but pressure is heavily placed on the world's poor as only wealthy countries and/or corporations with resources and better capacity gets the larger share.

5. Research methodology

This paper utilises secondary research documents and in depth interviews with some of the key stakeholders, which experienced the changes of those who lost their jobs.

- In depth interviews: These interviews allowed the author to gain a deeper insight into the feelings of participants towards the subject, as hearing the word Ramatex for many still feels like a sharp knife piercing through human flesh. The authors interviewed Mr. David Namalenga, a unionist turned businessman, who is managing Dinapama Manufacturing and Supplies, a Namibian garment manufacturing company that have taken over the textile industry after the closure of Ramatex. Also interviewed is Mr. Herbert Jauch, an expert in labour issues and an author of a book featuring Ramatex in Namibia. The in-depth interviews also afforded the researchers an opportunity to gain the trust of the informants, and allowed for probing to get a clear understanding and accurate of information from the informants.
- Secondary research documents: The papers also reviewed journal articles, conference papers and newspaper articles to get the general feeling of the people of Namibia and developing countries. This method also provided the globalisation link and its impact between developing and developed countries. This gave the researchers the opportunity to understand the communities better. With in-depth interviews it is essential that one spent a reasonable amount of time with the informants and this indeed enhanced the rapport, as there was a great opportunity for common understanding and confidence and trust between the parties which lead to detailed and accurate information.

6. Discussions and findings

Entrepreneurs' success, especially small-scale businesses, depends on their ability to be competitive in the global market even if they do not compete globally [5]. Developing relationships with multinationals is key to the success of small-scale businesses, thereby developing what [5] termed symbiotic entrepreneurship—"an enterprising effort by multiple parties, each of which benefits from the joint effort, such that added value is created". This will lead to multi-polar networks, as firms focus on relationships rather than on the firm, thereby enhancing competitiveness and growth.

Evidently, the Ramatex investment was doomed to fail as it was not based any nearer to this foundation. Ramatex needed to set up a factory in a country with relatively abundant and cheap labour, manufacture the fabrics, and export to the US market. A discussion with experts below sheds more light on the subject.

6.1. Discussions with Mr. David Namalenga

Mr. Namalenga is the founder and Managing Director of Dinapama Manufacturing and Supplies. He is of the opinion that the impact of globalisation on small firms such as Dinapama is that one is able to find new strategies, technologies and market in the world. There are however also challenges as small firms sometimes lack capacity to utilise such opportunities due to the non-levelled playing field, thereby ending up being overshadowed by large corporations and eventually close-down.

Mr. Namalenga revealed that the strategies Dinapama have employed to fill the gaps left behind by Ramatex is growth at home. He said that Ramatex was supplying the world, while Dinapama want to first supply Namibia and Africa before moving anywhere in the world. He believed that relationship building with their clients is critical for their growth, as they do not only want to sell but also to engage and develop relationships with their clients.

Mr. Namalenga further echoed that the lessons that Namibia should take from the failed Ramatex investment in Namibia is that rather put your faith in your own people, because they will still be around if things go south. He emphasised that today they have learned to trust themselves and grow their domestic market in a way that benefits the people, and that foreign investors should only come to complement the already existing efforts by the Namibians.

Taking cognisant of the fact that globalisation opens up trade barriers and increase trade between nations, he responded that the loopholes for exploitation and self-advancement by multinationals can only be best dealt with if developing countries start teaming up and supporting each other to develop their local and regional networks. He however advised that people should still remember that trade openness is key to success of developing nations, as it brings with new technology, which can help them to do things better and efficiently to better their position in the global village.

Mr. Namalenga further encouraged that developing countries should emulate strategies that a country like Singapore have developed to propel themselves from the third world to first world position. He reminded that developing countries, especially African countries, are still at the beginning of the transformation journey and different pathways will emerge as countries navigate the transformation of production systems. Namibia and Africa have a huge opportunity to capitalise on these opportunities as long as they do it with the best interest of the people at heart. He concluded by imploring for a new and available strategies to help close loopholes that Ramatex left behind.

6.2. Discussions with Mr. Herbert Jauch

Mr. Herbert Jauch is a Labour Consultant in Namibia, author, and have been one of the vocal people on the Ramatex saga in Namibia. Jauch revealed that one of the huge challenges for local firms is the cut-throat completion posed by global competition. In the era of globalisation, the world economy-guided by the dogma of free market capitalism-has become a site of intense competitive struggles where only the strongest survive. Thus many local firms could either not take off or collapsed under the pressure of cheap imports. He further stated that proponents of globalisation argue that globalisation provides consumers with cheap goods and services and that the competitive local firms will benefit from export markets. On balance, Jauch argued that overall, Namibia has been one of the many losers in the globalisation system and this is shown in mass unemployment and very low wages for the vast majority of workers.

Jauch lamented that the Ramatex case has clearly shown that it is naïve to believe that any investment is a good investment. He blamed Namibian policy makers for failing to understand how companies like Ramatex operate, how they are driven by short-term profit maximisation and how they have absolutely no regard for the developmental aspirations of the country they are operating in. Jauch cautioned it is thus important to be extremely selective when it comes to foreign investments and to not blindly accept the conditions set by such investors, to avoid similar problematic investments in future.

He reiterated that weaker economies like Namibia (and African economies in general) were always hoping that in the end they would benefit from globalisation. However, the pattern is very clear: the strong and powerful economic blocs and countries (like China and the EU) have been the main beneficiaries and they are dictating the rules of globalisation to a large extent. He said African scholars like Samir Amin have long argued that Africa needs to selectively delink from globalisation and develop new links that are equal and mutually beneficial with countries that do not have an imperial agenda. In his seminar paper title The Global Crisis and African Alternatives - Inspirations from Venezuela, Jauch gave highlights of Venezuela's redistribution and participatory democracy as an alternative to the global crisis. Venezuela embarked on a series of radical reforms regarding social services provision, which involved channelling oil revenues to provide access to housing, education, and health care, which resulted in broadened access to university education for students from poor families, accessible healthcare, redressed regional imbalances, increased minimum wages, lower poverty levels, growth in GDP, reduced unemployment, lower Gini Index, and overall improved standard of living [6]. Jauch advised the third world countries to learn from the "semi-liberated" countries in Latin America—Cuba, Venezuela and Bolivia, as it seems obvious that the social progress made by Venezuela through the "Bolivarian Alternative for the Peoples of our America" hold significant promises.

6.3. Summary of discussions

The potential of globalisation to transform this world to be a better place for everyone is unquestionable. Free trade is supposed to promote global economic growth, job creation,

Bolivarian Alliance for the Peoples of Our America—is a regional bloc, organised in 2004, that aims for social, political, and economic integration in Latin America and the Caribbean.

competitiveness, and affordable prices for consumers. However, the pressure is heavily placed on the world's poor as they have to struggle to survive on indecent and low paying jobs, left with destroyed environments, driven out of business by large transnational corporations, corrupted, exposed to outbreaks, and susceptible to international political risk.

Since the 1990s, there has been improvement in world GDP and world trade as a result of globalisation led policies [2]. Although globalisation has helped increase growth and wealth over the years, not all continents and countries experienced the same growth. Social ailments continue to impede development as third world countries are left to pick up the pieces [3]. The situation is also worsened by developing countries' unsustainable external debt, which leave them with little options but to enter into unfavourable bilateral agreements with bigger players most of whom are in it to solely advance their economic agendas.

From the discussions, which were based on the economic aspect of globalisation, the pressing issues of globalisation are the lack of business ethics by transnational corporations conducting business in third world countries, regulatory and law enforcement issues, and the unequal gains between wealthy and poor countries from trade openness. The third world countries are advised to learn from one another and always put the interest of their people first; to empower local firms to survive competition from big multinational corporations; device strict laws with appropriate enforcement capacity to guard against environmental damage, exploitation, and to enable skills transfer; and to gear themselves up to reap the full benefits of globalisation and propel themselves to first world position.

7. Conclusion and recommendations

The findings of this paper reveal that the impact of globalisation on the economic aspect is twofold, bringing about two schools of thought. One is that of the perceptions that multinationals seek for new favourable markets to grow at the expense of the market in which they operate, while the other is that of pure global interdependence and development. While trade liberation is supposed to benefit all economies globally, the imbalances still that are negatively skewed to the developing countries still exist. Nations are urged to develop their own markets and support growth at home policies in order to avoid dependency on large players, while supporting balanced trade openness. For many developing countries, globalisation brings with negative spillovers to the poor as some multinationals exploit the cheap and abundant labour in developing countries, drives out small firms out of the market, damage the environment, and leave those countries to pick up the pieces. Namibia learned the hard way when Ramatex closed its doors leaving many people unemployed, dreams shuttered, and hopeless. Many people flocked to urban areas in hopes of better living conditions, placing a huge burden on the government to provide basic services to the escalating urban population. The experts interviewed highlighted the need to improve domestic laws and regulation to guard against exploitation of resources and environment, manipulation, corruption, and unethical business practices. Law enforcement also came out strongly as nations struggle to ensure compliance due to lack of capacity and resources. Conversely, globalisation is also highly praised as it allows free flow of goods and services, flow of information, labour movement, increased employment opportunities, integration of cultures and tolerance, decrease in commodity prices, among others. The researchers also recommend symbiotic entrepreneurship in order for firms to focus on relationships rather than on competition, thereby enhancing competitiveness and growth especially among firms in the developing countries.

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The Moral Dilemmas of Global Business

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Additional information is available at the end of the chapter

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Abstract

Since the 1970s, the rise of global capitalism posed new ethical dilemmas for Western multinational corporations (MNCs), when it became apparent that they could profit from lower labor, environmental and human rights standards in developing countries. Academic reflection on the matter led to the development of the international business ethics field, which seeks to answer a key question: how should a company behave when the standards followed in the host country are lower than those followed in the home country? This chapter will fulfill three goals. Firstly, it will present the new moral dilemmas that economic globalization and technological change are posing to multinational corporations. Secondly, it will introduce a number of answers developed by practitioners in civil society, government and business. Finally, it will review a number of theoretical answers developed by normative researchers by adapting traditional moral theories such as utilitarianism, kantian deontology and virtue ethics. The chapter will conclude that traditional moral theories have mostly failed at providing guidance for a number of new crosscultural moral dilemmas in the global economy.

Keywords: globalization, business ethics, cross-cultural, normative

1. Introduction

"The Gordian knot of international business ethics is formed around the vexing question, how should a company behave when the standards followed in the host country are lower than those followed in the home country?" [1].

Since the 1970s, globalization, deregulation and technological change triggered a rapid expansion of multinational corporations (MNCs) to every corner of the planet. By the year 2000, some 63,000 multinational companies with more than 690,000 foreign affiliates accounted for 25% of world production [2]. These "new Leviathans" became increasingly powerful and



nation states lost their capacity to regulate them [3, 4]. Corporations took advantage of regulatory arbitrage, relocating to low tax jurisdictions and lax regulations on labor and environment. Multinationals structured global value chains by relocating purchase, sales, support and product development activities to locations where they could be done better, faster or cheaper [5].

In domestic business environments, national laws and traditions establish a shared ethical framework on what businesses can and cannot do. A French company operating in France knows that it must comply with well-established labor, environmental and governance rules backed by reliable enforcement mechanisms. However, in its overseas operations, the company often faces substandard regulatory frameworks and weak enforcement mechanisms, which present the opportunity of obtaining benefits through practices that would be unacceptable at home. Many dilemmas arise about the moral legitimacy of capturing such benefits.

In this chapter, I review the challenges that economic globalization and technological change are posing to multinational corporations (MNCs).

First, I will present the new set of moral dilemmas that arise in labor standards, marketing practices, environment, corruption and human rights, as companies operate across diverse cultural and legal frameworks. Second, I will review the answers that governments, corporations and civil society actors have developed to assist managers in international decision making. Third, I will review how business ethicists have adapted moral frameworks such as libertarianism, utilitarianism, deontology and virtue ethics to address the specific challenges of global business.

2. The moral dilemmas of globalization

2.1. Labor standards

In the 1960s and 1970s, companies in developed economies began to relocate production facilities and contracting in emerging countries to cut labor costs [6]. Offshoring raised the number moral dilemmas in the issue of sweatshops [7–10]. Some argue that sweatshops violate duties of justice because the company offers lower pay and working conditions to employees in the host country for the same kind of work. Others believe that sweatshops ought to be encouraged because they are a necessary first step for economic development in emerging countries [11].

Child labor is an especially critical issue in such debates. Managers from a Western multinational would not even think about hiring children in their home country since it would be both illegal and offensive to the moral sense of the community. In some emerging economies, however, child labor is common and even essential for the subsistence of the child. Does this make hiring children morally acceptable?

Other dilemmas involve differences in worker safety standards. The SS United States was one of the most luxurious cruise ships of the 1950s. In the 1990s, the company decided to have it refurbished which required removing asbestos from the vessel. Conducting the task under US strict worker safety norms had a cost of \$100 million. The company decided to outsource the job in Turkey, where the cost was only \$2 million. Since finally the Turkish authorities would not allow it for fear that workers would get cancer, the ship was towed to the Russian port of Sevastopol, where asbestos were removed for even less, thanks to even lower standards in worker safety.

2.2. Environmental standards

Technological progress triggered exponential growth in human ability to alter the environment. While this has countless benefits, it also raises a number of dilemmas about the use of natural resources in societies with poor environmental regulations [12].

Texaco was accused of making irreversible damage to the Ecuador rainforest because of the use of low standards in the 1970s and 1980s. A similar case happened in southern Argentina's shale gas field of Vaca Muerta. Protests have arisen against the activities of oil companies YPF and Chevron for using allegedly low environmental standards in fracking [13].

In the late 1990s, the Finnish company Botnia planned the construction of a pulp mill in the city of Fray Bentos (Uruguay), on the shores of the Uruguay River near the border with Argentina. The project was heavily resisted by environmental advocacy groups. Botnia was accused of making extra profits by following lower environmental standards than in the home country.

Another frequent international environmental dilemma is related to toxic waste. It is estimated that a considerable part of China's arable land is polluted with lead, zinc and other heavy metals exported from developed economies. Old computers that are discarded in the United States usually end up in China, where the cost of disposal is 90% lower [14]. Some emerging economies have sought to attract foreign direct investment by lowering environmental standards, in a phenomenon known as "race to the bottom" and the creation of countries that work as "pollution havens".

2.3. Human rights

Corporations sometimes face dilemmas linked to operations in countries with governments accused of violating human rights.

A high-profile case was IBM scandal of doing business with the Nazis. In the 1930s and 1940s, IBM provided Hollerith punch cards to the Third Reich, which were used in the operational management of extermination camps [15].

In the 1970s, Polaroid stopped selling equipment to the government in apartheid South Africa when it learned that cameras were used to make IDs for the surveillance of dissidents. In 1993, Levi Strauss and Co. canceled contracts in China due to the systematic violation of human rights perpetrated by the government.

More recently, Google accepted the Chinese government's request to censor keywords like Tiananmen Square and Dalai Lama in its search engine. The CEO Eric Schmidt stated: "I think it is arrogant to enter a country where we are starting our operations and tell the country how to govern itself" [16].

2.4. Cultural diversity

Principles of international law hold that corporations ought to respect the customs and culture of the communities where they operate [17]. Traditional values can be lost to the homogenizing trends introduced by globally integrated production processes and product promotion. Some amount of change is inevitable and certain local practices may not deserve protection if they violate important minimum global norms. However, when should a norm be respected because of cultural diversity considerations and when should it be ignored because it violates a global minimum?

A paradigmatic case occurs with gender equality. It is frequent that anti-discrimination standards clash with traditional customs or religious practice. Western corporations, which typically promote gender equality at home, often find themselves operating in societies intolerant against women. In Saudi Arabia, for example, gender separation is almost total and women are forbidden by law to practice many professions.

While companies usually justify discriminatory practices out of respect for local traditions, these arguments can be problematic: "As in Saudi Arabia today, South Africa maintained a system where a broad segment of society was discriminated against in all walks of life and under the authority of men without any fear of being considered responsible for their actions. The only difference was that the victims in South Africa were black; In Saudi Arabia, are women" [18].

In some cases, softer ways of discrimination exist. While Mexico does not have formal restrictions against women in the labor market, a widespread macho culture often operates as a glass ceiling [19]. Corporations face an unwritten rule that holds that women should not be in charge of a male team. Using the gender equality standard of the home country (not considering gender as relevant for defining team leadership) could be costly for the company, as employees may not perceive a female boss as a legitimate authority. However, respecting local traditions and denying promotion to a talented executive solely because of gender considerations would seem a violation of the principle of equal opportunity.

Sometimes, cultural diversity dilemmas manifest themselves in marketing decisions. Developed countries usually have strict regulations against dangerous substances such as tobacco. As change in customer preferences and health laws generated a decline in cigarette consumption in developed economies, tobacco companies shifted their attention and marketing dollars to emerging markets with different regulatory standards.

For example, US tobacco executives had to decide how to market tobacco in Egypt, where the minimum legal age to buy cigarettes is 14. Should the company use the home standard (abstain from marketing tobacco to people under 18) or the host standard? Is the 14-year-old threshold from Egypt below some global minimum or the result of cultural preferences about the age at which people should be responsible for choosing whether to smoke or not?

2.5. Corruption

Corruption is a concept that agglomerates practices ranging from multi-million dollar payments to high government officials to a few dollars bribe to a low-level bureaucrat. It is estimated that over \$1 trillion are paid in bribes annually, which squanders public resources and deprives millions of food, education and other government services to which they are entitled.

Bribery in foreign operations was not always considered morally wrong. Some even saw it as a normal operating expense when doing business in emerging economies. German corporate law, while severely punishing bribery at home, considered foreign bribes as tax deductible expenses [20]. Attitudes toward bribery changed in the late 1970s after the US Congress passed the Foreign Corrupt Practices Act which outlawed paying bribes abroad for American companies.

It is beyond doubt that bribing foreign officials to win a contract is immoral. However, less clarity exists in other situations. For example, is it acceptable to bribe a low-level bureaucrat to speed up a procedure he is supposed to do anyway? Small payments are tolerated in some countries and even rationalized by the need to supplement the meager salaries earned by public officials [21, 22]. It is not always clear, however, what should count as a "small payment". In April 2012, it was reported that Walmart paid more than \$24 million to Mexican officials to speed up permits to open new branches. Payments were made to expedite a process that officials should have executed anyway. Is \$24 million a "small payment" for a company the size of Walmart? [23].

In some cases, cultural differences exist in the appropriate relationship between a company and its stakeholders. Following China's integration in the global economy, scholars became interested by the ethical status of guanxi, informal networks of favor exchange between companies and public officials. Since it is not a specific payment for a particular service, guanxi does not fit into the conventional definition of bribery. Advocates of guanxi argue that the definition of bribery is based on a Western concept of impartiality that is not necessarily shared by all cultures. Critics contend that guanxi is similar to Western mafia practices of "today you scratch my back and tomorrow I will scratch yours". It is unclear whether these exchanges of favors constitute a form of corruption or whether it is a legitimate way of doing business in the Chinese market [24, 25].

3. The response from governments, civil society and corporations

As ethical dilemmas in international business became more widespread and complex, governments, civil society associations and corporations began to develop policies and agreements as a response.

3.1. Governments

The response of governments to the new scenario of international business was an attempt to manage the globalization process by creating transnational norms for corporations.

In 1977, the Foreign Corrupt Practices Act was an early example of national regulation with international reach, since it affected the activities of American companies abroad. Enacted in the aftermath of the Enron and Worldcom frauds, the 2002 Sarbanes-Oxley Act established a set of ethical standards to be followed by every firm doing business in the USA. Because of the sheer size of the US economy, American regulators are in position of influencing corporate behavior around the world. Smaller societies, however, are vulnerable. Tight labor or environmental regulations may lead to capital flight to countries with lower standards.

Over the years, there has been growing awareness of the difficulties for nation states to solve a problem that is essentially global. This is why governments have sought regional and global agreements such as the Declaration on International Investment and Multinational Enterprises [26] and the Declaration of Fundamental Principles and Rights at Work [27].

In 1999, UN Secretary General Kofi Annan launched the Global Compact, establishing a set of principles on human rights, labor, environment and corruption taken from commitments made by governments at different UN pacts, such as the Universal Declaration (1948), the Rio Declaration on Environment and Development (1992), the International Labor Organization's Fundamental Principles and Rights at Work (1998) and the UN Convention Against Corruption (2003) [28].

In general, these initiatives only achieved limited results because no body exists with transnational political authority and enforcement capability. The difficulty of finding common intercultural values and the pressures of special interests to keep global economy free of regulation also affected the efficacy of government initiatives to influence corporate behavior [29].

On September 2015, a number of countries adopted the sustainable development goals (SDGs), a set of 17 global goals which cover a broad range of social issues like poverty, hunger, health, education, climate change, gender equality and social justice to be achieved by 2030. The SDGs are likely to become an important source of guidelines for the behavior of multinational corporations in years to come [30].

3.2. Civil society

Global civil society actors have had some success in enforcing sanctions on companies engaging in unethical behavior, mostly through activism against abusive practices. Soft law influences corporate behavior, not through legal sanctions, but through awareness campaigns and boycotts [31].

Nike faced international scandal when it was reported that its clothing was manufactured through a network of abusive contractors in Southeast Asia. After a 9-year boycott by the Rainforest Action Network (RAN), in 1998 Mitsubishi agreed to replace wood-based paper with an eco-friendly one [32].

In addition to boycotts triggered by specific situations, the global civil society has developed more formal attempts to create socially responsible standards. The fair trade movement created a fair trade certificate that guarantees that a product was not produced under abusive conditions and that a fair price was paid for raw materials.

Fair trade started in 1986 in the Max Havelaar Foundation in the Netherlands. After a beginning in the coffee industry, it expanded to honey, bananas, tea and orange juice. It gained important traction in 2000 when Starbucks announced the introduction of a blend of fair trade coffee [33].

The Global Reporting Initiative (GRI) was created in 1997 by a project of the Coalition for Environmentally Responsible Economies and the United Nations Environment Program. This non-profit organization developed the most widely used standard for controlling corporate sustainability practices. The GRI framework aims to increase the consistency and comprehensiveness of sustainability reports, requiring companies to present abundant information in terms of corporate strategy, operational profile and management systems, as well as data on 50 performance indicators related to its economic activity and environmental impact.

In 2000, some 50 organizations used GRI principles to report their sustainability performance. The number grew progressively to the present day, in which it is estimated that more than 4000 companies from more than 60 countries use them. Firms participating in the United Nations Global Compact are required to submit reports following GRI guidelines. In return, they have the right to use the Global Compact seal on their products, which establishes them as socially responsible companies to consumers and other stakeholders.

3.3. Corporations

While philanthropy and charity were always present in the business world, the idea that corporations have a moral obligation toward stakeholders beyond shareholders is quite recent. Corporate leaders began paying attention to corporate citizenship in the late 1990s, following waves of anti-globalization protests.

The main response of corporations to the moral challenges of globalization has been the development of global codes of ethics. The majority of individual company codes and industry-wide standards emerged after the mid-1970s. In the US, many came as a response to foreign bribery scandals while others reacted to broadly calls for greater social responsibility.

Codes of conduct help clarify internal policies and procedures, promote a common company identity among a diverse international workforce and communicate standards to external stakeholders. Voluntary codes can help encourage appropriate conduct and reduce pressures for mandatory government action.

Enderle developed a taxonomy of four typical philosophies that guide policy when domestic and foreign standards differ [34].

The Foreign Type adapts the practices of the subsidiaries to the laws and customs of the host country under the notion of "when in Rome, do as the Romans". The Imperial Type keeps home standards virtually unchanged. In the Interconnected Type, the company does not consider itself as being of a particular nationality but of a certain region, such as the European Union. In its foreign operations, it uses the region's standards. Finally, Global Type companies do not believe that belonging to a country is relevant for the practice of international business. These companies consider the fact that the parent company is, say, in the USA does not

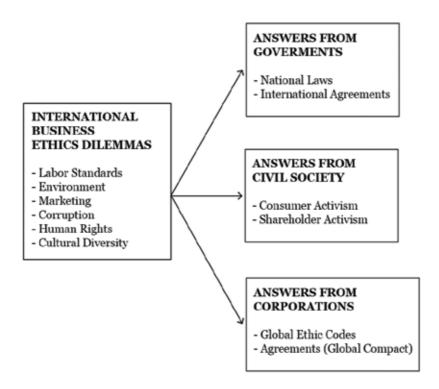


Figure 1. Answers from practitioners to the moral dilemmas of global business. Source: Own Elaboration.

generate any obligation to abide to US standards. An American company could use European standards on environmental issues and other rules for labor issues.

In addition to individual codes of ethics, corporations also developed voluntary agreements on standards for international business. In 1978, a group of US companies adhered to the Sullivan Principles for their operations in South Africa. They agreed not to respect the discriminatory labor laws of apartheid and to put pressure on the South African government for their abolition. The Sullivan Principles were a model for other voluntary codes such as the Caux Round Table, created in 1986 by former executives of multinational corporations in the USA, Europe and Japan.

In 1994, this organization proposed an international code of ethics based on principles of search for the common good and human dignity. It offers behavioral guidelines for consumers, employees, investors, suppliers, competitors and local communities (Figure 1) [35].

4. The response from moral theory

Even though philosophers of all time have reflected about the morality of economic activity, business ethics as an academic field only started in the 1960s. As corporations gained global influence, awareness increased about the risks posed by their activities on the environment, consumers and workers. Bowie argues that the field was born in November 1974, when the first business ethics conference was held at the University of Kansas [36]. In that context, business schools developed their first programs in ethics and social responsibility, generally focused on the study of interactions between laws and business.

In the early 1970s, philosophical ethics entered business schools and concepts such as utilitarianism, deontology and virtue ethics started to be applied to corporate behavior. The pioneers, in general, faced a cold reception in the academy. Colleagues in philosophy departments did not perceive business as a philosophically interesting activity. Colleagues in business schools were skeptical about what a moral philosopher could bring to the moral common sense of executives.

The relevance of business ethics was helped by the publication of John Rawls' A Theory of Justice in 1971 [37]. The book introduced distributive justice concerns into mainstream philosophical debate which included moral reflections on the role of multinational corporations [38, 39].

Management scholars started to address these issues in the 1980s with the seminal book Strategic Management: A Stakeholder Approach (1984) where Edward Freeman introduced stakeholder theory. This theory emphasized the moral and socio-political dimensions of decision making, in particular the consideration of the rights and interests of the different stakeholders of an organization, and not only the shareholders [40]. This movement was connected to the rise of corporate social responsibility among practitioners.

The deepening of globalization and the international expansion of corporations generated moral dilemmas of increasing complexity. The common sense of executives became insufficient to make complex decisions about gender discrimination in foreign cultures or about drug testing in developing countries.

The first book to offer a systematic treatment of such issues was The Ethics of International Business [41] which uses a social contract device to elucidate the rules that a socially responsible multinational should follow. In Competing with Integrity in International Business, De George presents 10 moral principles that every company must meet anywhere in the world, including respect for human rights, local cultures and cooperation with government [42].

International business ethics research was deeply influenced by stakeholder theory [43]. This requires answering a series of questions about who the stakeholders are, what interests should be considered, and the nature of the balance to be reached. All this was conceptualized through the Pyramid of Corporate Social Responsibility [44–46].

According to this model, a multinational has four types of global responsibilities toward their stakeholders.

First, to generate economic performance. Companies are expected to produce goods and services on a global scale and to sell them globally for a profit.

Second, they have the responsibility of following the law in countries where they operate.

Third, when the law is not appropriate to guide the ethical behavior, the corporation has an obligation to do what is right. Ethical responsibilities include practices and activities that are expected or prohibited in a society, but are not codified in the law: rules, standards and expectations of what employees, customers, shareholders and the global community regard as fair, equitable and consistent with the protection of stakeholders' moral rights.

Fourth, corporations have a philanthropic responsibility that reflects a society's expectation about the involvement of companies in activities that are not required by the law nor generally expected by ethics.

International business ethics investigates the third level of the Corporate Social Responsibility Pyramid: ethical responsibilities that are desirable or prohibited, but are not necessarily codified in law. Theoretical developments for answering this question were based on the adaptation of traditional ethical theories such as libertarianism, utilitarianism, Kantian deontology and virtue ethics to the new challenges posed by globalization (Figure 2).



Figure 2. The CSR pyramid illustrates the different levels of corporate responsibility. Source: Carroll (1991).

4.1. Libertarianism

The libertarian perspective only accepts the economic and legal levels of the CSR Pyramid and only considers the shareholder as a valid stakeholder. While it has not been defended as a single theoretical framework in the field of business ethics, the view may be summarized by a famous Milton Friedman's argument in an article published in the New York Times Magazine [47].

According to Friedman, in a democratic society, the majority of citizens determine the laws that govern corporate behavior. Executives are agents of the shareholders and the only common interest that shareholders have is to make money. As an agent, any commitment to anything else than providing returns for shareholders within the rules of the game means that the manager is spending money that is not his, whether that is of the customer (through price increases), the employees (by means of lower wages) or the shareholder (through lower profits). In Friedman's argument, this would constitute a form of taxation without representation because managers are not democratically elected.

From this follows the famous Friedman's libertarian definition on the obligation of business: "there is one and only one social responsibility of business-to use it resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud" [48].

The Texaco oil company faced a famous scandal after being accused of several oil spills in Ecuador over decades starting in the 1970s. Critics argued that Texaco ignored oil industry standards by dumping untreated waste directly into rivers and streams. The company replied with a libertarian argument: it had always operated in full compliance with Ecuador law and with the approval of Ecuador government. The problem, from a libertarian perspective, is that when Texaco started its operations in the 1970s, the country was under military rule. After democracy returned, it still was a highly corrupt country and it was unclear that the "rules of the game" really reflected the people's will.

Generally speaking, the libertarian argument assumes that the "rules of the game" are created by democratic governments where the majority of citizens determine the laws that govern corporate behavior. However, many dilemmas in international business ethics arise from the fact that companies operate in non-democratic countries where laws are not the result of popular consent and where enforcement systems are weak.

Holding the government of Ecuador, the sole responsible for the consequences of Texaco's operations merely because Texaco operated lawfully is to set an extraordinarily low standard for the conduct of multinational corporations. It would imply that corporations should not be regarded as morally responsible for any behavior so long as the government in power legally sanctioned the conduct.

4.2. Utilitarianism

Initially developed by Jeremy Bentham and John Stuart Mill and with over 200 years of history, utilitarianism is a durable ethical theory that is also an important foundation for economics and social policy [49, 50]. It was adapted to international business ethics by Gerard Elfstrom [51]. In its simplest form, utilitarianism holds that ethically correct decisions need to comply with the Utility Principle, which prescribes maximizing benefits and minimizing damages to all stakeholders.

Facing a dilemma, the utilitarian moral decision-making process goes as follows [52]:

- 1. Identify all the relevant alternative actions,
- 2. List all the stakeholders who will be affected by the alternative courses of action,
- **3.** Assess how the stakeholders will be affected by the alternative actions, computing the balance of benefit to harm for each stakeholder affected by each act,
- **4.** Choose the act which maximizes utility (which results in the greatest total balance of benefit to harm).

Pastin and Hooker [53] use a utilitarian argument against the Foreign Corrupt Practices Act. Maitland [54] presents utilitarian considerations on behalf of sweatshop manufacturing since it tends to benefit citizens of developing societies.

Card and Krueger [55] build on utilitarian thinking when they argue that corporations could raise sweatshop wages to the subsistence level without sacrificing profitability. According to the Utility Principle, this would be the right decision as it tends to improve the situation of workers without harming shareholders. Arguments against the Child Labor Deterrence Act, which sought to prohibit the importation of products made from child labor into the United States, were also made on utilitarian grounds. According to the argument, the law would harm stakeholders such as the owners of the Bangladesh clothing industry (because they would lose the American market) and the children employed in the factories (because they would lose their only source of income) [56].

While we lack space here to review its different varieties, generally speaking, utilitarian perspectives have typically faced three main complications: difficulties for stakeholder identification, difficulties in defining the expected result of different courses of action and lack of consideration for individual rights that might conflict with the Utility Principle.

First, it is not always easy to determine who are the stakeholders affected by a decision, which makes it difficult to measure the balance between benefits and damages. In the case of the Child Labor Deterrence Act, are children the only stakeholder who will be affected if the clothing industries close in Bangladesh? Should the children's families count as a stakeholder too, since they rely on the working children for economic support? Whether one considers or not the family as a stakeholder has an impact in the utilitarian calculation of benefits and harm, and as a consequence, may end justifying a completely different decision.

Second, the morally correct decision depends on the expected result of different courses of action. However, the outcome of each alternative is usually hard to predict. Depending on the empirical assumptions and the probability the decision maker attributes to each scenario, the Utility Principle might suggest diametrically opposed decisions. How are factory owners expected to react to the Child Labor Deterrence Act? Will they close the factories and leave thousands of children out of work? Or will factory owners hire adults (which cost a bit more)

and absorb a small reduction in profits? If more adults have income, will their children go to school and improve their future opportunities through education? Making a moral decision requires answering a number of highly speculative questions about expected outcomes.

Third, when comparing the benefits and costs of a decision, utilitarianism may not properly consider individual rights. This is usually a problem in clinical testing dilemmas. Let us imagine a pharma company that is developing a drug for curing a deadly disease in children. Having the tests done in a country with lower standards could greatly accelerate the release of the drug, potentially saving the life of millions. The cost would probably be a handful of preventable deaths in an emerging country. Some could argue, from an utilitarian point of view, that the benefits of conducting the tests far outweigh their cost. Hence, it would be morally permissible. Critics, however, argue that this utilitarian calculation is unfair toward the subjects in the emerging country. Generally speaking, an important problem of utilitarian thinking is that promoting the greatest good for the greatest number can affect fundamental rights of minorities [57].

4.3. Kantian deontology

Bowie [58] pioneered the introduction of Kantian thinking in business ethics. Building on this work, Evan and Freeman developed a Kantian model for stakeholder management. Bowie [59] made the first comprehensive and systematic effort to apply Kantian ethics in business, in combination with contemporary theories of organization and strategic management.

Kantian morality is based on the premise that humans are autonomous beings that have an intrinsic dignity and universal rights. Kant proposes the categorical imperative as a test for assessing whether the principles upon which an action is based are morally acceptable. Kant offers different formulations of the categorical imperative [60].

The formulation "work only according to a maxim such that you can want at the same time that it becomes universal law" can be applied to bribery. If bribery (secret payments to gain an advantage over others) became a universal behavioral law, then the practice of making secret payments to gain advantages would make no sense. Since they fail the categorical imperative test, bribes are immoral.

The formulation "work as if, through your maxims, you were always a legislative member in a universal kingdom of ends", translated to business, may mean that organizational structures should treat all people with equal dignity and respect. From this formulation arise obligations such as the consideration of all the interest groups affected by the decisions, the establishment of relations of justice and in cases where it is necessary to benefit one group over another that the decision is not taken with an Utilitarian parameter such as the number of members of each group.

Kantian deontology advises managers to identify the rights of the different groups affected by a decision and to choose a course of action that does not violate any. Because of its nonconsequentialist nature, Kantian ethics avoids the problem of the aggregation of benefits and damages that affects utilitarian models.

Pharmaceutical companies must sometimes decide to test new therapeutic methods in societies with weak health regulations. From a utilitarian perspective, the risk of a few deaths in a developing country could be justified if it leads to accelerating the launch of a new therapy with the potential to save millions. From Kantian morality, however, this option would be illegitimate because it does not respect the dignity of the individuals who will be subjected to the tests [61]. Kantian arguments were frequently used to defend the right of employees not to be discriminated against, of consumers not to be deceived and of communities to enjoy a healthy environment.

However, Kantian ethics has also faced a number of criticisms. Different people can come up with different answers regarding the universalization of action maxims. Depending on the assumptions, many alternative formulations of rights could be made between different stakeholders [62]. Some argue that Kantian ethics is too speculative, demanding and unrealistic to apply in organizational contexts. Solomon believes that Kantian concepts are inadequate to address the specific context of business and the particular roles people play in companies: "people do not do ethics that way" [63].

4.4. Virtue ethics

Virtue ethics is a venerable tradition that can be traced back to Plato and Aristotle in the West and to Confucius in the East. Recently, this stream of thought aroused a renewed interest, mostly due to the work of MacIntyre [64]. In the early 1990s, Solomon [65, 66] introduced Aristotelian ethics in the organizational field.

Virtue ethics starts with the idea that the basis for moral judgments is not the isolated individual but the community. A corporation is, above all, a community where managers fulfill roles with specific obligations. In many cases, there are no general rules on how to behave. Dilemmas cannot be solved with the instrumental reason, as if it were the resolution of a technical problem through the application of a universal law to a particular case. It is necessary to resort to practical reason, good judgment, or as Aristotle called it, phronesis.

The manager's ability to make the ethically correct decision depends on his or her character. There are different virtues of character relevant to business, including honesty, courage, generosity, tolerance, integrity and prudence. Virtues are not static character traits that a manager possesses or does not possess. They are enduring traits that are cultivated through experience in the resolution of ethical dilemmas. In every situation where the executive is confronted with an ethically complex decision, virtue ethics suggests identifying what virtue is at stake and then asking what a virtuous person would do.

As the manager acquires this habit of thinking, his character will develop and his habits of ethical decision making will become more successful. To the extent that more members of the corporation go through this process and acquire the virtues of good character, the organization as a whole will tend to the common good [67].

Virtue ethics' approach seems well adapted to the concrete ethical situations that managers can find in organizations. The theory is able to solve cases where rules seem difficult to apply or when two or more rules suggest courses of action inconsistent with each other. Instead of generating a discussion about which rule has priority over the others (a debate for which executives, because of their training and interests, are often poorly prepared) virtue ethics diverts attention from the principles to the agent. The key question is not what principle or rule is applicable, but what virtue is at stake and what would a virtuous person do.

Virtue ethics has faced two kinds of criticism. First the situationist critique questions the moral psychology assumptions underlying the model of virtuous man. Virtue ethics assumes that actions are a result of character, and that the development of good character results in better moral decision making. Doris [68], however, notes that character traits are less durable than what this model implies. Evidence indicates that small changes in the environment significantly affect decision making and that decisions depend little on the character of the person and much of the situation in which they are made. If this were true, then it would be false that the development of virtues tends to improve ethical decision making, a basic assumption of virtue ethics.

Second, while the focus on the agent may solve a number of problems of rule-based approaches such as utilitarianism and Kantian ethics, the downside is that it is only applicable to individual managers. Corporations, however, also need moral guidance for the development of global codes of ethics. Utilitarian and Kantian approaches, despite their difficulties, are capable of offering criteria of good corporate behavior on which to build globally applicable rules. Virtue ethics, on the contrary, is unable to provide answers to dilemmas at the level of the corporation in relation to business in society. Solomon argues: "a problem with virtue ethics is that it tends to be provincial and ethnocentric. It thereby requires the language of rights and some sense of utility as a corrective".

Melé [69] believes that some basic rational principles from Personalist ethics could be used as guidelines for virtuous behavior. Melé proposes two principles: the Personalist Principle,

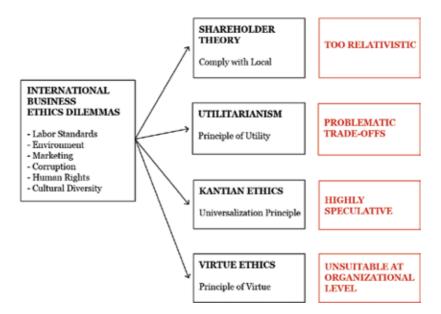


Figure 3. Different answers from traditional ethical theory to dilemmas in international business. Source: Own elaboration.

including respect and love for people, which prescribes respect of workers and consumers, and forbids exploitation, manipulation and deceptive behavior in commercial transactions; the Common Good Principle, which captures the social dimension of human beings, requires that managers and employees do whatever is necessary to contribute to situational needs and goals of an organization.

While Melé's proposal is valuable in trying to introduce some principles into virtue ethics, it is still at an early stage of research. At this point, the principles are too general and abstract. It remains unclear that Melé's proposal could correct the excessively situationalist character of virtue ethics, which makes it unable to provide rules for moral guidance in decision making (**Figure 3**).

5. Conclusion

Economic globalization and technological change are posing new ethical challenges to multinational corporations. As companies operate across diverse cultural and legal frameworks, moral dilemmas arise in labor standards, marketing practices, environment, corruption and human rights. In this chapter, I have reviewed the response of governments, corporations and civil society associations to the new moral dilemmas of globalization. Then, I have introduced the answers developed within the academic field of international business ethics.

Velasquez [70] applied all traditional ethical theories to a dilemma faced by a North American multinational doing business in Jamaica during the 1970s. He found that none of the existing theories provided an adequate answer. Theories were too abstract, presented inconsistent choices or made suggestions that were counterintuitive to moral common sense.

Other, more recent, frameworks have arisen during the 1990s, such as Integrative Social Contracts Theory, a contractarian approach to business ethics. Up to this point, however, no theory can provide a fully satisfactory solution for the dilemmas managers have to face. Much progress is to be done in developing better tools for managerial moral decision making in global business.

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Adaptations of CSR in the Context of Globalization the Case of the GCC

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Additional information is available at the end of the chapter

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Abstract

Globalization plays a significant role in driving the evolution of the CSR discourse and practice across developed and developing countries. The differential development of CSR across contexts is pervasive but undeniably relates to internationalization, modernization, and the globalization process. In this chapter, we look specifically at how globalization plays an important role in shaping CSR conceptions and practices in developing countries and how there is invariably an important counterpart process of indigenous translation and adaptation in context. The nuanced connotations and practices of CSR in a Middle Eastern region, namely the Gulf Cooperation Council (GCC), are analyzed closely to draw conclusions on the implications of globalization in terms of shaping key logics for CSR in non-western contexts. A qualitative inductive approach to content analysis is used where published articles on CSR perceptions, practices, and connotations in the six GCC countries are analyzed thoroughly. Statements regarding global forces of international best practices and their diffusion into local contexts, the translated western-centric CSR logics in the context of local political and socio-economic realities are extracted to form conclusions in relation to the adaptation of CSR in the global business environment of the GCC.

Keywords: corporate social responsibility, globalization, logics, Middle East, GCC

1. Introduction

Corporate social responsibility (CSR) has been gaining heightened global interest and has become a key term in global economy discourse. The attention attributed to CSR escalated through globalization forces and increased international trade. It is an umbrella term encompassing multiple concepts regarding the role and impact of business on society. At its core,



the concept assumes a firm to be a social agent and part of a global setting where managerial decisions and actions create impacts and form relationships with society, economy and the environment. Due to the increased complexity of national systems and societies, governments are falling short on their roles in providing adequate attention to citizens' needs, living standards, and local developmental challenges. Therefore, the private sector is expected to take part and contribute to society on many fronts. This is also driven by increased public pressure, media criticism about corporate externalities, global competition, and the role of states [1].

CSR is an important differentiator in the current global business arena as companies are adamant about communicating their CSR contributions to gain legitimacy, enhanced brand image in the pursuit of higher financial performance and long-term profits. The global trend is therefore calling for firms to go beyond 'business as usual' and assimilate local and global societal and environmental challenges. The World Business Council for Sustainable Development (WBCSD) provides a definition of the concept as the integration of environmental and social values into core organizational processes and with stakeholder interactions for the purpose of sustainable economic development [2]. Other conceptual definitions of CSR outline a social responsibility pyramid with four paradigms of application spanning economic, legal, ethical and philanthropic patterns [3]. It is economic if companies pursue CSR for higher profits or to save brand image from public criticism. The legal paradigm constitutes following policies and regulations by taking managerial action to avoid legal issues. Ethical decision-making involves long-term planning for responsible behavior for its integration with all aspects of operations and stakeholder interaction. Philanthropic CSR is when companies provide a financial contribution for meaningful causes to address societal and environmental issues. It becomes clear that CSR is more than merely philanthropic; it involves a restructuring of managerial perspectives on the relationship of the business with its surroundings.

The practice of CSR started in highly developed nations, such as in USA and Europe, where corporations were responding to the increased public criticism and media pressure to avoid bad corporate image or legal lawsuits regarding harmful practices to society and the environment. As it caught traction in western contexts, and with globalization, the concept spread through multinational corporations (MNCs), their subsidiaries and international standardization, leading to the salience of global best practices of CSR and the importance accorded to environment in other parts of the world, including the Middle East [4]. Consequently, the CSR concept diffused from West to East, carrying western values, connotations, and practices that form its basic understanding. This is referred to as "western assumptive logics", as is evident in mainstream business literature and the theoretical inferences made by CSR studies. Research on CSR in non-western contexts has asserted its divergence in different political, cultural and socioeconomic settings [5]. Therefore, as western assumptive CSR logics spread, they get diffused and altered according to every unique national context. Each country has a set of institutional variables that define its collective political and cultural values, beliefs and practices. In light of each constellation of particular institutional order logics, CSR is invariably translated for local applicability.

In western contexts, CSR is organized based on coherent systems of governance and national business systems that form western institutional realities and have implications for the way CSR is understood and practiced [6]. In such contexts, CSR is increasingly entrenched by corporate strategies and institutional particularities. On the other hand, less developed nations have vastly heterogeneous institutional order logics that interfere with the way CSR is translated for local practice. For instance, research on CSR in developing contexts has outlined the different cultural and religious motivations to pursue CSR in the form of voluntary philanthropic contributions to local communities [4]. CSR logics in non-western contexts are therefore dependent on the merger of western assumptive logics of CSR with local socioeconomic, historical, cultural and political realities. These realities form the particular institutional order logics of a country; as highlighted in Figure 1, they include state, religion, market, corporate, family, and profession institutions. Each institutional order logics and their specific interactions with western assumptive logics, creates peculiar and unique CSR discourses and practices specific to each nation. For this chapter, the focus is on the main institutional order-CSR logics and how they influence CSR implementation in various contexts. Each country has a set of dominant logics pertaining to each institution which form the collective system of meaning that interacts with western assumptive logics of CSR. The various logics will also interrelate dynamically with each other to create particular expressions in local contexts. This dynamic translation and adaptation process of CSR leads to nuances in the ways it is understood and practiced and thus calls for a nuanced analysis of each local context and its salient institutional order logics at play. Table 1 below outlines the understanding of institutional orders and their functional roles in a particular nation, as outlined by [7].

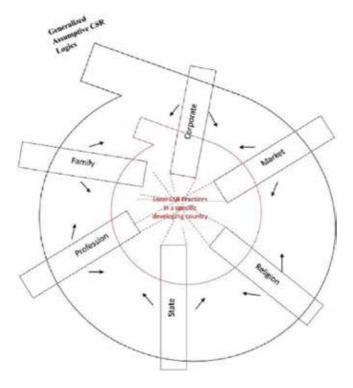


Figure 1. Diffusion of generalized assumptive CSR logics with institutional logics [6].

Institutional orders and their functions					
State	State institutional order refers to the governance structure of a nation where regulations, policies, and decisions are made on a national level.				
Market	Market institutional order constitutes the compartmentalization and pricing of human activity in neo-liberal market economics.				
Corporate	Corporate institutional order forms a hierarchal structure organizing a set of skills and knowledge to be used as a facilitator for neo-liberal market economics.				
Religion	The institutional order of religion forms the dominant moral values, belief systems and world view.				
Family	Family institutional order refers to the relationships formed between family members.				

Table 1. Institutional orders of state, market, corporate, religion, and family [6].

This book chapter will focus on a particular context in the Middle East, the Gulf Cooperation Council (GCC). Business activities are embedded in Middle Eastern history as the region has a strategic geographical positioning for trade across three continents. The current Middle Eastern business arena has witnessed a proliferation of CSR practices due to globalization and global sharing of best practices. The translation and adaptation of western assumptive CSR logics was also driven by social media attention, awareness and education in the area of CSR, and greater local demands for accountability and sustainable development [1]. Businesses are now accountable not only for their economic performance but also for their social responsibility and corporate citizenship as these concepts become more embedded in mainstream business practices across the region.

2. Methodology

The Middle East is a region in South-West Asia containing around 25 nations comprising highly heterogeneous and diverse contexts. It is also referred to as Middle East and North Africa (MENA) region and includes Arab and non-Arab nations. It is divided to multiple subregions and these include Mashriq which comprises countries to the East of Egypt, Maghreb which includes countries to the West of Egypt, and the GCC which includes all Arab States on the Persian Gulf except Iraq. GCC is not only a geographical categorization but also an intergovernmental economic and political union between Saudi Arabia, United Arab Emirates (UAE), Bahrain, Oman, Qatar, and Kuwait. The GCC countries have the highest Human Development Index (HDI) in the region and are categorized by the UNDP as very high HDI countries [8]. The six countries of interest have the highest published content on CSR and their key country and economic indicators are outlined below in **Table 2**.

The Middle East contains diverse nations, each having a unique set of institutional order logics. As previously mentioned, these institutional orders consist of state, market, corporate, religion and family, and each has a particular function. Although some development challenges are shared among countries in the region such as gender equality or worker rights, however other socioeconomic factors remain rather diverse. Therefore, we expect to see in

	Qatar	Saudi Arabia	UAE	Bahrain	Kuwait	Oman
Human Development Index (HDI), 2015 [8]	0.856	0.847	0.840	0.824	0.800	0.796
Population (million), 2016 [10]	2.6	32.3	9.3	1.4	4.1	4.4
GDP per capita (USD), 2016 [10]	59,324	20,029	37,622	22,579	27,359	14,982
GDP growth (annual %), 2016 [10]	2.2	1.7	3.0	2.9	3.5	2.2
GDP (PPP) as a share (%) of world total, 2016 [11]	0.28	1.46	0.56	0.06	0.25	0.15
Global Competitiveness Index (GCI) (Rank 1–7), 2015 [11]	5.1	4.8	5.3	4.5	4.4	4.3
Subindex A : Basic Requirements (Rank 1–7), 2015 [11]	5.9	5.3	6.0	5.1	4.9	5.1
Institutions	5.6	5.0	5.9	5.0	4.0	5.0
Public institutions	5.8	5.0	6.0	5.0	4.1	5.0
Infrastructure	5.8	5.2	6.3	5.1	4.3	4.9
Macroeconomic environment	5.8	4.9	5.6	4.0	5.6	4.7
Health and primary education (Rank 1–7), 2015 [11]	6.2	6.0	6.3	6.2	5.6	5.9
Subindex B : Efficiency Enhancers (Rank 1–7), 2015 [11]	4.9	4.7	5.2	4.6	4.1	4.2
Higher education and training	5.0	4.9	5.0	5.0	3.9	4.4
Goods market efficiency	5.2	4.6	5.6	5.0	4.2	4.5
Labor market efficiency	4.9	4.1	5.2	4.6	3.6	3.5
Financial market Development	4.7	4.2	4.8	4.3	4.1	4.2
Technological readiness	5.4	4.9	5.8	5.6	4.3	4.5
Market size	4.4	5.4	4.9	3.3	4.4	4.1
Subindex C: Innovation and sophistication factors (Rank 1–7), 2015 [11]	4.9	4.1	4.9	4.0	3.5	3.6
Business sophistication	5.0	4.5	5.3	4.5	4.0	4.0
Innovation	4.7	3.7	4.6	3.6	3.0	3.3
Corruption perception index (Rank out of 168), 2015 [9]	31	62	24	70	75	64

Table 2. Key GCC development and economic metrics [9-11].

each country a specific amalgamation of logics that shapes a unique CSR arena including discourses and practices for CSR. The GCC region for instance collectively has almost half of the oil reserves in the world and 65.5% of the OPEC total [12]. They also have the highest per capita carbon emissions, which makes them liable to more environmental challenges than other parts of the Middle East. Table 2 highlights some key indicators that help create a vision of each country's development and socio-economic context that will guide the analysis. The information gives an overview of the institutional realities of each nation. As outlined, GCC has been successful in advancing their development metrics as compared to other countries in the region. Saudi Arabia has the highest population of 32.3 million and occupies the biggest surface area of the peninsula. Qatar has a significantly higher GDP per capita than the other neighboring countries, followed by UAE, Kuwait, Bahrain, Saudi Arabia, and lastly Oman. However, in terms of total GDP, Saudi Arabia ranks the highest and accounts for 25% of the Arab World's GDP [13]. Moreover, Qatar ranks the highest on HDI of 0.856, followed by Saudi Arabia, UAE, Bahrain, Kuwait, and Oman.

In terms of their GCI ranks, UAE ranks the highest with 5.3, followed by Qatar, Saudi Arabia, Bahrain, Kuwait, and then Oman. The most problematic factors for doing business in Qatar are access to financing and restrictive labor regulations. The same holds true for Saudi Arabia whose global competitiveness remains fairly stable [11]. Qatar remains the second highest competitive economy in the Arab World but has receded on worldwide ranking from 18th to the 25th place mainly due to the drop-in oil and gas prices which has impacted its fiscal situation; yet Qatar is still strong in many areas including infrastructure of its facilities, and goods market economy [11]. The UAE scores highest in the Arab World for overall competitiveness however the problematic factors for doing business in UAE relate to high inflation and also access to financing; Bahrain scores fairly high on ease of doing business with a slight problematic factor pertaining to inefficient governmental bureaucracy [11]. Kuwait has the highest inefficiency in governmental bureaucracy and the highest corruption rate; and lastly, Oman ranks highest on restrictive labor regulations and has other problematic factors regarding inadequately educated workforce and insufficient governmental bureaucracy [11]. It is important to note that the figures used for this analysis date prior to the 2017 Qatar-Gulf crisis, when several countries in the Gulf, namely Saudi Arabia, UAE and Bahrain, in addition to Egypt cut off their diplomatic ties with Qatar and imposed an air, sea and land blockade.

Due to the diverse contexts presented above, we expect to encounter a diversity of CSR logics in GCC region reflecting the amalgam of western and local CSR-institutional logics and the translation of these logics in the context of the unique systems of meaning and local practices in each nation [6]. Global forces through the sharing of best practices regarding social responsibility of MNCs and local forces resulting from the unique social, cultural and historical dynamic are both significant factors affecting CSR translation in the region. To study the CSR logics in the GCC region, a folder was created for each country and journal articles, book chapters and review publications analyzing CSR practices, expressions, and connotations in each country were downloaded. Through content analysis, the information was extracted from statements that are collectively used to draw conclusions on each institutional order logics and their interface with CSR. The analysis is inductive in nature where extracted statements provide evidence in relation to the nature of institutional logics of each country and their amalgamation with western assumptive CSR logics, in order to draw conclusions in relation to salient CSR logics in each context. Each of the following sections of the chapter (3-7) discusses the institutional order-CSR logics interface: Section 3 discusses CSR logic at the state level where regulations, policies, and decisions are made on a national level; Section 4 relates religion (dominant moral values, belief systems and world view) to CSR practices; Section 5 looks into CSR-market logic which captures the compartmentalization and pricing of human activity in neo-liberal market economics; Section 6 discusses CSR from a corporate institutional order which is a hierarchal structure organizing and facilitating neo-liberal market economics and Section 7 will relate CSR to family ownership and family ties. Finally, Section 8 presents the discussion of the results with concluding remarks and recommendations.

3. GCC CSR-state logics interface

A recent report published by the Arab Forum for Environment and Development recognizing the transition to sustainable practices as a necessity for the region to secure a path towards a sustainable future [14]. The GCC governments seem to play an integral role in achieving the necessary goals set by the Arab Forum. CSR logics however have unique expressions in each national context. Although these contextual differences exist in highly developed nations, literature points to higher heterogeneity among emerging economies [15]. For example, even in a single country such as the UAE, differences are prevalent between the different emirates and how their economies are run [15]. This section will discuss the various State-CSR logics that have manifested in the GCC region in recent years, discerning between positive, neutral, and negative State-CSR logics.

3.1. Saudi Arabia

Saudi Arabia is a strong emerging economy; it has 20% of the world's proven oil reserves and is the largest oil exporter in the world [16]. Due to the recent downfalls in the oil economy, the government is attempting to diversify its national economy and is consequently encouraging and supporting the private sector in its significant role and participation in its vision [16]. CSR has caught traction in Saudi Arabia where large firms are displaying strategic views on CSR. CSR is a great facilitator and an important component in the government's desire to strengthen its relationship with the private sector and it has been encouraging companies to partake in CSR initiatives [16].

It has been mentioned in the literature that there is a lack of legislation or an institutionalized system for CSR; this has resulted in fragmented efforts with a low level of overall strategic strength [17]. Governmental and legislative factors including high bureaucracy, labor laws, corruption, legal systems, and investment regulations are major challenges for CSR implementation [18]. The above factors point to negative state-CSR logics, where systematic efforts are needed to develop CSR in the Kingdom [17, 18]. On the other hand, positive state-CSR logics have emerged in Saudi Arabia. The government passed a legislative requirement through the 2006 Saudi corporate governance (CG) code, which requires firms to have an audit committee with at least three non-executive directors and at least a financial and accounting director; this code had a positive impact on CSR disclosure with a higher number of companies registered by research studies post its application [13]. However, it can be argued that this is a nonintentional CSR impact, where more direct legislative policies are required for promoting CSR.

Moreover, other systemic attempts exist to institutionalize CSR in Saudi Arabia, namely through the Saudi Arabian General Investment Authority (SAGIA), established in 2000, with the aim of strengthening the economy and rendering it more competitive. SAGIA has made efforts to spread CSR awareness and encourage the private sector to participate through launching a measure, the Saudi Arabia Responsible Competitive Index (SARCI). The governmental initiative aims at monitoring and evaluating CSR strategies of leading companies through social, environmental, economic, management, and stakeholder participation metrics [16]. However, issues of human and labor rights, corruption, and environment are pressing international issues that are of concern to CSR global standards; and these concerns are not addressed by SARCI [19].

3.2. United Arab Emirates

The UAE is a fast-developing country with a growing economy. It has large oil reserves particularly in the Abu Dhabi Emirate; this has enabled it to become a business and trade hub of the Middle East. Indeed, the oil sector currently only accounts for 28% of its GDP signaling a strong diverse economy [20]. Due to its economic strength and opportunity and its affluent sales prospects, MNCs consider the UAE economy as a gateway to enter the Middle Eastern market. In terms of CSR, the government of UAE has been encouraging business involvement in social responsibility and consumer awareness of their rights through various programs; such as activities for sustainable management focused on the importance of philanthropic initiatives to aid sustainable development [20]. Particularly, Dubai has championed emerging sustainability projects, specifically in construction and energy conservation.

Poverty reduction is a main concern for the government which has been tackled through food and housing projects and marriage funds. The Sheikh Zayed Housing Program and the Mohammed bin Rashid Housing Establishment are two examples of UAE-led philanthropic initiatives to aid citizen welfare, in addition to humanitarian initiatives that provide food for subsidized prices; in accordance to cultural attitudes, UAE also provides a marriage fund for low income citizens along with other programs such as healthcare and educational support [20]. Government funded CSR programs are also expanding internationally and deal with international development challenges; this is initiated by various programs such as Dubai Cares, which is the largest CSR initiative in the Middle East supporting social welfare in lowincome countries in fields of education, health, water and sanitation, and school infrastructure [20]. The government also encourages employees to participate and volunteer in social projects through an initiative called ENGAGE [21]. Other UAE-funded national and international initiatives support SMEs by promoting CG and raising awareness on issues of transparency, responsibilities of board directors, auditing, and sustainability practices [20, 21]. Lastly the Dubai Ethics Resource Centre specifically targets issues of CSR in the Gulf markets by planning forums and seminars in collaboration with business leaders and Gulf executives; their training sessions focus on improving knowledge of CSR targeted at professionals with the aim of enhancing CSR programs, strategies and infrastructures [21].

Along with providing CSR training sessions, the Center for Responsible Business in Dubai, provides assistance in CSR implementation and conducts audits to recognize responsible business behavior and rewards it with CSR labels; similarly, a UAE- funded project, the Arabia CSR Network audits and rewards CSR best practices in the country [21]. UAE governmental initiatives have yielded tangible results, evident through the increased awareness by consumers in the country, and specifically in Dubai and Abu Dhabi Emirates, where responsible business programs are concentrated [20].

3.3. Qatar

Qatar is also a country rich in oil and gas with other booming sectors, with Qatar recently serving as the largest exporter of cement and steel [22]. It is a small country with the second highest migration rate and the first GDP per capita in the world [23]. The Qatari government has been according importance to accountability and transparency issues in the country, setting fertile ground for the disclosure of information, specifically related to socially responsible behavior [24]. This is an improvement as the country lacked any proper regulations for financial reporting and all information disclosed on company's annual reports was completely voluntary [25].

While financial reporting has improved in the past decade, CSR disclosure is still a voluntary practice in Qatar, and not enforced by law. Companies lack a broad scope of CSR disclosure that mostly focuses on human resources; state regulations by the Qatari Government would help enhance CSR activities and set clear environmental disclosure standards in line with global sustainability trends [22]. Due to its contextual dynamics, as a small country with relatively low population, Qatar has excelled in inclusive social welfare initiatives; apart from its high living standards, the country's contribution to global development has been pronounced. Through initiating semi-governmental institutions, Qatar has participated in national and international philanthropy and community outreach programs [23]. In 2015 the country put forth the Qatar National Vision 2030 setting clear sustainable development goals with economic, social, and environmental targets. To set a pathway for the 2030 targets, Qatar has emphasized the role of the private sector through an emphasis on CSR activities; a 2016 study on CSR practices in Qatar found that corporations are driven by the country's vision for a sustainable future which also sets a framework for CSR activities and targets [23]. To further promote CSR activities and disclosure, the government should apply legal regulations for private sector involvement based on international and professional standards and criteria [14, 26].

3.4. Oman and Kuwait

Oman is an emerging mixed market economy that also highly relies on the oil and gas sector with a salience of joint ventures with international corporations [27]. Private sector partners along with the civil society are expected to collaborate with the government to maintain national competitiveness and equality. The state has set local development targets through the national socio-economic development plan (Vision 2020), launched in 1996; these collaborations are also in line with national inclusion, where all sectors are expected to be involved in steps for development planning [27].

Kuwait has a large oil economy and therefore the recent oil production cuts have affected economic growth [10]. The government is attending to this issue through plans of economic diversification; a privatization plan was put in place to shift dependence from the oil and gas sector. However, the state legal framework and enforcement is weak; there are no CG laws put in place and company regulations lack any reference to stakeholder's rights [28]. Due to its legal context, it is up to the firm to participate in socially responsible activities such as human and labor rights. A study on CG practices in businesses in Kuwait suggests the low level of development in that field with a salient lack of accountability, disclosure, shareholders' and stakeholders' rights. While some companies studied had assigned a board committee, others do not even have a selected board committee to look over governance issues [28]. There is no legal framework for social responsibility issues; however, some large sized companies exhibit some kind of participation in CSR practices [28]. This would be more organized and enhanced with well-structured legal regulations for accountability, CG, and social responsibility. Moreover, setting down regulations will be in line with the government's current privatization plan as proper CG laws with clear reference to the rights of shareholders and stakeholders would encourage investment and economy diversification.

GGC governments are playing an integral role in putting the basic infrastructure and groundwork for securing a path towards a sustainable future in the region. Some GCC countries are trying to enhance and monitor CSR practices by diversifying national economy and supporting the private sector and civil societies, by launching philanthropic programs to aid sustainable development and reducing poverty and by establishing international networks to help other low-income countries. However, not all governments are as much involved, some are still lacking laws that enforce CSR practices and legal regulations for accountability.

4. GCC religion-CSR logics: philanthropic or strategic?

Normative and institutional pressures resulting from belief systems have a great impact on CSR practices in the GCC [17]; Islamic teachings salient in the region, view social responsibility as an obligation to business activity [18], namely through the Zakat obligatory tax to be given to the poor on an annual basis, and a general requirement by Islam to enhance social welfare and preserve environmental ecosystems [29]. However, these traditional efforts fall short of the global CSR standard, as they are usually private, fragmented, lack accountability and a clear strategy to maximize effectiveness of business philanthropic efforts [21]. This section will discuss the religion-CSR logics and draw recommendations on the best course of action for sustaining traditions while moving towards sustainable development.

4.1. Saudi Arabia

Companies in Saudi Arabia have been following a religious tradition of Zakat which is charitable giving that requires companies and individuals to give an annual endowment of 2.5% of their annual income or revenue [29]. This longstanding socially responsible tradition has transformed through business development to an obligatory institutional Zakat tax, commonly labeled by corporations as a CSR activity in recent years [29]. Therefore, CSR articulation has only come up in recent years in Saudi Arabia; initially there was a general traditional obligation on ethical business activities [14]. A study by CSR consultants in Saudi Arabia found that businesses are starting to leverage the benefits of CSR beyond merely charitable activities; focusing on a broader CSR scope involving employees, communities, and the environment [18].

4.2. United Arab Emirates

Philanthropy has always been practiced in UAE through Zakat. This has also been institutionalized and organizations are usually compliant with religious doctrines and practices. Due to the prevalent endowment behavior, organizations believe in their responsibilities towards society, apart from their shareholders [20]. The religious practices are not centralized and approached merely in an informal and unorganized manner. Unlike Saudi Arabia, a Zakat tax is not enforced or collected by the state. However, some have argued against the effectiveness of a centralized Zakat collection practice; such system does little to better the living standards of the needy [20]. CSR is very different from Zakat although philanthropy is included as one of the secondary pillars of CSR practice. Zakat has a spiritual end whereas CSR ought to be targeted towards social equality and sustainable development. CSR also includes concepts of preservation of resources, sustainable practices, and involving stakeholders in business operations and strategies [21].

4.3. Qatar

Qatar also has salient Religion-CSR Logics as it is an Islamic country with high social, cultural, and religious expectations of firms participating in philanthropy; this ultimately influenced the introduction of CSR in the professional realm and encouraged company participation to meet their social responsibility expectations [23]. Community involvement of businesses in Qatar has always been prevalent through donations such as to orphanages, elderly homes, and particularly sports [29]. Religious groups in Qatar also act as pressure groups on companies to get involved in the annual Zakat tradition [24, 25]. These groups account to a significant portion of investors in the country and may choose to invest in companies that show interest in social development and participate with annual philanthropy [24]. Islamic values need to be present and emphasized by companies in Qatar to maintain legitimacy and survival; through enhanced communication with local groups and communities, and transparent disclosure of socially responsible behavior [25].

4.4. Bahrain and Oman

Bahrain is a small GCC country and has a dearth of research on CSR practices by corporations. However, one study focused on social responsibility reporting of Islamic financial institutions based in Bahrain. The results show a thorough understanding of CSR as the banks are required by law to produce an annual report, the Shari'a Supervisory board report, to assert their commitment to Islamic teachings [30]. There is evidence of voluntary philanthropic practices in Islamic financial institutions which signifies a commitment to social welfare issues in the country [31].

Similar to other countries in GCC, Oman is a Muslim nation characterized with philanthropic practices to low income groups, which has contributed to the assimilation of CSR concepts [27]. There is evidence of a merger in Oman of traditional philanthropic traditions with strategic CSR practices integrating economic, social and environmental challenges [27].

Islamic religion in the GCC countries views social responsibility as an obligation to business activity mainly through the Zakat tax. However, the Zakat tax was practiced way before the CSR concept came to light and is considered as only one of the secondary pillars of CSR practices which is philanthropic. Social responsibility is present in the GCC in Islamic financial institutions as well.

5. Market-CSR logics

Market-CSR interface creates various logics depending on the market dynamics of the specific context. International market integration greatly influences CSR logics and expressions. The local context has an even greater impact, for instance in case of monopolies or other peculiar ownership contexts. Moreover, the pursuit of market growth might produce operational negative externalities impacting society or the environment.

5.1. Saudi Arabia

Despite the fact that Saudi Arabia is an Islamic state following Islamic law and practices, a study found that companies pursue CSR beyond charitable and philanthropic activities [32]. Indeed economic, environmental, and social pillars are addressed through CSR, marking a qualitative shift in the country. However, companies through these practices are in pursuit of higher economic value with higher profits and long-term success [32]. Therefore, it seems that although a developmental approach is prevalent in some companies in Saudi Arabia; the guiding principle is in line with economic priorities. Saudi Arabia has strong connections politically and economically to the west, and western market logics have manifested in the country [14]; It is emphasized by many authors that this particular Saudi CSR expression is inspired by western free-market economy influences, and plays a significant role in shaping business practices and economic priorities [14, 32].

In light of the start of the Arab Spring, Saudi Arabia began to focus on driving CSR discourse forward and spreading awareness on the importance of CSR as a political strategy to meet the public's demand for sustainable local social and economic development. CSR became essential for enhancing social cohesion and solidifying the country's authority and political role in the region [33]. In this way, it has changed from being an economic activity to a political priority. Consequently, multiple governmental projects took place including generous philanthropic assistantship to low income groups in the Kingdom, as well as a housing development project where the government built half a million residential units for the needy [14]. This marks an evolution in CSR in the country moving away from western market logics and into new applications rooted in socio-economic rationales.

5.2. United Arab Emirates

UAE is characterized with an internationally integrated market; in fact, only 20% of its population comprises nationals and local citizens and 80% constitute migrants from 100 different countries searching for work opportunities; although it is an oil and gas rich nation, the sector only contributes to 28% of its GDP [20]. Market logics in UAE are driven by high economic growth and international integration and competitiveness. This open market environment aiming for rapid economic growth may result in socially irresponsible behavior. Indeed, due to opportunistic attitudes permeating the UAE, business practices have been characterized with poor labor rights, low customer safety standards, unequal welfare distribution, and environmentally damaging activities [15].

Governmental laws and structured regulations regarding business conduct exist but their implementation depends on institutional monitoring and enforcement capacity [15]. Although positive state-CSR logics prevail, there are several challenging factors that inhibit proper stakeholder engagement in the UAE market. Due to some firm's monopoly positions, there has been a failure of prioritizing stakeholder management in organizational operations; in addition to the diversity of cultures and backgrounds in the country and short-term residencies, effective communication channels are difficult to build and long-term relationships with stakeholders are not maintained due to the high turnover rates [15].

5.3. Qatar

Due to the high rate of economic development and international market integration, CSR in Qatar is growing exponentially as western-centric CSR is diffused to relevance in the local context [26]. Due to the high percentage of international firms in Qatar, CSR global standards and reporting are followed, especially in the energy sector [23]. The energy sector in Qatar however does not follow the same type of CSR disclosure seen in western energy sectors. It is expected that such an industry would be keener on disclosing socially responsible behavior regarding environmental challenges; however, this is not the case in the Qatari energy market, as a study revealed that the sector's highest emphasis through CSR reporting is related to human resources rather than an environmental theme [22].

On another note, the recent governmental privatization program is attempting to enhance local investments. A study revealed that post the implementation of this program, a high association between shareholder percentages and CSR reporting prevailed [25]. Management is attempting to assure current and potential private investors of the company's commitment to transparency and social responsibility through proper disclosure. Shareholders in Qatar prefer investing in socially responsible firms that prioritize social and environmental challenges [25].

5.4. Oman and Kuwait

The Omani market enjoys joint ventures and a majority natural resources sector. This has had a significant effect on shaping CSR expressions in the country, where they are found to be consistent with other emerging economies with similar characteristics [27]. The best type of CSR practiced in Oman is through philanthropy; this could be due the traditional charitable activities. However, it is argued that economies that are highly dependent on natural resources conform to 'CSR as philanthropy' philosophy [27].

Due to the economic structure in Kuwait where the market is dominated by major shareholders with a weak legal system, there exists a lack of accountability, proper shareholder rights, and transparent disclosure [28].

As GCC markets became more open and engaged internationally due to globalization, western logics penetrated CSR practices that shifting the focus away from economic activity to political priority such as in Saudi Arabia and Qatar. In other countries, such as the UAE, the open market led to the inflow of foreigners looking for opportunities and this created a challenging factor facing social responsibility.

6. Corporation

Corporation-CSR logics constitute of two main paradigms: Corporations pursuing CSR for the aim of higher profits and economic priorities; and corporations focusing on integrating local and global development challenges through CSR strategies.

6.1. Saudi Arabia

Companies in Saudi Arabia with CSR practices usually consider local development priorities in strategizing their CSR goals. However, due to the cultural context in the country, businesses and citizens view social responsibility and development as the primary goals of the state structure [18]. The fact that businesses in Saudi Arabia view CSR as voluntary stands in the way of the governmental plans to make CSR strategies the norm of doing business. Saudi Arabian corporations also showed a high correlation between improved CSR disclosure and board independence and firm size [13, 34], signifying that companies with higher financial liquidity and independent audits, are more willing to invest in a CSR strategy and disclosure. However, small and medium sized enterprises face structural challenges in integrating CSR into their business operations; such companies do not create high employment nor do they follow strategic developmental approach to CSR, rather they merely stick to paying the annually ensued Zakat tax [14].

6.2. United Arab Emirates

MNCs in the UAE tend to follow sustainability pathways through supporting society and the environment in their CSR practices; the majorities of these firms operate in free trade zones of the country [20]. In a study on CSR perceptions of UAE corporates in free trade zones revealed some linkage between CSR and business performance; most respondents believe in the high economic value that CSR produces such as reputational gains, higher profits, and long-term success [21]. Nonetheless, clearly targeted and structured CSR strategies are not salient in UAE; this is due to the lack of understanding of how CSR practices should be formulated and what constitutes an effective CSR strategy [21]. Despite the high awareness of the significance of CSR and importance of following international standards, firms do not have the knowledge of how to implement these standards.

6.3. Qatar

Despite the high international market integration in Qatar, corporations fall short on CSR practices as the main themes of CSR reporting are related to human resources and product development; the disclosure is mostly in a narrative format through the chairman's report which indicates that companies through CSR pursue higher profits and a corporate image and reputation as responsible corporate citizens rather than contributing to the enhancement of local sustainable development [22]. The highest amount of reporting is recorded in large companies [25, 35]; as they have higher financial resources to be able to apply CSR strategies, in addition to being more visible to the public eye and so need to maintain a responsible corporate image for long-term success [25]. Large companies are also more likely to secure funds from banks and other financial funding institutions and therefore they tend to disclose detailed information to convince investors [25].

The local development context in Qatar is characterized with many challenges such as inapt human and worker rights and transparency and accountability. These areas are not covered by CSR programs of corporations; rather their focus is mainly on health, education, environment, and sponsoring of sport events [26]. Corporations in Qatar ought to develop their professional skills in dealing with CSR by hiring specialized professionals in separate CSR departments for greater integration of local development context of ineffective labor and human rights, working environment, and governance issues [26].

6.4. Oman and Kuwait

The highest sector that practices strategic developmental CSR in Oman is the oil and gas sector as it is dominated by transnational corporations that work in joint venture contracts with the government. Corporations in this sector apply more systematic approaches to CSR integrating economic, social and environmental issues, as well as incorporating local traditions of philanthropy [27]. This is not the case with SMEs in Oman as they primarily follow religious obligations to philanthropy; although some integrate CSR in their core operations, that is usually not organized or systemic [27]. Despite the lack of governmental regulations for CG or CSR in Kuwait, strategic CSR is salient in some large companies in the country. Social responsibility in Kuwait is still underdeveloped, and requires more effort from governmental institutions and large companies to drive the practice forward [28].

Companies in the GCC usually believe that social responsibility and development is the primary goal of the state and not mandatory for businesses. Yet, companies do practice CSR despite the lack of understanding of how CSR practices should be formulated and what constitutes an effective CSR strategy.

7. Family-CSR logic in family owned firms

Family logics in a specific country greatly influence CSR strategies in family owned firms; this is specifically true in the Middle East as a large portion of corporations are family owned. Family-CSR logics interface is affected by the cultural attitudes of helping relational in-groups; tribe culture as a salient logic in the GCC area might also influence CSR expressions. Negative CSR-family logics might occur due to the high level of nepotism and giving priority to employing family members in the business that is detected in some cases in the Middle East.

7.1. Saudi Arabia

Saudi Arabian corporations apply the religious philanthropic traditions of Zakat; as mentioned above it is required and collected by governmental bodies. However, corporations also showed a high correlation between improved CSR disclosure and board independence and family ownership [13]. Indeed, family owned businesses tend to go beyond what is required by law (Zakat tax), and apply a broader Islamic view on business operations; Islam requires businesses to be socially responsible and to promote social cohesion and conserve environmental ecosystems. On the other hand, various philanthropic donations go unnoticed in Saudi Arabia, as individuals and family-owned corporations find it immodest to advertise their good deeds; for example, a \$130 million donation made in 2012 to the cyclone affected Bangladesh population remained anonymous [29].

7.2. Qatar

Due to the Qatari corporate ownership structures that are mainly dominated by the government or a number of families, corporations do not have incentives to disclose socially responsible information. These powerful and wealthy Qatari families can directly request information from management, and therefore companies do not tend to voluntarily disclose information about their corporate citizenship and social responsibility, as civil society pressure groups do not exist [25]. On the other hand, religious pressure groups exist and therefore companies tend to meet their requests through improving the living standards of employees and through charity or philanthropy [25].

Although it is highly international, Qatar still preserves Islamic and in-group values that are evident through its relationship with expatriates. It has been criticized by international organizations due to concerns about human and labor rights; the nationalities of expatriates determine their social status and treatment within the Qatari society [23]. This is in fact prevalent throughout GCC countries in general, and needs to be addressed through CSR programs targeted at nationals and minority groups to enhance social cohesion.

7.3. Kuwait and UAE

Similar to Qatar, ownership in Kuwait is concentrated with either families or governments, and corporations have a lack of proper disclosure of information [28]. Ownership structures create agency issues for corporations in Kuwait, where the process of appointing board members and audit committees is prejudiced by large shareholders and nepotism [28].

The cultural attitudes and familial ties in UAE follow a collectivist philosophy that views social welfare and relationships in a philanthropic fashion [36]. Although governmental efforts to promote global standards of CSR are highly prevalent in UAE, CSR is still viewed in a philanthropic manner and at times merely as a religious requirement [36].

Most of the companies in the GCC are family owned and they view CSR in a philanthropic manner. Yet, some family owned businesses tend to go beyond what is required by law (Zakat tax), and apply a broader Islamic view on business operations.

8. Discussion and conclusion

The above analysis provides a broad scope understanding of the nuanced peculiar national contexts in the GCC and the relevant CSR expressions prevalent in light of the diffusion of western assumptive logics of CSR through globalization. In terms of State-CSR logics, supportive logics are expressed in the GCC countries; Saudi Arabia passed the 2006 Saudi corporate governance code that had an indirect positive impact on CSR disclosure by companies in addition to institutional attempts through SARCI that have collaborated with stakeholders from multiple sectors to promote CSR. The UAE government has initiated and funded various community outreach projects, in addition to institutional CSR initiatives to promote and audit CSR practices. Similarly, the Qatari government has funded several initiatives for CSR promotion and awareness as well as social welfare projects. On the other hand, Omani government CSR initiatives are still shy; apart from setting a socio-economic governmental plan that requires tri-sector collaboration, more emphasis on structured CSR regulations would help its promotion. The state of Kuwait does not provide any type of support for CSR in the country. Indeed, structural obstacles hinder its application, such as a feeble legal system, poor human and worker rights, lack of accountability and nepotism.

In terms of Religion-CSR logics, the Islamic tradition of Zakat is salient across all GCC countries and has transformed to an institutional annual philanthropy tax. In Saudi Arabia, this tax is legally mandated and collected by the government every year. This is not the case in other GCC countries. In some cases, corporations tend to go beyond this tradition, and incorporate a broader view of Islamic social responsibility in their business operations, as seen in UAE and Oman. Moreover, religious pressure groups exist and enhance CSR disclosure of companies in pursuit of higher investments, as evident in Qatar. However, these practices are usually fragmented and unorganized; although they have set a fertile ground for CSR development as companies view social responsibilities as significant religious obligations, a structured and strategic approach that builds on these religion-CSR logics would enhance their application and effectiveness in contributing to local sustainable development.

In terms of market-CSR logic interface, western market values have proliferated in Saudi Arabia, UAE and Qatar and have manifested in economic and business priorities through CSR practices in these countries. Moreover, a negative market-CSR logic prevails where the market dynamic has created opportunistic attitudes causing negative externalities on society and the environment; this is evident in UAE markets where some corporations' monopoly positions lead to negative CSR expressions. Similar obstacles exist in the Kuwaiti market that is dominated by major shareholders; this has led to low accountability and responsibility standards. In Saudi Arabia however, an economic and market oriented CSR approach has transformed into a political rationale and priority in light of the emergence of the Arab Spring.

Corporation-CSR logics prevail in GCC countries under two main paradigms, either prioritizing economic profits or integrating local developmental challenges. The former is evident in Saudi Arabia where large companies with higher financial liquidity tend to invest more in CSR practices, in UAE where companies pursue long-term success, and in Qatar where corporate image and financial gains are prioritized. On the other hand, developmental corporation-CSR logics exist in some companies in Saudi Arabia, the UAE, and in the oil and gas sector in Oman.

Lastly, three family-CSR logics have been detected in the GCC literature. Companies follow the traditional familial values of helping family members and in-groups that is salient in the region; For instance, the UAE family-owned companies exhibit the collectivist social politics, and this has led to the 'CSR as philanthropy' understanding. Another Family-CSR logic is through the impact of familial values on business practices where the managers practice CSR in accordance with their personal beliefs; in Saudi Arabia, there is a positive association between higher CSR disclosure and family ownership where family owned companies tend to apply a broad view of Islamic values for social responsibility in their business operations, going beyond the annual Zakat tax. A third and negative family-CSR logic is salient in Qatar and Kuwait where family ownership has led to cases of low incentives for CSR practices and disclosure (Qatar) and to prejudices and nepotism (Kuwait).

Generally, it is clear that in each of the GCC countries, we see an amalgam of global, mainly western, logics relating to CSR, and local logics tied to indigenous institutions. Western CSR logics rarely stay intact, and are often adapted in local contexts as they interact with local institutional logics. Therefore, we detect nuances in the understanding and applications of CSR across contexts, even when these countries are located in close proximity to each other as is the case for the GCC. This comes across clearly through our contribution and we need more research along these lines to contribute to the global comparative CSR agenda as we enrich our understanding of the diversity of CSR and its manifold applications across developed and developing contexts. Future research can be done on the possibility of including independent members on the Board of Directors in family-owned businesses in order to overcome the obstacle of negative CSR-family logics. CSR in the GCC countries should encompass a broader view than just philanthropic programs and Islamic views. Future research can also tackle the issue of shifting CSR views from economic activities to a political priority initiated by the government, and also practiced by businesses as mandatory through laws that enforce CSR practices and legal regulations for accountability.

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The Relationship between Environmental Reporting and Corporate Governance: Empirical Evidence from Pakistan

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Abstract

The main purpose of the present research is to empirically scrutinize the relationship between corporate governance (CG) characteristics and environmental reporting (ER) (a component of corporate social responsibility) of firms in Pakistan, through the lens of stakeholder and agency theory. The annual reports of 50 non-financial companies listed on Pakistan Stock Exchange (PSX) for the years 2014–2015 are content analyzed to compute the companies' environmental reporting practices. A multifactor model comprising of six elements of CG, i.e. board size, board independence, CEO duality, audit committee independence, proportion of female directors on board and institutional investors is used to assess the impact of CG elements on companies' environmental reporting initiatives. The results revealed that larger board size, higher proportion of independent non-executive directors on the board, partition of the dual role of chairman and CEO and institutional ownership is associated with greater environmental reporting. The results are valuable to both academics and policy makers in Pakistan.

Keywords: corporate governance, corporate social responsibility, environmental reporting, agency theory, stakeholder theory, Pakistan

1. Introduction

There is an increasing tendency for organizations worldwide to disseminate information regarding their social and environmental measures [1]. The concept of corporate environmental responsibility has gained considerable attention as a result of growing concern of public over the sustainability of natural environment. This concern has become particularly



noticeable over the past four decades [2]. In addition the concept of Triple Bottom Line Reporting (i.e. reporting regarding economic, environmental and social activities) introduced by Elkington [3] during the mid-1990s and global reporting initiative in 2002 gained substantial attention and has recommended certain guidelines on three dimensions of corporate accountability and responsibility, i.e. economic responsibility, social responsibility and environmental responsibility.

Parallel to this, corporate governance has enormously engrossed attention in recent years. It is generally emphasized that sound corporate governance is associated with enhanced transparency, accountability and plausible disclosure [4-7]. Agency theory and other corporate governance guidelines recommend a sound corporate governance structure for an effective and transparent disclosure mechanism about the corporations.

Moreover, the notion of sustainable development stipulates firms to be accountable not only financially or economically but to be sound and reliable socially and environmentally [8]. The strong connection between corporate governance mechanisms and the level of voluntary disclosure has been reported by the authors in [9–17]. Likewise, the authors in [18–22] documented a significant connection between corporate social responsibility disclosure and determinants of corporate governance. Whereas the authors in [2, 23–26] have acknowledged that sound corporate governance is associated with enhanced environmental disclosure practices.

The literature suggests diverging views regarding association between corporate governance and information disclosure. Studies conducted by the authors in [21, 22, 25, 27] suggested that larger board leads to more efficient reporting system. On the contrary, the authors in [19, 23] found a lack of association between board size and environmental reporting. In addition, the authors in [10, 17] suggested a need for a separate leadership structure for enhanced transparency and disclosure whereas, Ho and Wong [9] found a lack of relationship between the nondual leadership structure and the level of corporate reporting.

The authors in [14, 20, 25] found a positive association between board independence and environmental reporting. Likewise, the authors in [22, 25] endorsed that female directors exhibit socially responsible behavior and firms with more female directors tend to disclose more information.

Audit committee independence is also documented to be positively associated with corporate disclosure practices by Oscar and Juliet [26]. On the other hand, Alhazaimeh et al. [16] found no link between audit committee independence and voluntary disclosure. For institutional ownership, the authors in [12, 25] reported a positive relationship between institutional ownership and environmental reporting. On the contrary, Alhazaimeh et al. [16] argued that effectiveness of board is reduced due to the presence of institutional investors.

CSR has been well examined in Pakistan. The prior studies support the notion that sound CSR practices improve the financial performance of firm [28–32] and corporate image [33–35]. Likewise, studies conducted by the authors in [20-22] documented a substantial association between CG and level of corporate disclosure, but so far limited empirical work has been carried out to analyze whether this also relates to environmental reporting. The key motivation of the current study is to fill up the gap by investigating the impact of corporate governance elements on the environmental information disclosure of the companies listed on Pakistan Stock Exchange (PSX). The present study is expected to make noteworthy contribution to the existing accounting literature by imparting updated information on the extent of environmental reporting practices in Pakistan and by presenting empirical evidence on the relationship between corporate governance characteristics and environmental reporting in the annual reports of 50 companies listed on PSX.

The findings suggest a positive association between board size and environmental reporting as larger board characterized by more qualified individuals acquires an efficient reporting system including ER. It is also found that independent directors effectively monitor board activities, stimulate autonomy within board and are positively associated with environmental disclosure practices. Likewise, separate leadership structure enhances the efficiency of board in monitoring management activities and ensures high level of transparency. Finally the study proves that institutional investors actively voice their concern over the firm's strategies and board governance and compel management to reveal more information regarding environmental activities.

After the introduction, the rest of this chapter is arranged as follows. Section 2 discusses the corporate governance and environmental reporting nexus. Section 3 presents the literature review and explains the hypotheses development. Section 4 shows in detail the research methodology followed by the results of the empirical analysis to test the stated hypotheses in Section 5. Finally, Section 6 presents the conclusion, implications, limitations and areas for future research.

2. Corporate governance and environmental reporting

"Environment Reporting" offers an opportunity for firms to apprise stakeholders that their corporate operations and efforts are environmental friendly. Environmental reporting should be embraced by corporation as an opportunity rather than an impediment to the growth of business. However, it is a real challenge in a country like Pakistan, where pervasive control and command systems invade the governance of country. Regulatory framework often tends to target the disciplinary behavior of corporations, instead of providing them with a facilitating environment for better compliance on ecological and social standards. Sustainability reporting also known as triple bottom-line reporting, corporate social responsibility reporting or non-financial reporting addresses the ability of organizations to formally reveal information about their economic, social and environmental operations [36]. In this perspective, sustainable approach, i.e. to fulfill the requirements of current generation without compromising the capacity of upcoming generations to fulfill their requirements is an emerging concern among the global community. In Pakistan, sustainability reporting of which environment reporting is a significant category is in its infancy but gradually growing.

Globalization is the process of economic integration of multinational and national companies. These include listing of companies at international and national stock exchanges. This cross

listing provides investors with opportunities to invest and earn economic gains originating from versatile interactions because of higher level of brain storming skills [37].

"Environmental reporting" has been described broadly as reporting by corporations regarding the environmental implications of their activities [38]. Environmental disclosure expands the responsibility of the firms beyond the conventional role of imparting financial information assuming the broad environmental responsibilities of the firms [39]. Manifesting effective corporate governance practices and maintaining sound environmental performance are among the key challenges faced by the organization to ensure its sustainability. In this context, environmental reporting can be reckoned as means of ascertaining effective corporate governance practices that incorporate transparency in its environmental practices. This rigorous operationalization of information disclosure in the environmental sphere is also attributed as "governance-by-disclosure" [40]. Companies in Pakistan and globally are under more public scrutiny than ever before and are obliged to disclose information regarding their environmental operations. Disclosure on environmental performance helps firms to gain stakeholder's confidence, to evaluate potential risks involved in performing such activities and to moderate the impact of these activities on the environment. It considers impact of their operations on the surrounding environment and to reveal the results to multiple stakeholders such as employees, consumers, community, regulators, the media and shareholders which become critical for the long-lasting sustainability of the organizations [41].

Despite the variations in theoretical frameworks being endorsed, pertinent former literature from a broader spectrum has recognized that sound corporate governance is affiliated with enhanced level of transparency and plausible reporting [4]. Therefore, sound corporate governance practices are considered as accountability catalysts, reducing information asymmetry by ascertaining the disclosure needed for meeting the informational requirements of diverse stakeholders. The existing literature on disclosure of information provides evidence of number of theories supporting the disclosure of information by corporations. However, agency theory [42] and stakeholder theory [43] have dominated the explanation of corporate governance. Jensen and Meckling [42] described agency relationship as an agreement where one person (the agent) renders some services on behalf of the other party (the principal) and safeguards their interest. Certain decision making power may be delegated to agent as a reward of these services.

Stakeholder theory has a comprehensive dimension as compared to agency theory as it broadens the notion of principal to all concerned parties rather than just shareholders. This theory basically deals with the identification and appreciation of the association between the firm's actions and its influence on various stakeholders [44]. With respect to stakeholder theory, the authors in [19, 45] argued that good corporate governance practices enhanced firm-stakeholder relationship by fostering corporate sustainability. Consistent with the stakeholder concept, environmental disclosure serves as a part of the discourse between the company and its stakeholders concerning various environmental dimensions [8, 44]. On the basis of above discussion and in the context of agency and stakeholder theory, the study asserts that level of satisfaction of stakeholders regarding environmental information is associated with greater accountability and transparency of the top management.

3. Literature review and development of hypotheses

The previous studies investigating the extent of corporate voluntary reporting practices are of the view that environmental reporting is a significant phenomenon employed by corporations and is influenced by many corporate governance and firm specific attributes. The present review is an endeavor to encircle the multiple determinants of environmental reporting and its relationship with corporate governance characteristics. Corporate governance characteristics are manifested and categorized into: (1) board characteristics namely the size of board, board composition, role duality and proportion of female directors; (2) board committee's characteristics computed by audit committee independence and (3) ownership structure computed by the percentage of institutional investors. Control variables employed in the present study are size of the firm, leverage and profitability. In the sub-sections below, we develop hypotheses relevant for CG characteristics.

3.1. Board size and environmental reporting

Board size plays a significant role in monitoring firm performance and is taken into consideration mainly from the perspective of agency theory. Agency theory advocates for the smaller board size and it is anticipated that smaller board enhances efficiency, results in better coordination and effectively monitors the management decisions concerning the information disclosure [46]. Prado-Lorenzo and Garcia-Sanchez [47]asserted that larger board is detrimental to governance efficiency. The literature also shows contrary school of thought regarding association between board size and information disclosure. According to Xie et al. [48] larger board is characterized by more qualified and knowledgeable individuals and acquires a more effective reporting procedure and enhanced level of voluntary disclosure including the environmental disclosure.

The authors in [49, 50] argued that larger boards are expected to be dominated by the CEO, result in poor communication, ineffective coordination and less decision-making. They suggested that boards having more than seven or eight representatives are likely to be ineffective. Yoshikawa and Phan [51] also emphasized that numerous hidden interactions and divergence of interest among board members made the larger boards less cohesive resulting in weak coordination. In addition, they elaborated that sometimes larger boards are purposely formed by CEOs to disperse the power in the boardroom by making the CEO a dominant figure and thus reduces the likelihood of integrated actions by board members. Parallel to the theoretical expectations the study conducted by Byard et al. [52] using a sample of 1279 firms over the years 2000–2002 found a negative association between board size and environmental reporting. Hence, from the perspective of agency theory it is hypothesized that the relationship between board size and environmental disclosure would be negative:

H₁: The level of environmental reporting is negatively related to the board size.

3.2. Board independence and environmental reporting

According to the agency theory [53] the presence of independent non-executive directors on the board effectively monitors the activities of company, stimulating objectivity and autonomy within the board. Furthermore, the board independence reduces the conflicts of interests among the multiple shareholders and the management thus leading to the minimization of agency costs [19]. From the perspective of stakeholder theory, independent directors are seen as accountability mechanism [18], as they have responsibility for a wider variety of stakeholders [45, 47]. The 2013 Corporate Governance Code issued by Securities & Exchange Commission of Pakistan (SECP) requires all listed companies to have majority of independent non-executive directors on their board, thus facilitating the board to discharge its duties and responsibilities appropriately. Regarding the association between independence of board and CSR reporting [13–15, 21, 22, 54] empirically found a significant impact of the existence of non-executive independent managers on CSR disclosure.

According to Refs. [24, 25, 55] boards having more independent non-executive directors compel managers to take favorable decisions regarding the firm's environmental performance. Moreover, the firms demonstrating active environmental concern proved to have more independent directors on their boards. Therefore, we hypothesize a significant positive relationship between the proportion of independent non-executive directors on the board and the extent of environmental reporting:

H,:The level of environmental reporting is positively associated with the proportion of independent non-executive directors on the board.

3.3. Practice of separation between the chief executive officer and chairman of the board and environmental reporting

Role of CEO has been incorporated as one of the significant factor influencing the corporate environmental and social reporting by Adams [56]. It is believed that the "CEO duality" or "dominant personality phenomenon", i.e. the positions of CEO and the chairman held by the same person can lessen the efficiency of the board in screening the management activities [10, 57]. The 2013 Corporate Governance Code released by the SECP also recommends the separate role between the CEO and chairman of the board. The authors in [42, 58, 59] proposed discrete leadership structure on the basis of agency theory. Hence, it could be assumed that the board independence attained by separate leadership framework will direct to a better and effective environmental and social reporting about the companies, thus protecting interest of the shareholders.

The literature shows contrary results with regard to the practice of separation between the executive manager and the chairman of the board and the level of reporting. Furthermore, the authors in [9, 19, 60] found no substantial association between the separate leadership structure and the level of reporting. Florackis and Ozkan [50] argued that the dual role endorses CEO entrenchment by decreasing monitoring efficacy of board. Haniffa and Cooke [10] found that role duality is linked with lesser voluntary disclosure. Consistent with the arguments, the authors in [17, 45, 52, 61] found a positive association between disclosure and separate leadership framework. Finally, it is anticipated that separate leadership structure will enhance the extent of environmental reporting by the firm:

 \mathbf{H}_3 : The level of environmental reporting is positively related to the practice of separation between the Chief Executive Officer (CEO) and chairman of the board.

3.4. Proportion of female directors on the board and environmental reporting

Board diversity in terms of proportion of women on the board has been documented as having a substantial effect on firm performance and disclosure of both financial and nonfinancial matters [62]. Female directors are more diligent, committed, philanthropically driven and make effective contribution to the firm performance [25]. Ballesteros et al. [63] also documented a positive relationship between the proportion of female directors and level of CSR disclosure. Female directors exhibit more philanthropic concern as compared to men [22, 64] enhancing information transparency and accountability [65].

In line with stakeholder theory, the authors in [66, 67] endorsed the view that women are socially oriented than men, develop effective stakeholder management and increase the board independence and thus social responsible behavior [45]. Furthermore, higher percentage of female directors on the board leads to the board independence and thus increases the probability of providing enhanced corporate environmental reporting [25]. On the basis of the above arguments about the monitoring potential of female directors and rationale offered by stakeholder theory, it can be asserted that female director's commitment, independence, thoughtfulness and other attributes enable them to actively participate in corporate decision making concerning disclosure practices. Therefore, we hypothesized a significant positive relationship between the proportion of female directors on the board and the level of environmental reporting:

 $\mathbf{H_4}$: The level of environmental reporting is positively related to the proportion of female directors on the board.

3.5. Audit committee independence and environmental reporting

The main purpose of board committees is to monitor the audit process, the auditor's independence, the internal control and accounting system, the nomination and remuneration of the board directors, thus ensuring a continuous communication between the external auditor and the company's board [68]. Agency theory advocates the audit committee as an instrument of mitigating agency costs.

According to Ref. [69], the existence of an audit committee offers an ancillary internal control mechanism, likely to enhance the performance of a firm. More appreciably, audit committee with independent members empowers the committee to discharge its responsibilities impartially and thus substantially contribute to the committee's effectiveness [9]. According to the 2013 Corporate Governance Code issued by the SECP, all listed companies in Pakistan are required to have an independent director as the chairman of board audit committee. There is dearth of empirical support regarding the relationship between environmental reporting practices of firms and independence of audit committee.

Aburaya [70] found a positive relationship association between audit committee independence and the reporting quality of certain environmental specific categories such as policies concerning environment, adherence with environmental legislations and other environmental information. Nevertheless, in the context of voluntary disclosure [9, 12, 55, 71–73] documented the presence of a positive link between audit committee and the incurring independence and the extent of voluntary reporting exhibited by the companies. They argued that board committees determine good corporate disclosure of information. In conclusion, the existence and independence of audit committee improves the transparency of corporate boards and is expected to guarantee that a company fulfills its social commitment including the environmental commitment. Hence, it is hypothesized that the relationship between the presence and independence of audit committee and environmental disclosure will be positive:

H_e:The level of environmental reporting is positively related to the existence and independence of audit committee.

3.6. Institutional ownership (ownership concentration) and environmental reporting

Ownership structure whether it is dispersed or concentrated is considered to be an important attribute of corporate governance [74]. Institutional ownership is the form of ownership concentration computed as the percentage of shares held by institutional shareholders comprising banks, pension funds, endowment funds, mutual funds and insurance companies, etc. [75]. It is generally argued that the efficacy and effectiveness of board is reduced due to the presence of institutional investors. Jensen and Meckling [42] argued that separation of ownership and control result in increasing demand of information disclosure by firms. Hence, it could be assumed that institutional shareholding decreases the probability of providing enhanced corporate environmental reporting.

Investors having larger stake in the firm confine the decision making power of the board, which reduces the board autonomy and activism [42, 75] whereas, the authors in [14, 54, 61, 73] found no substantial association between the institutional ownership and the level of reporting. Some studies have found a negative association between institutional ownership and corporate disclosures [74, 16]. According to the agency theory, institutional investors have strong incentives to monitor corporate disclosure practices and influence corporate values [12]. Consistent with the stakeholder theory, institutional investors demand more accountability and transparency and are positively associated with corporate voluntary disclosure practices including environmental disclosure [76]. In line with the theoretical expectations, Rao et al. [25] documented a positive association between institutional ownership and environmental reporting. They suggested that institutional investors are active owners and influence management and corporate value due to their large ownership stake in the firms. Based on the above discussion and rationale provided by agency and stakeholder theory, it could be anticipated that institutional shareholdings increase the likelihood of providing enhanced corporate environmental disclosure.

H_c:The level of environmental reporting is positively related to the ownership concentration.

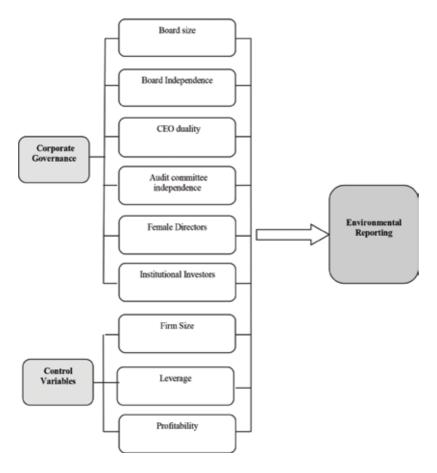


Figure 1. Conceptual framework.

The conceptual framework for the study shows the role of internal, external and control variables in affecting environmental reporting practices in the firm (**Figure 1**).

4. Methodology

The sample consists of 50 nonfinancial firms listed at Pakistan Stock Exchange that may affect the environment; forestry; the extractive and manufacture industry; food industry; construction industry; automobile industry; chemical industry; production and distribution of electricity, oil, gas and water; engineering and transport and storage. Fifty companies are selected, using proportionate stratified random sampling technique from 19 sectors.

The annual report is the main source of data being utilized in the recent study to analyze the environmental reporting practices of firms listed on Pakistan Stock Exchange covering a period of 2014–2015. The selected time span is not an independent period compared to systematic factors in the economy (for details see Appendix 2 showing the major macro-economic

factors) and no major economic event took place during this period. The reports have been used as the fundamental medium of reporting social and environmental activities of firms as evident from prior studies performed by the authors in [54, 61, 73].

4.1. Variables relevant for the study

4.1.1. Dependent variable (environmental reporting index (ERI))

The dependent variable, environmental reporting is computed by employing content analysis of the annual reports of the firms listed at PSX. Content analysis of environmental disclosure requires the development of categorization pattern and then deciding a set of rules for coding process, estimating and documenting the information being analyzed. First, a preliminary checklist containing anticipated environmental information items is organized. The checklist is then attuned to fit with the operational measures as documented by the guiding principles on environmental performance indicators and implication of the Global Reporting Initiative (GRI) that assist ascertaining environmental reporting in the annual reports.

Consequently, the final checklist is reckoned viable and rigorous in portraying environmental reporting practices in the annual and sustainability reports of Pakistani firms. The final checklist comprises of 60 environmental information items classified into seven broadly identified categories, namely: (1) Environmental philosophy and strategy (7 items); (2) Environmental summary (6 items); (3) Initiatives concerning environmental reporting (6 items); (4) Governance structure and management system (6 item); (5) Credibility (9 items); (6) Environmental performance Indicators (16 items) and (7) Environmental spending (10 items). Then, a coding method is used to allocate environmental information items in the annual reports to that of the scoring sheet/checklist employing premeditated decision rules.

Unweighted disclosure index technique is employed to compute the level of environmental reporting where the reporting of an item in the annual reports is coded (1) and non-disclosure is coded as (0). The disclosure model (unweighted environmental disclosure) thus computes the total disclosure (TD) score for a company as additive as follows:

$$ERI = \sum_{i=1}^{60} di/nj \tag{1}$$

where di is 1 if item is disclosed and 0 if item is not disclosed and nj is the maximum number of items for firms (nj \leq 60). To compute specific firm score, total score awarded to a firm is divided by the highest possible score and then multiplied by 100 to get the percentage scores. The maximum possible score that a firm could get is 60 because the numbers of reporting items incorporating all the seven broad categories form a total score of 60. The average score is calculated as the percentage of the number of firms reporting a specific item to the total number of items.

4.1.2. Independent variables

Table 1 represents the details about the independent and control variables employed in the current study and techniques used for their operationalization.

Variables	Operational definitions	Symbol	Expected sign
Independent variables			
Board size	Total number of directors on the board	BS	-ive
Board independence	Percentage of independent non-executive directors to the total directors	BI	+ive
CEO duality	Dummy variable equal to 1 if CEO is also the chairman, 0 if not	DUAL	-ive
Audit committee independence	Proportion of independent non-executive directors on the audit committee	ACI	+ive
Female directors	Proportion of female directors on the board	FEMDIR	+ive
Institutional ownership	Percentage of total shares held by institutional investors	INSINV	+ive
Control variables			
Firm size	Natural logarithm of total assets	SIZE	+ive
Leverage	Ratio of total debt to total equity	LEV	+ive
Profitability	Return on asset	ROA	+ive

Table 1. Details relevant for the independent variables used in this study.

5. Results and discussion

To test the nature of the relationships proposed in this study, following sets of analyses are performed. These include descriptive statistics, correlation analyses, multiple regression analyses, robustness tests including multicollinearity test and incremental regression analysis. The details of these tests are presented as follows.

5.1. Descriptive statistics and the correlation matrix

Table 2 depicts the descriptive statistics of different corporate governance attributes along with control variables investigated to analyze their impact on corporate environmental reporting system. The mean value for board independence which is computed by the percentage of independent non-executive directors to total number of directors on the board is 40%, demonstrating that 40% of the total board members are independent non-executive, aligned with the SECP Corporate Governance Code (2013). The mean value for board size is 8.58 reflecting that larger board has been a conventional practice among Pakistani firms. Moreover, the mean value for independence is 91.2% for the audit committee, imparting the relatively high degree of independence in audit committee. Meanwhile, the mean value for women representation on the board is only 6% with the maximum representation of around 33%. This shows that the firm's board does not comprise of many female members. Concerning the structure of ownership, it can be observed that the mean value for institutional ownership is 58% exhibiting the fact that institutional ownership represents the major form of block holdings. On the other hand, mean value for leverage and profitability ratio is 2.16 and 4.58% respectively.

Variables	Mean	Minimum	Maximum	Standard deviation
ERI	43.4	0.00	95.0	27.2
BS	8.58	6.00	15.0	1.93
BI	40.0	25.0	85.1	8.63
DUAL	0.08	0.00	1.00	0.27
ACI	91.2	33.3	100	15.1
FEMDIR	6.22	0.00	33.3	9.05
INSINV	58.1	0.02	100	32.8
LEV	2.16	0.05	7.79	1.94
ROA	4.58	-20.2	24.9	9.70

Table 2. Descriptive statistics.

Variables	ER1	
BS	0.49**	
BI	0.292*	
DUAL	-0.284*	
ACI	-0.027	
FEMDIR	-0.06	
INSINV	0.507**	
LEV	0.316*	
ROA	0.324°	

Table 3. Pairwise correlation.

Some exploratory details about the components of the ERI and relevant score by each company are presented in Appendix 1.

5.2. Correlation analysis

Pairwise correlation coefficients exhibit relationship of corporate environmental reporting to all corporate governance attributes and firm specific variables used in the study and are presented in Table 3. Results indicate a positive association between the extent of environmental reporting and each of board size, independence of board, leverage, profitability and percentage of institutional investors whereas the CEO duality is negatively associated with the level of environmental reporting.

Variables	Predicted sign	Coefficients	t-statistics	Probability	VIF
С		-0.7616	-1.9955	0.0528	
BS	_	0.0324	1.8593	0.0703	1.34
BI	+	0.8537	2.6796	0.0106	1.13
DUAL	_	-0.1811	-1.8038	0.0788	1.13
ACI	+	-0.0401	-0.2231	0.8245	1.11
FEMDIR	+	0.1144	0.3795	0.7063	1.11
INSINV	_	0.3612	4.3243	0.0001	1.12
SIZE	+	0.0414	0.9315	0.3572	1.29
LEV	+	0.0334	2.2527	0.0298	1.25
ROA	+	0.0078	2.7889	0.0081	1.12
R ²	0.6369				
Adjusted R ²	0.5552				
D-W statistics	2.0229				
F-statistics	7.7963 & p = 0.000002	2			

Table 4. Multiple regression results using (ERI) as the dependent variable.

5.3. Multiple regressions analysis

The results by using multiple regression analysis presented in **Table 4** are explained as follows.

5.3.1. Environmental reporting and board size

The first hypothesis (H_1) proposed that board size is negatively related to the environmental reporting. Contrary to H_1 , the findings revealed a positive relationship between environmental reporting and the size of a board (p = 0.070). Hence H_1 is not sustained. The finding is coherent with various studies [21, 22, 25, 27, 61] who deduced a direct connection between the size of a board and the level of environmental reporting, advocating that larger board acquires the needed skills and incurs more efficient reporting system to ensure sound environmental disclosure.

The result implies that management of the firms needs to have an optimal board size having variety of members from national and multinational organization so that environmental reporting in these firms is sustained. The greater number of board members leads to have rigorous brainstorming and interchange of more ideas which results in economic integration of companies leading to higher globalization.

5.3.2. Environmental reporting and board independence

The second hypothesis (H₂) implies that the proportion of independent non-executive directors is positively and significantly linked with the extent of environmental reporting. The

results revealed a positive and substantial linkage between environmental reporting and board independence (p = 0.010). Therefore, H_2 is supported.

The results are in line with the stakeholder and agency theory argument that voluntary disclosure practices of the firms are more likely to improve with an increase in the percentage of independent non-executive directors. The outcome is in harmony with the inferences of many prior studies [20, 45, 63].

The result implies that the board independence (higher number of independent directors) from national and international organizations lead to independent thinking and incorporation of environmental friendly provisions in the firms. The management of the firms needs to have a higher number of independent directors resulting in higher financial integration and cross investment in the company leading to higher globalization and value for shareholders.

5.3.3. Environmental reporting and CEO duality

The third hypothesis (H₂) suggests a negative relationship between the level of environmental reporting and role duality. Outcome of the H_3 is in harmony with the agency theory (p = 0.078), endorsing that separate headship will bring about an improved social and environmental reporting related to the firms. The results of the study are in consonance with the stakeholderagency theory stating that the separate leadership structure is liable to offer requisite checks and balances and can enhance the efficacy of the board in controlling the management's actions [58]. This reduces the probability of restraining information outflow and deterring unfavorable information/news from spreading to stakeholders. The result is coherent with [17, 45, 61].

The result implies that a single person holding both the positions is detrimental to the environmental friendly practices and its reporting in the firm. The management of the firms needs to use nondual leadership structure to improve on the environmental reporting as the single dominant person does not let the board members think properly leading to less economic integration and globalization.

5.3.4. Environmental reporting and proportion of female directors

The fourth hypothesis (H₄) suggests a positive association between the proportion of female directors on the board and the level of environmental reporting. Contrary to the expectation, the results of the model revealed the lack of any significant association among these variables (p = 0.7063).

5.3.5. Environmental reporting and audit committee independence

The fifth hypothesis (H₅) recommends a positive and a significant association between independence of audit committee and the level of environmental reporting. The audit committee independence appeared to have no significant association with environmental reporting (p = 0.8245) leading to the rejection of H_s . The result is in line with previous evidence provided by the authors in [16, 24].

5.3.6. Environmental reporting and institutional ownership

The final result depicts that institutional investors have a positive and significant impact on environmental reporting (p = 0.0001) leading to the acceptance of H_6 . The finding is consistent with various studies [12, 25] who deduced a direct connection among institutional ownership and that of environmental reporting, advocating that institutional investors are active owners and influence management and corporate value due to their large ownership stake in the firms. The result shows a positive and constructive role by the blockholders leading to higher level of environmental reporting and economic freedom and globalization. The management of the firm needs to have a healthy relationship with the institutional shareholding so the level of environmental reporting in the firm is improved. The summary of the results for the hypotheses testing are presented in **Table 5**.

The results for the control variables suggest a considerable positive connection among environmental reporting and each of leverage and profitability. The positive connection between leverage and environmental reporting is reported by the authors in [12, 55]. The profitability is significant at 1% level of significance advocating that highly profitable firms disclose additional information regarding environmental activities in their annual reports. Results are consistent with the studies of [4, 10, 18] who deduced a significant positive connection between environmental reporting and profitability.

As discussed before, the robustness tests for the study include multicollinearity and incremental regression analysis. The values of VIF vary from 1.11 to 1.34 showing a lack of substantial multicollinearity problem in our analysis [77]. The results for the incremental regression suggest that removal of the institutional investors' fraction leads to substantial fall in the value for the R-Squared (from 63 to 46%). The outcome shows that percentage of institutional investors is the most significant independent variable in affecting the level of environmental disclosure. The other diagnostics of the model show that the value for the R-Squared is 0.636 which reveals that 63.6% of the variations in the dependent variable are explained by the independent variables included in the model.

Hypotheses	Status
$\overline{\mathbf{H}_{1}}$: Board size negatively impacts the level of ER.	Rejected
H ₂ : Board independence positively impacts the level of ER.	Accepted
H ₃ : CEO duality negatively impacts the level of ER.	Accepted
H ₄ : Higher percentage of women on the board positively impacts the level of ER.	Rejected
\mathbf{H}_{s} : Audit committee independence positively impacts the level of ER.	Rejected
\mathbf{H}_{6} : Institutional ownership positively impacts the level of ER.	Accepted

Table 5. Results for the hypotheses testing.

6. Concluding remarks, limitations and further scope of the study

The study primarily intends to scrutinize the association among the certain attributes of corporate governance and the environmental reporting practices of companies in Pakistan for a period of 2014-2015. The findings depicted a substantial connection among environmental reporting practices and attributes of corporate governance. The results highlighted that larger board size, higher proportion of nonexecutive independent directors, partition of the twin positions of the CEO & chairman and institutional ownership (ownership concentration) is related with enhanced environmental disclosure in Pakistan. The overall results supported the corresponding theoretical contention of agency theory and stakeholder theory that sound corporate governance practices serve as monitoring and accountability catalyst and eventually result in more environmental disclosure.

The results of the study suggest that the firms should use the highlighted instruments as powerful tools and be encouraged to produce climate change policy and environmental reports on regular basis to manifest their commitment to sustainable development. The limitations of the study suggest that a longitudinal research with large sample size and a relative analysis of Pakistan with developed market would offer more insights regarding the role of corporate governance practices in affecting environmental reporting.

A. Appendix 1

Overall extent of environmental reporting of firms.

S#		Number of firms reported	Percentage
	A. Vision and strategy		
1	A declaration of firm environmental performance in CEO's message	31	62
2	A description of environmental philosophy, values, policies and environmental ethics	38	76
3	A narration of a proper managerial systems for environmental operations and risk	19	38
4	A declaration of the regular reviews and assessment of firm's environmental performance	17	34
5	Environmental standards or targets	37	74
6	An announcement of the measurable objectives regarding future environmental performance	25	50
7	An indication of specific innovations or latest technologies regarding environment	19	38

S#		Number of firms reported	Percentage
	B. Environmental profile		
8	A comment regarding the firm's adherence with particular environmental principles or targets	26	52
9	Performance against environmental targets	25	50
10	Measures taken to monitor compliance with policy statement	21	42
11	A brief summary of the impact of firm's activities on environment	31	62
12	A review of how the firm's activities or products effect the surrounding environment	20	40
13	A comparative analysis of the environmental performance to the other industries	13	26
	C. Environmental initiatives		
14	A proper statement of employees training sessions to create awareness on environmental issues	29	58
15	A response plan in emergency actions	39	78
16	Internal awards as recognition of environmental performance	8	16
7	Internal audits of firm's environmental actions	18	36
18	Environmental certification by internal body	18	36
19	Community participation or environmental donations	42	84
	D. Governance structure & management systems		
20	Department or managerial position for environmental management or controlling pollution	21	42
21	Presence of CSR or environmental committee on the board	14	28
22	A set of principles for suppliers or customers concerning environmental practices	13	26
23	Stakeholder participation in deciding environmental strategies	25	50
.4	Executive reward is allied with environmental conduct	0	0
.5	Training sessions for raising environmental awareness	34	68
	E. Credibility		
26	A declaration of an environmental/ sustainability report	16	32
17	Adherence GRI guiding principles	23	46
28	Independent and regular audits on environmental operations or environmental certification by third party	18	36
.9	Certification of products in connection with environmental influence	27	54

S#		Number of firms reported	Percentage
30	Environmental recognition awards by external body or nomination in a sustainability catalog	19	38
31	Stakeholders participation in environmental reporting process	20	40
32	Involvement in voluntary activities regarding environment	43	86
33	Involvement in the operations of specific industry to enhance environmental performance	22	44
34	Involvement in other organizations to enhance environmental performance	31	62
	F. Environmental performance indicators		
35	EPI regarding energy consumption or efficiency	34	68
36	EPI regarding water consumption or efficiency	24	48
37	EPI regarding greenhouse discharge	22	44
38	EPI regarding air discharge other than green house	23	46
39	EPI regarding toxic release inventory	19	38
10	EPI regarding additional discharges or emissions	15	30
1 1	EPI regarding waste management	34	68
12	EPI regarding biodiversity and resource conservation	30	60
13	EPI regarding impacts of industrial products on environment	20	40
14	EPI regarding compliance with environmental targets	13	26
45	Equipment for waste water treatment	25	50
16	Recycling of waste material	28	56
47	Land renovation and forestation plans	19	38
18	Pollution management of industrial operations	36	72
19	Preservation Anti-litter operations	20	40
50	Introduction of new production techniques to lessen pollution	24	48
	G. Environmental spending		
51	A review of monetary savings from environment programs	0	0
52	Environmental Policy	7	14
53	Previous and current spending on effluence control facilities and apparatus	16	32
54	Previous and current operating expenses on effluence control apparatus and facilities	8	16

S#		Number of firms reported	Percentage
55	Future assessment of expense for effluence control apparatus and facilities	5	10
56	Funding for effluence control apparatus or facilities	34	68
57	Estimated pattern of potential environmental spending	7	14
58	Estimation of contingent obligations	0	0
59	Expenditure on R& D, technologies or innovations to improve environmental efficiency	24	48
60	Penalties regarding environmental concerns	0	0

Environmental reporting items not reported by any sample company.

SI no.	Environmental reporting items
24	Executive reward is allied with environmental conduct
51	A review of monetary savings from environment program
58	Estimation of contingent obligations
60	Penalties regarding environmental affairs

Ranking of companies on the basis of environmental disclosure scores.

S#	Company name	No. of items disclosed	%	Ranking
1	K-Electric Limited	57	95.00	1
2	I.C.I. Pakistan Limited	53	88.33	2
3	Murree Brewery Company Limited	51	85.00	3
4	Atlas Honda Limited	50	83.33	4
5	Fauji Fertilizer Company Limited	49	81.67	5
6	Engro Fertilizers Limited	48	80.00	6
7	Siemens Pakistan Engineering Co. Limited	47	78.33	7
8	GlaxoSmithKline (Pakistan) Limited	46	76.67	8
9	Pakistan Refinery Limited	45	75.00	9

Unilever Pakistan Foods Limited	S#	Company name	No. of items disclosed	%	Ranking
Pakistan Tobacco Company Limited 43 71.67 12 Nestle Pakistan Limited 42 70.00 13 Nestle Pakistan Limited 40 66.67 14 Engro Foods Limited 40 66.67 14 Hub Power Company Limited 36 60.00 16 Pakistan National Shipping Corporation Limited 32 53.33 18 Maple Leaf Cement Factory Limited 32 53.33 18 Fecto Cement Limited 31 51.67 19 Service Industries Limited 30 50.00 20 Treet Corporation Limited 29 48.33 21 Kohinoor Industries Limited 29 48.33 21 Kohinoor Industries Limited 27 45.00 23 Gul Ahmed Textile Mills Limited 26 43.33 24 Nishat Mills Limited 26 43.33 24 Pakistan Cables Limited 25 41.67 25 Bannu Woolen Mills Limited 27 40.00 26 Bata Pakistan Limited 23 38.33 27 Bannu Woolen Mills Limited 23 38.33 27 Oil and Gas Development Company Limited 42 70.00 29 Dawood Hercules Corporation Limited 20 33.33 31 Pakistan Services Limited 20 33.33 31 Pakistan Services Limited 41 35.00 30 Dawood Hercules Corporation Limited 42 70.00 29 Dawood Hercules Corporation Limited 41 35.00 30 Dawood Hercules Corporation Limited 42 70.00 29 Dawood Hercules Corporation Limited 43 35.00 30 Dawood Hercules Corporation Limited 45 70.00 39 Pakistan Services Limited 46 70.00 33 Cherat Packaging Limited 47 70.00 39 Aisha Steel Mills Limited 17 28.33 34 Berger Paints Pakistan Limited 16 26.67 35 Berger Paints Pakistan Limited 17 36 Pakistan Paper Products Limited 18 30.00 37	10	Pakistan International Airlines Corporation	45	75.00	9
Nestle Pakistan Limited 42 70.00 13 Nestle Pakistan Limited 40 66.67 14 Bigno Foods Limited 40 66.67 14 Hub Power Company Limited 36 60.00 16 Pakistan National Shipping Corporation Limited 34 56.67 17 Maple Leaf Cement Factory Limited 32 53.33 18 Service Industries Limited 30 50.00 20 Treet Corporation Limited 29 48.33 21 Kohinoor Industries Limited 29 48.33 21 Kohinoor Industries Limited 28 46.67 22 Gul Ahmed Textile Mills Limited 26 43.33 24 Nishat Mills Limited 26 43.33 24 Nishat Mills Limited 25 41.67 25 Bannu Woolen Mills Limited 24 40.00 26 Bata Pakistan Limited 25 41.67 25 Bannu Woolen Mills Limited 27 70.00 29 Oil and Gas Development Company Limited 42 70.00 29 Oil and Gas Development Company Limited 41 35.00 30 Dawood Hercules Corporation Limited 42 70.00 29 Dawood Hercules Corporation Limited 41 35.00 30 Pakistan Services Limited 41 35.00 30 Dawood Hercules Corporation Limited 41 35.00 30 Dawood Hercules Corporation Limited 42 70.00 29 Dawood Hercules Corporation Limited 43 30.00 33 Cherat Packaging Limited 48 30.00 33 Cherat Packaging Limited 49 31.67 32 Cherat Packaging Limited 17 28.33 34 Aisha Steel Mills Limited 17 28.33 34 Berger Paints Pakistan Limited 17 28.33 34 Rupali Polyester Limited 12 20.00 37	11	Unilever Pakistan Foods Limited	44	73.33	11
14 Sui Northern Gas Pipelines Limited 40 66.67 14 15 Engro Foods Limited 40 66.67 14 16 Hub Power Company Limited 36 60.00 16 17 Pakistan National Shipping Corporation Limited 34 56.67 17 18 Maple Leaf Cement Factory Limited 32 53.33 18 19 Fecto Cement Limited 31 51.67 19 20 Service Industries Limited 30 50.00 20 21 Treet Corporation Limited 29 48.33 21 22 Kohinoor Industries Limited 28 46.67 22 23 Gul Ahmed Textile Mills Limited 27 45.00 23 24 Nishat Mills Limited 26 43.33 24 25 Pakistan Cables Limited 25 41.67 25 26 Bata Pakistan Limited 24 40.00 26 27 Bannu Woolen Mills Limited 23 38.33 27 28 Millat Tractors Limited 23 38.33 27<	12	Pakistan Tobacco Company Limited	43	71.67	12
Engro Foods Limited 40 66.67 14 Hub Power Company Limited 36 60.00 16 Pakistan National Shipping Corporation Limited 34 56.67 17 Rample Leaf Cement Factory Limited 32 53.33 18 Pecto Cement Limited 31 51.67 19 Service Industries Limited 30 50.00 20 Treet Corporation Limited 29 48.33 21 Kohinoor Industries Limited 28 46.67 22 Kohinoor Industries Limited 27 45.00 23 Millat Mills Limited 26 43.33 24 Pakistan Cables Limited 25 41.67 25 Bannu Woolen Mills Limited 24 40.00 26 Bata Pakistan Limited 23 38.33 27 Millat Tractors Limited 23 38.33 27 Oil and Gas Development Company Limited 42 70.00 29 Oil and Gas Development Company Limited 42 70.00 29 Dawood Hercules Corporation Limited 20 33.33 31 Pakistan Services Limited 19 31.67 32 National Foods Limited 19 31.67 32 Cherat Packaging Limited 17 28.33 34 Aisha Steel Mills Limited 16 26.67 35 Berger Paints Pakistan Limited 16 26.67 35 Berger Paints Pakistan Limited 16 26.67 35 Rupali Polyester Limited 12 20.00 37	13	Nestle Pakistan Limited	42	70.00	13
Hub Power Company Limited 36 60.00 16 Hub Power Company Limited 34 56.67 17 Pakistan National Shipping Corporation Limited 34 56.67 17 Maple Leaf Cement Factory Limited 32 53.33 18 Pecto Cement Limited 31 51.67 19 Service Industries Limited 30 50.00 20 Treet Corporation Limited 29 48.33 21 Call Almed Textile Mills Limited 28 46.67 22 Call Almed Textile Mills Limited 27 45.00 23 Call Almed Textile Mills Limited 26 43.33 24 Call Nishat Mills Limited 25 41.67 25 Call Almed Textile Mills Limited 25 41.67 25 Call Almed Textile Mills Limited 27 45.00 26 Call Almed Textile Mills Limited 27 40.00 26 Call Almed Textile Mills Limited 29 40.00 26 Call Almed Textile Mills Limited 20 38.33 27 Call Almed Textile Mills Limited 21 35.00 30 Call Almed Textile Mills Limited 21 35.00 30 Call Almed Textile Mills Limited 20 33.33 31 Call Almed Textile Mills Limited 31 31.67 32 Call Almed Textile Mills Limited 32 33.33 31 Call Almed Textile Mills Limited 31 30.00 33 Call Almed Textile Mills Limited 32 33.33 34 Call Alisha Stevices Limited 31 30.00 33 Call Alisha Stevices Limited 32 33.33 34 Call Alisha Stevices Limited 34 Aisha Stevi Mills Limited 35 Berger Paints Pakistan Limited 36 Pakistan Paper Products Limited 37 36 Call Alisha Stevices Limited 38 Call Alisha Stevi Limited 39 Call Alisha Stevi Limited 39 Call Alisha Stevi Limited 30 Call Alisha	14	Sui Northern Gas Pipelines Limited	40	66.67	14
Pakistan National Shipping Corporation Limited 34 56.67 17 Rabistan National Shipping Corporation Limited 32 53.33 18 Pecto Cement Limited 31 51.67 19 Service Industries Limited 30 50.00 20 Treet Corporation Limited 29 48.33 21 Kohinoor Industries Limited 28 46.67 22 Kohinoor Industries Limited 27 45.00 23 Gul Ahmed Textile Mills Limited 27 45.00 23 Nishat Mills Limited 26 43.33 24 Pakistan Cables Limited 25 41.67 25 Bata Pakistan Limited 24 40.00 26 Bata Pakistan Limited 23 38.33 27 Millat Tractors Limited 23 38.33 27 Oil and Gas Development Company Limited 42 70.00 29 Oil and Gas Development Company Limited 20 33.33 31 Pakistan Services Limited 20 33.33 31 Pakistan Services Limited 19 31.67 32 Cherat Packaging Limited 18 30.00 33 Aisha Steel Mills Limited 17 28.33 34 Aisha Steel Mills Limited 16 26.67 35 Berger Paints Pakistan Limited 16 26.67 35 Rupali Polyester Limited 13 21.67 36 Rupali Polyester Limited 13 21.67 36	15	Engro Foods Limited	40	66.67	14
18 Maple Leaf Cement Factory Limited 32 53.33 18 19 Fecto Cement Limited 31 51.67 19 20 Service Industries Limited 30 50.00 20 21 Treet Corporation Limited 29 48.33 21 22 Kohinoor Industries Limited 28 46.67 22 23 Gul Ahmed Textile Mills Limited 27 45.00 23 24 Nishat Mills Limited 26 43.33 24 25 Pakistan Cables Limited 25 41.67 25 26 Bata Pakistan Limited 24 40.00 26 27 Bannu Woolen Mills Limited 23 38.33 27 28 Millat Tractors Limited 23 38.33 27 29 Oil and Gas Development Company Limited 42 70.00 29 30 Dawood Hercules Corporation Limited 21 35.00 30 31 Pakistan Services Limited 19 31.67 32 33 Cherat Packaging Limited 18 30.00 33 </td <td>16</td> <td>Hub Power Company Limited</td> <td>36</td> <td>60.00</td> <td>16</td>	16	Hub Power Company Limited	36	60.00	16
Fecto Cement Limited 31 51.67 19 Service Industries Limited 30 50.00 20 Treet Corporation Limited 29 48.33 21 EXAMPLE SERVICE	17	Pakistan National Shipping Corporation Limited	34	56.67	17
Service Industries Limited 30 50.00 20 Treet Corporation Limited 29 48.33 21 Kohinoor Industries Limited 28 46.67 22 Kohinoor Industries Limited 28 46.67 22 Kohinoor Industries Limited 27 45.00 23 Gul Ahmed Textile Mills Limited 26 43.33 24 Pakistan Cables Limited 26 43.33 24 Bata Pakistan Limited 25 41.67 25 Bannu Woolen Mills Limited 23 38.33 27 Bannu Woolen Mills Limited 23 38.33 27 Cil and Gas Development Company Limited 42 70.00 29 Oil and Gas Development Company Limited 21 35.00 30 Dawood Hercules Corporation Limited 20 33.33 31 Pakistan Services Limited 20 33.33 31 Pakistan Services Limited 19 31.67 32 National Foods Limited 19 31.67 32 Cherat Packaging Limited 18 30.00 33 Cherat Packaging Limited 18 30.00 33 Berger Paints Pakistan Limited 16 26.67 35 Berger Paints Pakistan Limited 16 26.67 35 Rupali Polyester Limited 13 21.67 36 Rupali Polyester Limited 13 21.67 36	18	Maple Leaf Cement Factory Limited	32	53.33	18
Treet Corporation Limited 29 48.33 21 Kohinoor Industries Limited 28 46.67 22 Gul Ahmed Textile Mills Limited 27 45.00 23 Mishat Mills Limited 26 43.33 24 Pakistan Cables Limited 25 41.67 25 Bata Pakistan Limited 24 40.00 26 Bata Pakistan Limited 23 38.33 27 Bannu Woolen Mills Limited 23 38.33 27 Millat Tractors Limited 23 38.33 27 Oil and Gas Development Company Limited 42 70.00 29 Oil and Gas Development Company Limited 21 35.00 30 Dawood Hercules Corporation Limited 20 33.33 31 Pakistan Services Limited 20 33.33 31 Cherat Packaging Limited 19 31.67 32 Cherat Packaging Limited 18 30.00 33 Cherat Packaging Limited 17 28.33 34 Aisha Steel Mills Limited 16 26.67 35 Berger Paints Pakistan Limited 16 26.67 35 Rupali Polyester Limited 13 21.67 36 Rupali Polyester Limited 13 21.67 36	19	Fecto Cement Limited	31	51.67	19
22 Kohinoor Industries Limited 28 46.67 22 23 Gul Ahmed Textile Mills Limited 27 45.00 23 24 Nishat Mills Limited 26 43.33 24 25 Pakistan Cables Limited 25 41.67 25 26 Bata Pakistan Limited 24 40.00 26 27 Bannu Woolen Mills Limited 23 38.33 27 28 Millat Tractors Limited 23 38.33 27 29 Oil and Gas Development Company Limited 42 70.00 29 30 Dawood Hercules Corporation Limited 21 35.00 30 31 Pakistan Services Limited 20 33.33 31 32 National Foods Limited 19 31.67 32 33 Cherat Packaging Limited 18 30.00 33 34 Aisha Steel Mills Limited 17 28.33 34 35 Berger Paints Pakistan Limited 16 26.67 35 36 Pakistan Paper Products Limited 12 20.00	20	Service Industries Limited	30	50.00	20
Gul Ahmed Textile Mills Limited 27 45.00 23 Nishat Mills Limited 26 43.33 24 Pakistan Cables Limited 25 41.67 25 Bata Pakistan Limited 24 40.00 26 Bata Pakistan Limited 23 38.33 27 Bannu Woolen Mills Limited 23 38.33 27 Bannu Woolen Mills Limited 23 38.33 27 Dil and Gas Development Company Limited 42 70.00 29 Dawood Hercules Corporation Limited 21 35.00 30 Dawood Hercules Corporation Limited 20 33.33 31 Pakistan Services Limited 19 31.67 32 National Foods Limited 19 31.67 32 Cherat Packaging Limited 17 28.33 34 Aisha Steel Mills Limited 17 28.33 34 Berger Paints Pakistan Limited 16 26.67 35 Berger Paints Pakistan Limited 13 21.67 36 Rupali Polyester Limited 13 21.67 36 Rupali Polyester Limited 12 20.00 37	21	Treet Corporation Limited	29	48.33	21
24 Nishat Mills Limited 26 43.33 24 25 Pakistan Cables Limited 25 41.67 25 26 Bata Pakistan Limited 24 40.00 26 27 Bannu Woolen Mills Limited 23 38.33 27 28 Millat Tractors Limited 23 38.33 27 29 Oil and Gas Development Company Limited 42 70.00 29 30 Dawood Hercules Corporation Limited 21 35.00 30 31 Pakistan Services Limited 20 33.33 31 32 National Foods Limited 19 31.67 32 33 Cherat Packaging Limited 18 30.00 33 34 Aisha Steel Mills Limited 17 28.33 34 35 Berger Paints Pakistan Limited 16 26.67 35 36 Pakistan Paper Products Limited 13 21.67 36 37 Rupali Polyester Limited 12 20.00 37	22	Kohinoor Industries Limited	28	46.67	22
25 Pakistan Cables Limited 25 41.67 25 26 Bata Pakistan Limited 24 40.00 26 27 Bannu Woolen Mills Limited 23 38.33 27 28 Millat Tractors Limited 23 38.33 27 29 Oil and Gas Development Company Limited 42 70.00 29 30 Dawood Hercules Corporation Limited 21 35.00 30 31 Pakistan Services Limited 20 33.33 31 32 National Foods Limited 19 31.67 32 33 Cherat Packaging Limited 18 30.00 33 34 Aisha Steel Mills Limited 17 28.33 34 35 Berger Paints Pakistan Limited 16 26.67 35 36 Pakistan Paper Products Limited 13 21.67 36 37 Rupali Polyester Limited 12 20.00 37	23	Gul Ahmed Textile Mills Limited	27	45.00	23
26 Bata Pakistan Limited 24 40.00 26 27 Bannu Woolen Mills Limited 23 38.33 27 28 Millat Tractors Limited 23 38.33 27 29 Oil and Gas Development Company Limited 42 70.00 29 30 Dawood Hercules Corporation Limited 21 35.00 30 31 Pakistan Services Limited 20 33.33 31 32 National Foods Limited 19 31.67 32 33 Cherat Packaging Limited 18 30.00 33 34 Aisha Steel Mills Limited 17 28.33 34 35 Berger Paints Pakistan Limited 16 26.67 35 36 Pakistan Paper Products Limited 13 21.67 36 37 Rupali Polyester Limited 12 20.00 37	24	Nishat Mills Limited	26	43.33	24
27 Bannu Woolen Mills Limited 23 38.33 27 28 Millat Tractors Limited 23 38.33 27 29 Oil and Gas Development Company Limited 42 70.00 29 30 Dawood Hercules Corporation Limited 21 35.00 30 31 Pakistan Services Limited 20 33.33 31 32 National Foods Limited 19 31.67 32 33 Cherat Packaging Limited 18 30.00 33 34 Aisha Steel Mills Limited 17 28.33 34 35 Berger Paints Pakistan Limited 16 26.67 35 36 Pakistan Paper Products Limited 13 21.67 36 37 Rupali Polyester Limited 12 20.00 37	25	Pakistan Cables Limited	25	41.67	25
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30 Dawood Hercules Corporation Limited 21 35.00 30 31 Pakistan Services Limited 20 33.33 31 32 National Foods Limited 19 31.67 32 33 Cherat Packaging Limited 18 30.00 33 34 Aisha Steel Mills Limited 17 28.33 34 35 Berger Paints Pakistan Limited 16 26.67 35 36 Pakistan Paper Products Limited 13 21.67 36 37 Rupali Polyester Limited 12 20.00 37	28	Millat Tractors Limited	23	38.33	27
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32 National Foods Limited 19 31.67 32 33 Cherat Packaging Limited 18 30.00 33 34 Aisha Steel Mills Limited 17 28.33 34 35 Berger Paints Pakistan Limited 16 26.67 35 36 Pakistan Paper Products Limited 13 21.67 36 37 Rupali Polyester Limited 12 20.00 37	30	Dawood Hercules Corporation Limited	21	35.00	30
33 Cherat Packaging Limited 18 30.00 33 34 Aisha Steel Mills Limited 17 28.33 34 35 Berger Paints Pakistan Limited 16 26.67 35 36 Pakistan Paper Products Limited 13 21.67 36 37 Rupali Polyester Limited 12 20.00 37	31	Pakistan Services Limited	20	33.33	31
34 Aisha Steel Mills Limited 17 28.33 34 35 Berger Paints Pakistan Limited 16 26.67 35 36 Pakistan Paper Products Limited 13 21.67 36 37 Rupali Polyester Limited 12 20.00 37	32	National Foods Limited	19	31.67	32
Berger Paints Pakistan Limited 16 26.67 35 Pakistan Paper Products Limited 13 21.67 36 Rupali Polyester Limited 12 20.00 37	33	Cherat Packaging Limited	18	30.00	33
Pakistan Paper Products Limited 13 21.67 36 Rupali Polyester Limited 12 20.00 37	34	Aisha Steel Mills Limited	17	28.33	34
Rupali Polyester Limited 12 20.00 37	35	Berger Paints Pakistan Limited	16	26.67	35
	36	Pakistan Paper Products Limited	13	21.67	36
Shabbir Tiles and Ceramics Limited 11 18.33 38	37	Rupali Polyester Limited	12	20.00	37
	38	Shabbir Tiles and Ceramics Limited	11	18.33	38

S#	Company name	No. of items disclosed	%	Ranking
39	Mitchells Fruit Farms Limited	10	16.67	39
40	Dewan Farooque Motors Limited	9	15.00	40
41	Pakistan Telecommunication Company Limited	8	13.33	41
42	Adam Sugar Mills Limited	8	13.33	41
43	Jubilee Spinning and Weaving Mills Limited	7	11.67	43
44	Gadoon Textile Mills Limited	6	10.00	44
45	Dewan Cement Limited	5	8.33	45
46	Shield Corporation Limited	5	8.33	45
47	Dawood Lawrancepur Limited	4	6.67	47
48	Dewan Textile Mills Limited	3	5.00	48
49	Bilal Fibers Limited	2	3.33	49
50	Olympia Textile Mills Limited	0	0.00	50

B. Appendix 2

Years	Inflation rate%	GDP (annual growth rate)%	Interest rate %
2012	9.73	3.8	7.98
2013	7.68	3.71	7.17
2014	7.23	4.1	7.26
2015	2.53	4.1	5.97
2016	3.76	4.5	4.83

Source: Economic Survey and other web sources.

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Other Impacts of Globalization

Building Democracy: National and International Factors

Daniel Silander

Additional information is available at the end of the chapter

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Abstract

Based on the promising democratic changes around the world during the late twentieth century, what are the favorable factors for building democracy? In the 1990s, research on democratization mushroomed, exploring how to explain reasons for democracy around the world. The global spread of democracy resulted in numerous conclusions about national and international favorable factors for democracy. More recently, the global democratic upsurge seems to have halted with worrying tendencies toward new forms of authoritarianism, hybrid regimes of both democratic and authoritarian institutions and fragile democracies. Recent studies have argued how authoritarianism has gone global and challenge the previous global spread of democracy. Based on a literature review of the bulk of studies on democracy building, this chapter identifies the main national and international favorable factors for democracy. It is argued that research has had a domestic focus up until the 1990s, but how international factors have come to play an important role in explaining democracy. Today, research must focus on the interplay between national and international factors to democracy building embedding both an actor and a structural dimension.

Keywords: building democracy, authoritarianism, transition, national factors, international factors

1. Introduction

There is an agreement in research about democracy building (democratization) that the previous century consisted of major ideological battles. Scholars on democracy building have argued that the last decades of the twentieth century consisted of a spirit of democracy with a growing number of democratic states around the world. From the 1970s to the mid-1990s, a global spread of new democracies occurred in most regions of the world—except the Middle East—and challenged post-totalitarian and authoritarian states, military regimes and



despotic leaders in Southern Europe, Latin America, Asia, Africa and Central and Eastern Europe. These political changes made scholars portray the global changes in terms of "the triumph of democracy," [1] "the end of history," [2] "the democratic revolution" [3] and how democracy had become "globalized" [4] as a third "universal language" aside from money and the Internet [5].

At the beginning of the twenty-first century, however, authoritarianism has gone global and is challenging democratic regimes and the notions of political rights and civil liberties around the world. Recent studies from the early 2000s and forward have pointed at a potentially worrisome trend in new types of authoritarianism and hybrid regimes [6] comprising both authoritarian and democratic institutions. This trend may have left the world community at a crossroads of democracy and authoritarianism. The global spread of democracies during the late twentieth century and the rise of authoritarianism in the early twenty-first century have raised an interest in understanding and explaining how to build democratic states around the world [7]. This study chapter sets out to understand how to build a democracy by identifying national and international favorable factors for democracy building. Section 2 after this introduction illustrates the global patterns of democracy building over time and is followed by Section 3 on the theoretical foundation of democracy. Sections 4 and 5 explain the favorable national and international factors for building democracy. Section 6 concludes this study.

2. Trends of democracy building

In the early 1990s, studies on democracy building mushroomed, identifying how the number of democracies worldwide had become greater than ever before in modern history. About 25 years ago, Huntington [8] identified major democratic waves in political changes, going from dictatorships to electoral and liberal democracies. The transition processes to electoral democracies centered on the establishment of popular votes and an election as the main competition for office. The numerous transitions into electoral democracies around the world embedded the right to vote for competitive parties in free and fair elections where the electoral outcome was respected and assured based on checks and balances between a country's judiciary, executive and legislative powers.

In the early 1990s, Huntington argued that the historical global spread of democratic transitions in the nineteenth and twentieth centuries could be described as waves of democracy building. A historical wave constituted numerous states around the world, all going through democratic changes within a specific period of time. In particular, a wave of democratic change included a larger group of transitions from nondemocratic (authoritarian) to democratic (electoral) regimes within a specified period of time, and this change outnumbered the reverse transitions into authoritarianism. The wave metaphor of global democratization had a great impact on the scholarly interests in the patterns of democratic change around the world. However, many scholars in the field of democratization raised concerns about how democratic regimes were defined, focusing only on free and fair elections (electoral fallacy), thereby disregarding other important democratic qualities, and the overlapping time periods of these waves of democratization [9]. Most scholars who focused on democracy building agreed, however, that Huntington shed light on important historical transformations [10] in a suggested "two steps forward and one step back" pattern. Huntington summarized the historical changes until the early 1990s in three waves of democratization and two reverse waves.

The first wave of democratization was the longest in terms of years covered (1828–1926). It was argued that the first wave began with the American and French revolutions and transplanted ideas of what democracy was all about and how democracy could be established. This wave of democratization included the spread of the political right to vote to new previously marginalized groups of society and to newly established states around the world, such as in the West, Australia and South America. The historical record showed how the first wave included democracy building in about 30 states after World War I. The wave of democratization did, however, halt and was reversed with the authoritarian and totalitarian ideologies developed in Germany, Italy and Japan during the 1930s and 1940s, which resulted in reverse democratic setbacks and authoritarian regimes in Eastern and Southern Europe, as well as in South America.

The second wave of democratization (1943-1962) lasted for a far shorter time compared to the first wave and was an outcome of the major international political changes of the balance of power that came with the end of World War II and the defeat and collapse of Nazism and fascism. The collapse of antidemocratic systems resulted in the expansion of new democracies in, for instance, West Germany, Austria, Japan, Turkey, Greece, Uruguay, Brazil, Costa Rica, Argentina, Colombia, Peru and Venezuela. The aftermath of the war became a window of opportunity for the new spread of democratic regimes, political rights and civil liberties in greater number of states, though primarily with the deviant cases in the communist states in foremost Eastern Europe and East Asia (China). It was the powerful role of the Soviet Union in a post-World War II context that eventually founded the reverse wave of authoritarianism and resulted in the consolidation of communism in the Eastern European states and in limited democracy in Latin American states and some East Asian states.

The third wave of democratization (1974-1991) was argued to have begun with transitions in Southern Europe in the early 1970s and ended with major democratic transformations in Eastern Europe as a result of a weakened and finally collapsed Soviet Union. Democratization began in Spain, Portugal and Greece and peaked with the transitions in communist ruled Poland, Czechoslovakia, Hungary and Romania and the independence of 15 new states. The third wave of democratic transitions was, however, global in a geographical scope, with numerous new democracies established in Latin America and Asia, outnumbering the previous authoritarian traditions of regimes around the world. The third wave had great global impact on the democratic political landscape. As stated, "the birth of more than ninety democracies in this period represents the greatest transformation of the way states are governed in the history of the world" [11], and as a consequence, many scholars perceived the twentieth century as the century of progress [12].

Though the academic community had spent decades of research on how to explain and foresee democratization, the third wave of democratization came as a surprise [13] and sparked

greater interest in the geographical scope of transitions, the driving engines behind such democratic change and the possibilities of further democracy building within newly democratized states. Scholars agreed that the third wave was global in scope and how the numerous transitions actually led to the number of democratic regimes now outnumbering authoritarian regimes for the first time in human history. Both scholars and international politicians argued how democracy was a symbol of good governance and how the wave of democratic transitions had shown "the unabashed victory of economic and political liberalism" in the world [14]. The global victory of political liberalism was argued to consist of the democratic transitions that established government by the people based on popular free and fair elections in multi-party systems. For almost half a century, the scholarly world had argued that democracy was based on free and fair elections. In his famous study, Schumpeter [15] presented a minimal definition on democracy and became the founding father of a procedural definition of democracy. Schumpeter's definition of an electoral democracy focused on competing political elites for power. From this perspective, democracy was perceived as a political tool for selecting politicians and how popular elections, as a core political procedure, were essential for the spread and consolidation of other crucial political rights and civil liberties often tied to democratic systems and societies.

In the early 2000s, however, a growing number of individual academic studies, think-tanks and statistical assessments on democratic freedoms identified new challenges to the previous global transitions embedded in the third wave of democratization. Though this has not yet been argued to be the signs of a third reverse wave of global authoritarianism, scholars have pointed out worrying signs of democratic challenges across the world. First, it has been argued that many transitional states have turned up as vague electoral democracies with authoritarian characteristics. They have had free and fair elections, but have continued to face political, economic and social obstacles that have had negative impacts on the democratization process. These obstacles have created political societies of democratic fuzziness where democratic patterns have been mixed with undemocratic ones. Such obstacles may be found in electoral democracies with patterns of restricted participation and liberties, electoral democracies influenced by the existence of personal rule and patron-client relationships, electoral democracies with the existence of human rights abuses, electoral democracies in which there is a massive and perhaps uncontrolled popular mobilization that challenges order and stability and/or electoral democracies where undemocratic actors, such as the military, continue to influence politics. All these democracies may have elections and may tolerate legal alternative parties in opposition to the ruling party, but they are challenged by other major problems that influence the democratization process and democratic stability [16]. Second, it has also been argued that we have seen an authoritarian surge in international affairs with greater activities among major authoritarian powers to contain democracy around the world. Aside from limiting democratic rights and liberties at home, authoritarian states have actively coordinated foreign policy actions to halt the global spread of democracy. Such authoritarian measures have included media initiatives to limit the impact of Western news around the world, political actions against pro-democracy and human rights' organizations, such as in global and regional intergovernmental organizations, and in civil society. Altogether, "The extent of the authoritarian challenges forces us to confront the disconcerting prospect that the most influential antidemocratic regimes are no longer content simply to contain democracy. Instead, they want to roll it back by reversing advances dating from the time of the democratic surge" [17]. The increasing bulk of studies have presented different concepts to describe these challenged electoral democracies [18].

3. The foundation of democracy

There has been a long and on-going scholarly discussion on how to define and measure democratic and nondemocratic regimes [19]. Democracy is a fuzzy and multifaceted concept. In the literature on building democracy, two conceptions of democracy are relevant; a minimalist and maximalist perspective. First, the minimalist perspective has defined democracy as an electoral democracy, focusing on the procedural system of institutions and the institutional mechanism of free and fair elections. An electoral democracy has embedded the procedure of free and fair elections in which political elites compete for political power and where the population uses the election to check the political power from wrong-doings. The scholarly studies on electoral democracy has stressed the importance of political procedure to ensure political rights and civil liberties, although the main focus from a minimalist perspective has been on the implementation of elections as a guarantee for the idea of government by the people. Such definition of democracy has been argued to provide scholars with the ability to make comparative studies on democracy-building in different states by analyzing if there are free and fair elections or not [20].

Second, the maximalist perspective has, in comparison to the minimalist perspective on electoral democracy, focused on a more substantive democracy embedding political rights and civil liberties beyond the procedure of free and fair elections. Such conceptualization of a liberal democracy has developed out of the notion of the "fallacy of electoralism" [21], meaning paying too much attention to the election and missing out on other important political rights and civil liberties in a democracy. It has been argued that the fallacy of electoralism may lead to the definition of states as democracies, although such states consist of nondemocratic traits. Although free and fair elections are important in democracies, focus on electoralism only is a too narrow perspective on what democracy is all about. The maximalist perspective has therefore introduced the definition of a liberal democracy, based on the procedural ingredients in an electoral democracy, but also including additional rights and liberties in, for example, minority rights, politically equality, freedom of belief, opinion, discussion, speech, publication and assembly, the rule of law and securing human rights, etc. [22]. It has been argued that three fundamental dimensions exist in a liberal democracy; high level of competition, participation and liberties. As summarized by Georg Sørensen,

"Meaningful and extensive competition among individuals and organized groups (especially political parties) for all effective positions of government power, at regular intervals and excluding the use of force.

A highly inclusive level of political participation in the selection of leaders and policies, at least through regular and fair elections, such that no major (adult) social group is excluded.

A level of civil and political liberties—freedom of expression, freedom of the press, freedom to form and join organizations—sufficient to ensure the integrity of political competition and participation" [23].

The minimalist perspective and the maximalist perspective on democracy have provided scholars on democratization with important theoretical notions of foundations of democracy. Overall, there has been a scholarly tradition to implement the minimalist definition of democracy when analyzing democracy-building, by focusing on free and fair election as an important mechanism to promote other political rights and civil liberties. This has resulted in the conclusion that building democracy is very much about institutionalizing free and fair elections. However, the scholarly studies on building liberal democracy have stressed the possibility and importance of further developing electoral democracies, beyond the free and fair elections, including political rights and civil liberties. Robert Dahl has presented a well-known conceptualization of a democracy (polyarchy). His definition of democracy may be seen as a midrange definition between a minimal and maximal definition of democracy. Dahl has presented two dimensions of a democracy in contestation and participation. First, contestation refers to structured political competition through free and fair elections and second, participation refers to the popular right to participate as voters and/or politicians. In his definition of democracy, eight important institutions are mentioned. These are freedom to form and join organizations, freedom of expression, right to vote, eligibility for public office, right of political leaders to compete for support and votes, alternative sources of information, free and fair elections and institutions for making government policies depend on votes and other expressions of preference. Although Dahl's definition focuses on electoral procedures, contestation and participation also embed other political rights and civil liberties. To ensure the implementation of democracy in contestation and participation, it is argued that civil liberties are crucial. Such liberties are, for example, freedom to think, believe, worship, speak and publish one's views as well as the freedom to form and join organizations among other things [24].

The scholarly discussion on definitions of democracy has come with studies on nondemocratic states. The process of democracy building starts in a nondemocratic environment which may be of different natures such as one-party-states, military regimes, dynastic rule, theocratic rule, tyranny, oligarchy, absolutism, despotism and monarchy, etc. The research on nondemocratic regimes has set out different types. At first, democracies stood in sharp contrast to the totalitarian type. The totalitarian regime was characterized as a regime-type enforcing state objectives and goals on society and citizens, by concentrating all power to the elite and by subordinating societal activities and people to the control of the regime. In sharp contrast to a democracy, the totalitarian society was defined as an atomized society with very limited independent political, economic, social and judicial institutions due to the total control by the regime through the use of propaganda and terror [25]. To uphold total control, research has come to stress the importance of the implementation of an official ideology, single mass party, secret police, full control of communication, monopoly of coercive methods and a central control of the economy [26]. Another and more common nondemocratic regime has been the authoritarian regime. The authoritarian regime, compared to the totalitarian, has said to have a limited official ideology that dictates societal sectors and with a less powerful, violent and controlling police. The authoritarian regime is also open for socioeconomic pluralism

and to some degree political pluralism, although such pluralism is never allowed to become political influential and challenge the ruling political elites. It should, however, be stated that democracy-building is far easier to achieve in an authoritarian setting compared to a totalitarian one. This is due to the existing political institutions in an authoritarian society, the allowance of pluralism and political opposition and to the more limited use of state violence and terror compared to totalitarian systems.

4. Building democracy: national factors

The previous trends of democratic progress around the world, followed by recent pessimistic assessments of returning authoritarianism, have led to a redeveloped interest in how to build democracies worldwide. There is a long tradition of studying how to protect and promote democracy. The main focus has been to identify the explanatory factors or driving engines that encourage countries to transition to democracy and in how to consolidate new democracies to become stabile and enduring. There has been a dominating focus on national factors for the transitions to democracy. The research on explanatory factors for building democracy grew out of an increasing number of studies on domestic actors and structures of the 1950s and onward, focusing primarily on socioeconomic factors. This approach was tied to developmental studies and was referred to as the modernization school or the modernization thesis. One of the first and most important studies on economic development and its role in modernization was Dankwart Rostow's Politics and the Stages of Growth [27]. In the 1960s, in the context of decolonization and new independent states, studies focused on how to establish political order and stability. The modernization perspective on political order was illustrated by the famous study by Lipset, Political Man [28]. Lipset argued that modernization, in terms of a high level of gross national product, was an important driving engine for building democracy. By assessing democracies around the world, it was convincingly argued how high levels of modernized socioeconomic structures were related to democratic states. In other words, states with economic modernization would become transitional democracies and, with further modernization, also become consolidated democracies. Lipset's focus on economic factors for democratization could be summarized as the more well-to-do a nation, the greater the chances that nation will sustain democracy; this became a major insight on how to explain democratization and triggered further studies on when modernization has been an important explanatory factor to build democracies and when it has not.

Over time, new studies began to explore a more complex picture of modernization and democratization by unfolding a more detailed understanding about what economic and social indicators could trigger democracy building. These studies did not question the importance of modernization for political development, but pinpointed the economic and social structures that are needed to be developed to see democratization. It was argued that democracy building was based on economic progress embedding improved infrastructure, higher levels of education, shared societal values and improved health, etc. The main point made was that modernization embedded social issues that became explanatory factors to democracy rather than just focusing on pure economic growth. States with economic growth could

through political reforms to facilitate social structures that were beneficial for developing and consolidating democracy. In more recent decades of research done on the modernization thesis, economic progress leading to improved technology and the flow of information and knowledge has become new emphasized indicators for building democracy. The IT revolution has empowered people to engage in societal issues and provided people the tools to hold politicians and governments accountable for their decisions and actions, although research also stresses how authoritarian regimes may use new technology to haunt down political oppositions [29].

In addition, modernization was said to also impact the domestic class-structures. For instance, Moore [30], in the classical study Social Origins of Dictatorship and Democracy – Lord and Peasant in the Making of the Modern World, argued the importance of the result of the modernization in the changes of the class structure. He stressed that modernization was not sufficient in deciding democratization, since such socioeconomic development with higher levels of gross domestic product (GDP) could also lead to authoritarian system. Modernization embedded more specific favorable factor for democratization in industrialization, urbanization, increased power to the middle class, decreased power to rural landlords and improved infrastructure, education and health care that all contributed to improved conditions for democracy. It was further argued that industrialization also integrated the commercialized countryside with urban areas, building ties between the urban middle class and rural peasants. Many studies have stressed the importance of a growing middle class to build democracy by integrating the lower and upper classes of the society into collaboration and unity. Socioeconomic modernization provides an economic and political ambitious middle class of business people, professionals, shopkeepers, teachers, civil servants, managers, technicians and clerical and sales-workers. However, some studies have pointed out that the working class is pro-democratic, whereas the middle class is less interested in political change and more interested in protecting its economic role as an antidemocratic force, while other studies have emphasized the alliances between the working class and the middle class to build democracy [31]. The main argument has been that democracy is likely to develop based on industrialization and a growing power of the organized middle class and/or working class. Democracy is less likely to emerge in less modernized, agrarian societies and the dominating body of studies have stated a correlation between higher gross domestic product (GDP) and a growing middle class as the the main pro-democratic forces.

A second set of domestic factors to democracy aside from socioeconomic modernization includes the political culture. The perspective on political culture has referred to people's aggregated political orientations/attitudes toward the political objects of a society, such as the institutions, politicians, norms and values. Such interest in political culture has also included the analysis of the political cultural in terms of existing religious and/or civilization codes within Protestantism, Catholicism, Confucianism and Islam [32].

The perspective on political culture was developed in the 1960s and onward and focused on issues of socialization and the political orientations in cognitive orientation (referring to the knowledge of and beliefs about the political system), affective orientation (feelings about the political system) and evaluation orientation (including commitment and support for political institutions and the values and judgements of system performances). One pivotal study for this tradition of approaches for democracy building was Almond and Verba's The Civic Culture, where political culture referred to "the specifically political orientations—attitudes toward the political system and its various parts, and attitudes toward the role of the self in the system" [33]. Their study analyzed the nature of the political culture that promoted and protected stable democracies and when political culture was defined as the aggregation of individual political attitudes. They argued that there existed three types of political cultures: the parochial, subject and participant culture. In the parochial culture, citizens were only indistinctly aware of the political system; second, in the subject culture, citizens saw themselves as subjects to political affairs rather than participants and third, in participant culture, citizens are participants of the system. The above-mentioned study stressed a connection between stable democracy and participant culture, but added that the importance of elements of parochial and subject cultures. It was argued that in the participant political culture, citizens participated in political affairs and supported political affairs, as well as how the parochial and subject political dimensions made the participating citizens loyal to the existing political decisions and implementation procedures, and thereby, they were supportive to the existing democratic institutions. It was further argued that a grave danger to democracy existed in too much of a subject culture because it could lead to an antidemocratic, authoritarian political system.

Other studies [34] about the role of political culture have focused on political culture as a multidimensional phenomenon and have measured people's political support of political community, regime principles, regime performance, regime institutions and political actors. These studies have assessed that the overall citizens' support of democracies is high around the world, but there are dissatisfied democrats in societies. Democracies embed an increasing tension between democratic values, which are highly supported, and the trust in existing democratic institutions, which is declining. It has been concluded that there is high confidence within established democracies regarding political objects in the political community and the regime principles, but less confidence and trust in regime performances, regime institutions and politicians. The reasons behind such tension may be the identified existing decline in social trust and civic engagement, failure in regime performances and constitutional design or cultural factors rooted in modernization and changing norms and values.

Important studies on modernization and shifting norms and values have added insight about potential explanatory factors and challenges for democracy. Inglehart [35] conducted the famous World Values Survey, assessing the patterns of political attitudes in states worldwide. From a comparative perspective and over a long period of time, this survey has analyzed political attitudes toward the political community, democracy as an ideal form of government and regime performance. This survey has identified a decreasing respect for political authorities—such as in, for example, the police and political parties—and such declining respects is explained in terms of shifts in cultural values among citizens promoted by globalization, cultural transformations and modernization. The modernization process has fundamentally transformed the political and cultural system from being previously based on religious beliefs to political institutions, rational behavior and post-materialist values of maximizing individual well-being. Such fundamental transformation of culture may explain the identified shifting support to important political objects of democracy.

The scholarly interest in and study of the aggregated attitudes of citizens toward political objects has been related to research focused on the role of the civil society. Research on civil society has concerned people's attitudes in a society toward political objects and the articulation of such attitudes into organizations, associations, unions and interest clubs. One famous and now classical study on civil society is De Tocqueville's Democracy in America [36], where a nineteenth century American prosperous democracy was argued to be based on a highly developed civil society. The American democracy was dynamic, vital and stable due to the highly developed network of civil society across economic, social, cultural and religious organizations and associations. These patterns of civil society constituted a platform or arena for societal activities between the outer bounds of government and the inner bounds of family ties and provided an interesting and important function for political life in democracies. The focus on the role of civil society re-emerged in the early 1990s with Putnam's study, Making Democracy Work—Civic Traditions in Modern Italy [37], in which he analyzed potential ties between democratic stability, political institutions, socioeconomic factors and sociocultural factors in northern and southern Italy. Such an approach questioned existing theories on socioeconomic factors and democratization and stressed the importance of civil society for institutional functionality, efficiency and democratic legitimacy. Democratic governance, it was argued, was based on the existence of a dynamic civil society of civic engagement, trust and reciprocity between citizens, which would foster improved political and administrative performances and legitimacy.

The growing bulk of studies over time on civil society and democracy has focused on the relationship between civil society and the state and has concluded a positive versus negative definition of a civil society. First, it has been argued that civil society may be a counter force to the state and, second, an arena or platform for civic education and participation [38]. The negative definition of a civil society refers to the counter force role a civil society may play in regulating and controlling the state and its performances. A civil society may function as an arena of civil society actors who balance the power of state institutions in relation to societal forces and who make sure that state's institutions do not abuse their authority. On the other hand, the positive definition of the civil society refers to the assisting function civil society can have in relation to the state by providing an additional societal arena where citizens can meet, articulate, aggregate and associate freely and become aware of political life. A civil society may therefore contribute to ideas, expertise, norms and values and societal actions to alleviate the pressure on the state and to guide the state in new directions for policy-making. A civil society may therefore have different functions in a democracy and may be an essential part in a vital and consolidated democratic system.

A third and final set of identified domestic factors for democracy building—aside from socioeconomic factors and political culture - includes political institutions and the political role of domestic political elites and the masses. One of the first and most important studies about political institutions and democracy was written by Huntington: Political order in changing societies. In times of societal developments, it was argued that one of the unstable factors in a society was insufficient institutionalization: "[t]he primary problem of politics is the lag in the development of political institutions behind social and economic change" [39]. The focus on political institutions as pivotal to democracy stressed the danger of increased political and economic demands from societal forces and delayed political institutionalization. It was argued that societal transformation led to increased societal demands on politics and how such demands had to be met by new institutional arrangements. Lack of institutionalization would jeopardize political order, as the political system would come under severe pressure and finally overload. Such institutional overload would provide grave danger to political order and lead to political illegitimacy and system collapse. Institutionalization, to safeguard political order, referred to the development of a strong multi-party system that could attract and mobilize people's political concerns into the political system in an orderly fashion. By channeling people's political demands into a political party's system, democracy could prevail and avoid being challenged by unsatisfied revolutionary groups. Building democracy was therefore argued to be a process of institutionalization, in the establishment of functional political parties, to ensure political participation. Political parties were essential for political order in that they provided instruments for attracting and representing interests and aggregating preferences. They were also tools for recruiting future politicians and institutionalizing elections by empowering political competitive alternatives and organizing the political agenda.

Research on political factors for democracy has also focused on the specific type of institutions that best favor democratic progress and stability. Studies have explored how to design or institutionally structure democracies in the best way to promote democracy and have assessed parliamentarism versus presidentialism. Such focus has, to a high extent, been based on the scholarly contributions by Linz and his colleagues. In his study, The Perils of Presidentalism [40], Linz argued that presidentialism is less favorable than parliamentarism for promoting and protecting stable democracies. Such conclusion was based on four perils of presidentialism. First, he argued that the nature of presidential elections (winner-take-all) could result in a presidency based on support from a minority of the electorate and provide a legitimacy gap. Second, he further argued that the fixed presidential terms and the many hindrances to change a president faces could be problematic for democratic vitality and change, especially when considering how the parliamentary system is more adjustable to changing conditions. Third, another danger was the divided legitimacy between the elected president and the elected members of Congress. Potential different political opinions between these two branches could lead to policy gridlock, declining political vitality and functionality and, in the long term, result in increasing societal demands, political illegitimacy and political instability with opportunities for undemocratic forces to take power. Fourth and finally, presidentialism could potentially foster personality politics and become open for inexperienced leaders to become president. Overall, the focus on presidentialism as less favorable for democracy than parliamentarism led to a growing number of studies about how to design democracies with opposing views, using the pros and cons with different institutional arrangements. Dominating arguments have discussed potential weaknesses in the presidential systems, in minority presidents, rigid terms and difficulty of removal, policy gridlock and the election of inexperienced outsiders and how the parliamentary democracies have seemed to be more functional and long-lasting compared to presidential democracies. However, it should be stated that many studies have challenged these arguments or assumptions by pointing out favorable conditions within presidential democracies, but also how political instability may be caused by weak democratic structures rather than by presidentialism).

The research on political explanatory factors for democracy was developed further in the 1980s by focusing on political actors in building democracy. Such an approach was referred to

as the transitology or the transition paradigm by stressing the importance of individual political actors in the transition to democracy. Previous studies about political explanatory factors had been foremost focused on structural conditions, while these new studies shed light on political actions taken by formal political actors and societal forces beyond the political system. O'Donnell et al. provided several studies in Transitions from Authoritarian Rule—Prospects for Democracy [41], Transitions from Authoritarian Rule-Southern Europe [42], Transitions from Authoritarian Rule-Latin America [43], Transitions from Authoritarian Rule-Comparative Perspectives [44] and Transitions from Authoritarian Rule – Tentative Conclusions about Uncertain Democracies [45] and focused on political actors and their preferences in the political and societal system. These studies identified different fractions of the political elite; two of these fractions within the dictatorial regime were the hardliners and softliners. Hardliners referred to the core of politicians against democracy and who viewed such a system as something that could bring chaos and disorder by undermining the existing privileges of the elite. It was further assessed how one group of hardliners firmly believed in the prevailing dictatorial system, but how softliners within the elite were less ideologically oriented and more pragmatic, foremost concerned with selfish political motives. The dictating political elite were therefore divided into two groups: hardliners and softliners. Where the hardliners were prepared to use their authority through repression and violence to keep stability and status quo, the softliners were open to limited political change to satisfy citizen demands or to increase quality of performances and receive legitimacy, as long as such political changes did not jeopardize the political survival of the elite. Therefore, softliners may be favorable for initiating democracy, but only if they believe that popular elections would result in a legitimate re-election of the same elite. These studies concluded that democracy could be built if there was a growing division between hardliners and softliners within the dictatorial elite and if softliners were able to convince or force the hardliners to democratize the system.

The role of softliners was, to some extent, dependent on the role of societal forces beyond the political system. Studies on political actors and their preferences for building democracy also focused on two more groups of actors in the moderates and the radicals (revolutionaries) within the society outside the formal political system. It was argued that the radicals wanted to overthrow the illegitimate elite of hardliners and softliners, while the moderates were open to forging alliances with softliners within the elite to see democratic change. It was stressed in in these studies that the transition phase to democracy often began with a division between hardliners and softliners within the authoritarian regimes, but strategic linkages between elites and the societal masses were important. This combination of alliances within the political elite and the societal groups outside the political system was referred to as the game of transition. The game of transition to democracy could take different paths. Democracy may result based on a pact between the dominating elite and the opposing elite to build democracy, through a reform when the societal masses are stronger than the elites and would build democracy from the bottom up, but without using violence; through imposition when one group of the political elite mobilizes and uses violence to overthrow the regime (such elite is often the military); and finally, through revolution, when the societal masses (revolutionaries) are strong enough to overthrow the traditional ruling elite by violence. Most studies on the game of transition have stressed the importance of the pact transition for democracy. Such a path would ensure an orderly progress toward democracy based on compromises and the growing trust between powerful elites. This path, based on a pact-strategy between elites, also limits the number of people engaged in the transition, which is favorable for further democratization, as fewer people bring involved improves the chances of reaching compromises and does not led to an overload of political wants and demands. Further related studies on elites and masses have from an economic position argued that citizens prefer democratic systems due to the economic redistribution majority rule provide. This is in opposition to the elites that rather prefer nondemocratic political systems since they protect social and economic privileges and represent a favorable system of redistribution for the people in power. Transition to democracy may, however, happen if concessions from the elites are not credible and when repression and the use of violence are perceived as too risky and too costly [46].

5. Building democracy: international factors

The above-identified domestic-oriented perspectives on socioeconomic, cultural and political factors have provided explanations for democratization. The complementary perspectives of explanatory factors for democratization shed light on important driving engines for building democracies around the world and have enlightened the public and those in academic life regarding when democracy is likely to happen. The bulk of studies have been comprehensive, but these perspectives have contained one important flaw: the neglect to focus on international factors for democracy building. Until the 1990s, most research on how to build democracy focused on domestic factors. The dominance of domestic factors was primarily due to two phenomena. One explanation for the domestic bias in research on democratization is the construction of separating academic disciplines in comparative politics and international relations where research on how to build democracy belonged to the former. The tradition of comparative politics was to focus on domestic structures and actors to explain political situations and changes. Scholars in international relations, however, were less interested in domestic politics and focused on how states and other powerful actors engage in diplomatic, economic and political relationships with others and with what motives and impact they do so. Another explanation for the domestic bias in research has concerned the fuzzy idea of what really constitutes the international factors, reaching for any structures and/or actors in the world beyond the state's territory. This has made potential international explanatory factors to democracy hard to pin down, which has left many scholars abandoning international perspectives on democracy building.

Some significant research efforts for identifying the international dimension to political change began in the 1960s. In a time of decolonization, a large number of studies focused on political and economic linkages and dependencies between developed and less-developed states. It was argued that international political and economic structures penetrated state borders and provided links between powerful and less-powerful actors. The notion of links and penetrated systems was especially explored among scholars within the dependency school,

arguing that third-world states were influenced by rich states in the West based on an unjustified and unequal world economic structure. The criticism, however, pointed out the lack of specificity of how to analyze and understand international factors and how and when domestic politics and economics were influenced by or dictated by external forces.

It was argued that states were open systems vulnerable for penetration and that developed and powerful states could have a political impact on democracy building [47]. For instance, Rosenaue identified the link politics between the international and national domains as "any recurrent sequence of behavior that originates in one system and is reacted to in another" [48] and focused on the potential impact such links could have on democracy. In the 1990s, the debate about the international dimension re-emerged in the scholarly debate on globalization. The quickly growing number of studies about globalization covered the diffusion of global characteristics within economics, technology, culture and politics and stated a growing notion of interdependence in the world. It was further argued that economic, technological, cultural and political transformations across borders of intensification of interactions, exchanges and meetings led to a de-territorialization of politics in favor of macro-regional, international and global actors and processes. Globalization and global politics were portrayed as enhanced interdependence where global changes were cutting through state borders by challenging the domestic political, economic and cultural domestic structures by decreasing geographical distances around the world [49].

Research on the international dimension on democracy building, triggered by the studies on globalization, peaked with the end of the Cold War and with the increased power within the West. It resulted in the conceptualization of the international dimension to democracy in democratic diffusion and democratic promotion. First, the diffusion of democracy was argued to happen between nearby locations and between geographical locations far away with similar political, economic and cultural structures (or historical ties). It was stated that the spread of democracy was facilitated by political, cultural and economic salience often provided by geographical proximity, but diffusion could happen as a global phenomenon in a world of decreasing geographical distances. Diffusion of democracy was one important dimension of globalization—aside from the spread of economic liberalism and technology—and embedded the growing popularity of installing democratic governance [50]. The diffusion of democracy from one state or region to another required diffusion agents to assist the spread of democratic rights and liberties. Diffusion agents acted as socialization agents within the transnational networks and domestic domain, interpreting and introducing global norms and values to domestic settings.

A second international dimension factor for building democracy has been democracy promotion. Research on democracy promotion has been based on traditional insights from international relations and foreign policy-making, focusing on international actors' motives and methods. The foreign policy analysis has displayed a growing interest in democracy promotion in which democracy promotion has referred to a foreign policy motivation to impact other governments and nations in a pro-democratic direction. Studies during the 1990s [51] argued that democracy promotion were essential factors for the global scope of democratization by identifying powerful actors, such as the European Union, the Organizations of Security and Cooperation in Europe and the United States, among others, and the declining power of Soviet Union. These actors promoted democratic ideas and encouraged governments and people around the world to launch democratic reforms, which led to transitions and, in the long run, snowballing effects on a growing number of states. The links between international democracy promotion and transitions were clarified through important research, such as in Pridham's study: Encouraging Democracy—the international context of regime transition in Southern Europe [52] and Building Democracy—The International Dimension of Democratization in Eastern Europe [53]. Pridham argued that international factors played a significant role in democracy building and discussed how such factors had had an increased role in explaining the transitions to democracy in Europe from the 1970s to the 1990s.

Another impressive study on the international factors for democratization was Whitehead's study, The International Dimensions of Democratization-Europe and the Americas [54], which conceptualized different methods or modes of democracy promotion in contagion, control and consent from a comparative perspective across the Atlantic. Schmitter [55] added a fourth mode in conditional cooperation and illustrated different actors, motives and processes that could shed light on the international factors for democracy. Conditional cooperation referred to the international influence on domestic democracy building based on the use of carrots and sticks. Democracy promotion was often implemented by offering political, economic and/or technological assistance and support (carrots) tied to formalized democratic demands on the reforms to be taken. Control, on the other hand, implies a mode based on coercive political, economic and/or military methods to see democratization without the necessary domestic consent through deliberate, forceful acts. Such a mode of influence could include intervention and isolation to enforce the transition to democratic institutions and political culture. In sharp contrast to control, contagion implies a mode of non-coercive impact where domestic democratic reforms are a consequence of the spirit of the time, the global surge of democracy and the domino effects from other states' transitions; that is, what was previously discussed in this chapter as the diffusion of democracy as a political idea and encouragement to dare to change domestic institutions in a democratic direction. In contemporary research on democracy building, international factors are systematically considered as explanatory factors, leaving national and international factors as equally important to take into consideration when trying to explain transitions to democracy around the world. In a globalized world order, national and international factors to democracy building are interwoven leaving scholars with a wide range of potential explanatory factors to be considered.

6. Final remarks

Democracy refers to the government by the people. It ensures contestation and participation and provides citizens with political rights and civil liberties that promote popular freedom. Democratic systems have been challenged by nondemocratic systems and ideas over time. In

the early twenty-first century, we have seen more democratic states than ever, with expanded freedoms in political rights and civil liberties, although an authoritarian upsurge is identified. Such authoritarian upsurge challenges electoral processes, political pluralism and participation, freedom of expression, associational and organizational rights and the rule of law, etc. This chapter has discussed the state-of-the-art research about factors favorable for building democracy in a time of authoritarian upsurge. So where do we stand today when we try to understand the possibilities and problems for democratic transitions? The research from the 1950s forward has developed explanatory factors for democracy building by pointing out national and international factors. This study identified the most important factors from a socioeconomic, cultural and political perspective. It was further argued that the international factors for democracy building, until recently, have constituted forgotten factors for democracy. This has been due to the comparative approach of most democratization studies and to the problems of conceptualizing international factors. However, this chapter presented two important international factors in democracy diffusion and democracy promotion. These factors complement the traditional domestic-oriented understandings of explanatory factors for democratization.

Based on decades of study about democracy building, contemporary research has continued to focus on national or international explanatory factors on the one hand and how links between the two groups of factors may interact on the other. Though international factors have come to play a much more important role in explaining transitions to democracy than before, today, it is the links between international democracy diffusion and democracy promotion and domestic salience that are in focus. This has led to a re-focus on political aelites and civil society actors as domestic democracy agents and gatekeepers in relation to external pro-democratic pressure. However, in a time of a reawakening of authoritarianism in the world, international pro-democratic forces are under heavy pressure from antidemocratic regimes. This has resulted in further studies on international politics regarding democratization and the balance of power between major states and international organizations and how certain states may be under international pressure and at a crossroads between democracy and authoritarianism. This has especially been the case in contemporary Eastern Europe and East Asia with the rising international power of Russia and China. Contemporary research on democracy building has become even more complex and requires scholarly collaboration between researchers belonging to comparative and international politics. It requires a firm understanding of national and international explanatory factors, but also how such factors may interact [56]. Based on previous research, long-term structural factors are important to build democracy. Such factors are economic prosperity, civil society activities, popular mobilization and political institutions. But actor-oriented factors are also crucial to understand democracy building in the short-run. It is foremost the different domestic elites and their perceptions, behavior and strategies that may provide window of opportunities for transitions to happen. In addition, national determinants to democratization must be linked to international factors in actors, structures and processes that penetrates state borders and may be prodemocratic or antidemocratic in nature.

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Higher Education Curriculum in a Global Village

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Abstract

Technology has become ubiquitous in the twenty-first century learning. Students in higher education are learning collaboratively across the globe as technology has made it possible for university students to blur boundaries of borders. It is imperative in the twenty-first century for a higher education curriculum to have technology embedded throughout. The purpose of this study is to explore technology in a higher education curriculum where academics have different views. The study draws on technology in higher education from three fundamental perspectives: technology critics' perspective, technology enthusiasts' perspective and technology from an intellectual perspective. The study ends with a conclusion that was drawn from the three main perspectives of technology. The author clearly supports the view of technology from an intellectual point of view as it enhances students' learning experiences.

Keywords: higher education, technology, curriculum, twenty-first century, university

1. Technology into the curriculum

Students of the twenty-first century represent generations which grew up with technology. Most of their day to day activities, regardless of being academic or social, they mainly use a technological gadget. For all academic questions or tasks which they have to complete, Google is usually their first point of search. They do not know a world without Google; hence, they have access to a wide range of information.

They want to be afforded opportunities for learning in real time, anytime, and on their own terms using technology. This challenges lecturers in institutions of higher learning to be creative and innovative in curriculum design and pedagogy in order to meet needs and



expectations of students in this digital era. A need for reviewing the curriculum to make it suitable for this digital era has led Williamson [1] to ask: what might be the future of the curriculum in the digital age?

It is imperative in the twenty-first century for a higher education curriculum to have technology embedded throughout. Technological advancements have made it possible for students in institutions of higher learning across the globe to blur boundaries by collaborating as if they are on different campuses of the same university in one district. In other words, university students are living in a global village where they learn and collaborate easily using technology.

In this contemporary digital age, educational technology is playing an increasingly important role. It has become so ubiquitous and fundamental in the teaching and learning of higher education [2]. Higher education sector is forced to use educational technology to keep up with needs of a twenty-first century student [3]. Placing computers in lecture rooms is not adequate enough for students to be competitive in the new millennium [4]. There is a need for curriculum design and pedagogy to be responsive to the use of technology in learning [5].

Curriculum is the main drive that can be used to perpetrate technology use in institutions of higher learning [3]. Gregory and Lodge [6] argue that a good curriculum is one that is not just responsive to the needs of students, but also what is happening in the environment at the time. A use of digital strategies is what is happening in the higher education environment today, hence, the need for curriculum design and pedagogy to enhance this initiative. The use of technology to reinforce the curriculum has proven not to be an obvious fit as there are diverging and sceptical views about effect.

Academics in institutions of higher learning do not unanimously agree that technology has tremendous influence in education. They have different views. This led Selwyn [7] to conclude that the confluence of technology and education is marred by a multiplicity of complications and contradictions, and it can be messy sometimes. The integration of technology into this twenty-first century curriculum has been conceptualised from different perspectives by various academics and authors. Three dominant perspectives about integrating technology into the higher education curriculum are presented in this chapter. These are technology critics' perspective, technology enthusiasts' perspective and technology from an intellectual perspective.

2. Technology critics' perspective

The initiative of designing a curriculum that is responsive to technology which is ubiquitous is being threatened by some of the negative effects of enabling Internet technology to blossom in the education sector. In a way, the Internet has degraded students' desire to acquire knowledge through conventional ways of deeply engaging with text. Students' reading culture has subsequently become low because of the readily available answers on Internet. Figes [8] asserts that students in this twenty-first century hardly read textbooks, either in digital form or hardcopy. They prefer getting quick information by using the index to find relevant points, reading articles and looking for information up on Wikipedia. Instead of consulting various books and other original and credible resources to answer past examination questions, twenty-first century students do it the easy way by simply getting answers on Wikipedia and google.com without necessarily reading books.

Students can easily get answers to sophisticated questions by simply clicking keys on the computer or smart phone. This can be viewed as an advantage as it provides easy access to information. But, some of the sources (for example Wikipedia and google.com) which novice researchers and undergraduate students use are questionable and not ideal to use in an atmosphere where quality teaching and learning are at stake. Wikipedia and google.com are the first places that millions of people, including students turn to whenever they want to access some educational information [7].

It is unfortunate to note that some sources like Wikipedia and google.com which students over rely on sometimes consist of misleading information. Wikipedia and google.com are not credible sources to cite when compiling an academic piece of work. This is simply because some of the information which they consist of would not have been peer reviewed by experts in the field. Orlando Figes, a professor of history at Birkbeck, University of London, checked Wikipedia for information about the Russian Revolution—his area of expertise—and found 'an alarming number of mistakes, misapprehensions and misleading statements that would never have appeared in a textbook written by an expert in the field' [8]. When students rely on such sources to write their assignments and all educational tasks, information would be so limited and result in the compromise of quality education. Wikipedia and google.com are essential websites to use especially when one wants to get quick readily available answers to questions. But, complete and credible educational information needs to be obtained from peer reviewed published sources.

This makes the use of textbooks, journals and other peer reviewed materials indispensable in any educational setting. The way in which students nowadays hardly engage with published peer reviewed resources such as books can be conceptualised as an educational consumption of slow poison. Such poison does not have imminent effects, but long-term detrimental consequences. Students will eventually bury a culture of reading textbooks in preference of quick short answers which may not be accurate because it was written by a student like them. **Figure 1** is a graphical illustration of how technology is burying traditional books.

The notable downside of technology is that students who are supposed to make rigorous search of information and deeply engage with text from authentic sources tend to bury books in favour of readily available quick and short answers on Internet. As shown in **Figure 1**, cell phones, iphone and a remote control are carrying a book to a grave which was dug by headphones using a shovel. The graphic illustrates that students are disregarding traditional books, not because they prefer reading digital books which are very ubiquitous in this century, but they dislike reading at all. The illustration corresponds with a prediction made by Thomas Edison a century ago about books being superseded by technology: 'Books will soon be obsolete in schools. Scholars will soon be instructed through the eye. It is possible to teach every branch of human knowledge with the motion picture. Our school system will be completely changed in ten years' (Thomas Edison, 1913, as quoted in [9], p. 100).

Marjorie Sykes emphasised that 'books have played only a minor part in the nurture of the young' [10] (xxv). This argument should not be taken in a wrong context. Sykes' point is not to mean



Figure 1. Graphic illustration of how technology is burying traditional books [12].

that books are worthless, but to say there are also significant factors that play important roles in students' learning. Thapan [11] concurred by echoing that textbooks are not always sacrosanct to students, but they are the only one aspect (among others) where students gain knowledge. Other aspects where students can gain knowledge other than from a text book include the instructor and conversation that they have among students themselves. The argument of reading a book (either hard copy or softcopy) still stands even though scholars differ on ranking its importance as a source of knowledge. Students are expected to read books not to have a situation where they reach graduation without having read detailed information from a textbook.

Figes [8] argues that some students these days finish their university education without reading a book to its entirety. This is resulting in a majority of students graduating without a deeper understanding or appreciation of specific books or any author who have contributed extensively to the body of knowledge in their areas of specialisation [12]. This is all because of the situation of not inculcating a reading culture because of the presence of Internet, which allows students to obtain readily available short and quick answers.

Obtaining quick short answers from sources like Wikipedia and google.com is gradually becoming a norm in institutions of higher learning. Such unintended consequence of technology in this digital era make critics conclude that technology is making education go wild, not wide. This has resulted in some university lecturers becoming sceptical about the value that technology adds to learning [13].

Some lecturers still float in the nineteenth century teaching where the use of technology was minimal. Others understand that teaching using technology means using data projectors only. Ng [13] postulates that many academics have not moved beyond 'basic' pedagogical uses of technology such as PowerPoint presentations, YouTube videos, word processing and Internet search. Although using such basic technological devices adds value to the technology driven teaching, there are many more ways that can be used to promote deep learning that is interactive. A great question that arises is how can educators enhance the initiative of optimising technology use in their teaching?

Technology critics simply conclude that technology is doing more harm than good in education. Its abundance is hindering students to engage with theory, think for themselves and learn different ways of doing things. Herald [12] postulates that although the advent of Internet and technology have transformed the way students undertake research, the downside of technology has been its effect in creating intellectual zombies who rarely go out of their way to understand complex theories. Technology has made students have a surface approach to learning where they can easily get answers without necessarily having to apply their minds and deeply engage with abstract educational matters. They hardly read books because of technology. If they have to construct an argument or engage with a scholarly controversy, they riffle through the index of a book, read introductions and conclusion and skim reading [8].

Knight [14] concurs that technology has led students to be impulsive as they want immediate access to information and an unconcerned approach to appraising, synthesising and critiquing information. Similarly, Pinar summarised key elements of a great Canadian public intellectual, George Grant, who critique technology and modernity. Pinar [15] states that 'Technology for Grant is a form of idolatry, substituting materiality for spirituality, distracting us from dialogical encounter—subjective presence through face- to- face communication—and diverting us into screens where we are forced to comply with programmes created by commercial entities with profit, not freedom, in mind.' Such programmes and the general provision of robust Internet connectivity are not cheap. This makes it a barrier to teaching using technology as gadgets such as smart phones and computers may be expensive for students and some learning institutions [16].

3. Technology enthusiasts' perspective

According to Williamson [1], twenty-first century students of today have intelligible understanding of technology, and they are sophisticated cultural producers of digital media, actively creating, remixing and circulating content online in complex ways that far outstrip anything demanded of them by the traditional subject curriculum. Thus, a curriculum that is supposed to be filled with future aspirations about what is happening in the environment should heavily draw on technology. From a perspective of technology enthusiasts, leaving out technology in this era would be a great setback in education as the local has become subsumed in the global, and the global has become technological [15].

This is because digital technology is now a prominent instrument of education provision and practice in many countries and contexts [17]. It is at the heart of various ways in which education is being provided today [7]. This is regardless of the subject or course as each has its unique ways of integrating technology. Teaching and learning can be enhanced by making use of technology as it makes the whole process easy, accessible and more effective. Technology enthusiasts are so obsessed to maximising technology usage despite limitations echoed by technological critics.

Enthusiasts acknowledge technology critics' plea for students not to abandon the reading culture. They (technology enthusiasts) fully concur with the view that a reading culture should

be revitalised and perpetually sustained. However, they argue that technology should be used as an instrument of attaining that transformation. It is a fundamental instrument that makes it easy for students to access learning materials anywhere, anytime and cost effectively [18, 19]. To a twenty-first century student, learning does not need to be restricted to a classroom—with their mobile devices and the advent of cloud computing, they are able to learn anywhere, everywhere and from anyone [20].

The increased access to technology by students, starting at a very young (pre-school) age, suggests two points: (1) it is no longer a novelty to use technology in educational institutions and (2) students come into the classroom with some degree of digital literacy and a set of skills that are largely associated with Internet search, social networking and possibly non-educational gaming [13]. Majority of students in universities today are digital natives. According to Prensky [21], digital natives are people born on or after the advent of the digital revolution, while those born before the era of computers, who had to adopt and adapt to the new information communication technology are called digital immigrants.

Digital natives are very enthusiastic about learning using technology. The fact that they (digital natives) are exposed to technology at a younger age, their learning needs and expectations differ from their lecturers who are mostly digital immigrants [22]. It will be a wasted opportunity if academics do not review the curriculum and pedagogy to incorporate technology in order to get students in their comfort zones of using technology. Teaching using technology is simply inevitable and uncontainable in this present day. Academics ought to find ways of ensuring that every student gets an opportunity to maximise his/her technological skills and development in order to achieve the learning outcomes.

On the one hand, digital natives expect technology including their mobile phones to be used to facilitate their learning. On the other hand, academics may not be having comprehensive knowledge of using technological devices needed by students. According to Koh [20], academics in charge of educating students in this digital era have had a challenging time playing catch up with the slew of new technologies and 'apps' (applications) such as those in Web 2.0. Thus, there is a paradoxical situation where students are technologically inclined and they need technology to be the cornerstone of their learning, whereas lecturers grapple with application of technological devices in their teaching.

It is important for people not to presume that all digital natives are good with technology, while all digital immigrants are digitally challenged. There are some digital natives who went to poor rural schools where there was no electricity and no technological exposure. On the other hand, some academics are very passionate about technology and they can use it way better than students [20]. In order to bridge a gap that exists on the lack of technological knowledge, Koh [20] suggests promoting technology enhanced learning by upgrading the digital immigrants and stretching the natives. Upgrading of digital immigrants can be done through in-service trainings and capacity development workshops aimed at continuously educating academics on how to employ technology in their teaching. Academics and students who are not so adept in the use of technology should be given opportunities to upgrade their computer skills so that they do not end up feeling further alienated in a techno-enriched environment [23].

Technology enthusiasts would hope that the sweeping technological changes experienced in the worlds of business and entertainment must also take place in the education sector [24]. In a sector like banking, technology has made it amazingly convenient for people to bank. They can do banking anywhere, anytime and they do not have to go physically to the bank. Such convenience has been through the innovations advanced by technology. Similarly, in the entertainment sector, musicians may record quality music which entertains people without having to master how to play any musical instrument. Every sound of a musical instrument can be computer-generated and replicated. Such advanced and fast moving strides of technology in other sectors are what technology enthusiasts would advocate to happen in education. In other words, from a technology enthusiasts' perspective, anything goes as long as it is done using technology. This is a remarkable point that differentiates enthusiasts from those who view technology from an intellectual perspective.

4. Technology from an intellectual perspective

Intellectuals do not resist technology in as much as critics do, neither do they appraise it unreservedly like enthusiasts. Intellectuals are more meticulous and inquisitive. They operate from the view point that digital technology has become an integral part of education today [7], hence academics in their spaces are challenged to find ways in which they can use it to enhance the quality of teaching and learning.

Undoubtedly, in this digital era, students are often seen chatting using different emerging technologies, sharing ideas using digital platforms and showing enthusiasm of learning using technological gadgets [25]. That surely cannot be ignored simply because technology usage possesses some risks. Intellectuals want the use of technology to be implemented but with due caution and should not be done simply because there is new technology in the market. They want technology to be adopted and utilised as it adds value to teaching by promoting engagement on students' learning. Research into the world of digitally oriented learning environments has shown that simply moving to a more digitised platform has not necessarily shown strong educational or motivational outcomes [26].

Imagining education enabling technology to take over all its roots and fundamental principles as fast as it has done in the banking sector would be a huge paradigm shift which could bring the sector (education) into disrepute if it is not done meticulously. Technology enthusiasts simply want the latest technology to be used and immediately replace the old one. From an intellectual perspective, rationalisation of wanting to use every new technology would take precedence. If the new technology enhances teaching and learning better than the old technology, then replacement needs to be supported. For example, clickers are a new technology, which a university has to buy for students to use. Clickers are now being replaced by a new application which can be loaded into smart phones so that students can use their cell phones as clickers. The point is that education can allow new technology to replace the old one as long as it adds more value compared to what existed.

Replacement of old technology with new technology in education for the sake of wanting to move with time results in confusion and misuse of gadgets in teaching and learning. New technology needs to be used, but it is not ideal to quickly dismiss it and adopt another new type which hits the market without verifying it as that can give rise to previously unknown

risks and dangers such as hacking, cyberbullying and identity theft [27]. This makes intellectuals' position very clear that there is an opportunity for new technology to come every now and then; hence, one has to be mindful of the challenges and risks presented by digital technologies to education in general and young people in particular [28].

Education that involves students' learning cannot be fast tracked in order to keep up with the fast moving technological developments. This is because students are expected to accommodate and assimilate information which they will be expected to demonstrate after graduation. In some cases, students will be expected to impart their acquired knowledge to school children as in the case of teacher trainees.

If a teacher trainee graduates at a university without building a reading culture, he/she will not be able to inspire learners in schools to read books in preparation for school leaving examinations. The whole education sector ends up degenerating into a system where surface learning takes place because learners are not motivated to read. Surface learning occurs 'when students concentrate on memorising facts, focus on the discrete elements of the reading, fail to differentiate between evidence and information, are unreflective and see the task as an external imposition' ([29], p. 1). Surface learning is condemned in education.

Intellectuals' stand point about a reading culture in the digital era is that the latter has to complement the former. In other words, a broad spectrum of emerging technology that we are having in this twenty-first century should be used to enhance a robust reading culture anywhere and anytime. In the previous century, students were mainly required to use books in hard copy formats. These books were mainly accessible from the university's library. Thus, students would only have limited reading times as they depend on library's operational times. In this digital era, universities are subscribing to multiple data bases, which provide students to access books in digital formats. Thus, they can read the books anywhere and at their time without necessarily worrying about library closing times. All they need is a technological gadget.

Teachers are expected to inspire a reading culture in their primary and secondary education pupils, so that they will be able to pass examinations. They are expected to provide comprehensive notes and information related to a particular topic. They are expected to provide references such as textbooks, dictionaries, encyclopaedias and credible peer reviewed articles. The only way teacher trainees would be able to give full details of correct reading material to learners is when they engage with such resources during their university education. If they do not do that, the situation in schools is likely to deteriorate in the sense that learners who are taught by teachers who rely exclusively on Google may not be able to do well in examinations that require all candidates to demonstrate comprehensive understanding of issues in text books.

From an intellectual point of view, there is no doubt that technology has massive potential of facilitating student learning. People cannot do away with reading, neither can they not benefit from the innovative and creative ways of using technology in this digital era. A study conducted by Li [30] found that technology had four fundamental purposes to students: (1) increased efficiency, (2) improved pedagogical approaches, (3) preparing them for the future and (4) increased motivation and confidence. The task of academics in promoting students in today's learning remains one of reaching students through their desired means—technology [26]. There is a need of rethinking education in this era of technology. This is because a technology revolution combined with globalisation and the crossing of cultural frontiers that are being experienced today is forcing higher education to rethink curricula [31].

Today's students exist in a digital age with access to a wide choice of technologies that provide a diversity of interactive resources for information and communication [14]. They think and learn in different ways from their forefathers [21]. Thus, academics cannot be seen teaching today the same way they used to teach long back when all the information resided on a teacher. This corresponds with John Dewey's saying: 'If we teach today's students as we taught yesterday's, we rob them of tomorrow'. Long back, students' access to information was very limited as they had to wait for a teacher to disseminate the information and handout textbooks. As a result of technology, things have radically changed from the way they used to be in previous generations. Gosper and Ifenthaler [32] contend that technology has become more sophisticated and the teaching and learning context more diverse. This is resulting in a more nuanced approach to integrate technologies into the curriculum.

In educational settings, the prevalence of technology is also expected to bring about a revolution in learning and teaching [33]. Education has been modified and made easy by technology in which the Internet generation cannot learn without it. Academics have to come on board on this contemporary digital learning strategy. If they do not use technology and create an enabling environment for students, there is a risk of disengaging students and derailing the learning process [34].

Technology needs to be used to complement effective teaching and learning, not to make it look like it is all that students have to learn. We cannot assume that the mere existence of a textbook, support materials and technology tools will improve the quality of the teaching and learning experience [14]. Digital platforms do offer much of the freedom for students to learn anywhere and anytime, but not necessarily the structure and direction, necessary for learning [26]. There has to be a way of making technology and reading of books complement each other, so that students graduate with solid disciplinary knowledge and skills.

Grant [35] critiques technology because it deprives students of the ability to be creative as they will be confined to the stipulations of a programme designed by somebody for commercial purposes. He (Grant) also reiterates that problem solving is no longer informed by knowledge and wisdom—but, rather, devising a technological fix [35]. From an intellectual point of view, it is a fallacy of composition to conclude that technology does not enable students to become innovative and creative because they are restricted to using a programme that was creatively developed by somebody. In education, the purpose of students' learning using technology is not for them to be masters of the programme or a learning platform like blackboard. Students are expected to engage with educational content, which lecturers require them to do using a learning platform. Thus, student creativity is not going to be measured on the basis of the platform, but ability to engage with meaningful ideas related to the subject under study.

The integration of digital technologies into the curriculum is intended to support innovative pedagogy as well as prepare students for future work and citizenship [13]. Technology can be embedded into the curriculum as a means to an end. Rambe and Nel [19] and Khoza [36] argue that technology is a means to develop students who graduate with skills needed in the job market. Similarly, Heafner [37] states that the use of technology can be a means to

motivate students by engaging them in the learning process with the use of a familiar instructional tool that improves their self-efficacy and self-worth. A study conducted by Shifflet and Weilbacher [16] found that academics believe that technology can be used as a means to help engage students in thinking critically to promote self-regulated learning and improve literacy skills. It should be used as a means of letting students optimally learn, and the end product is to develop competent graduates who have comprehensive understanding of subject knowledge and generic graduate attributes.

Technology needs to be used optimally because it has massive potential of enhancing the standards of teaching and learning. A survey conducted by Li [30] found that 87.3% of the students liked to use technology and believed it could be effective in learning. A current situation that many universities sit on is that of large numbers of students. A way of reaching out to all students and promoting effective and interactive learning is by using technology. Technology is capable of promoting interactive learning which is typical of constructivism. According to Wade et al. [38], integrating educational technology into the curriculum has vast potential of creating a paradigm shift of learning from teacher-centred to student-centred learning. It enables more student-driven learning, since it is underpinned within the principles of constructivism [39].

Social networking technologies available can influence the cultural practices of learning through online communities and promote a robust platform where students can share and interact extensively among themselves and with lecturers [14].

Ricoy and Feliz [40] argue that Twitter that is mainly used for social interaction can also be used in the learning process by university students to provide motivating experiences. According to Vygotsky [41], learning is a socio-cultural process which takes place when there is interaction. There is a lot of interaction on Twitter because students will be sharing information, collaborating and participating [42]. This qualifies Twitter as a way in which knowledge can be constructed because it involves a lot of interaction and exchange of valuable information among students themselves and students and lecturers [43].

Twitter and other emerging technologies bring in Vygotsky's [44] social constructivism where knowledge is constructed through interactions by various stakeholders. Undoubtedly, through the Twitter social network, whose use is freely promoted by users themselves, communication and interconnection are generated, and content is created and disseminated at tremendous speed and on a great scale, as one would expect of a mass medium [40]. This allows students to assume active roles in the construction of knowledge in a collaborative and interactive learning environment [45]. The use of social media such as Twitter and Facebook in the learning process is not welcomed with praise by all scholars. Madge et al. [46] contend that Twitter and Facebook are unsuitable for students to deeply engage with text as they are ideal for social networking only. They conducted a survey with first year undergraduates and found that Facebook was used most importantly for social reasons, not for formal teaching purposes, although it was sometimes used informally for learning purposes [46].

The assertion that Facebook is not ideal for proper engagement with text in students' learning may have been relevant in 2009 because it was still on its beginning stages where people including academics confined it to exclusively social interactions. Social media that include Facebook and Twitter have now gained momentum, and they are used extensively to promote student learning by interaction. Gachago et al. [47] argue that Facebook has the ability to expand the entire teaching and learning space and to allow all students to engage meaningfully with each other throughout the process. It (Facebook) has massive potential of providing a highly informal, democratic learning space, which can serve as an essential source of peer support, supporting collaboration and interaction with fellow students beyond the classroom [47].

This completely rules out Madge et al. [46] opinion that Facebook is distractive, and it brings uncertainties about the academic rigour of discussions generated via text messages. Facebook was in fact initially developed for university students [48], and its possibilities of position students in the centre by enhancing interactive learning are indispensable in this digital era. Oradini and Saunders [49] maintain that in this 21st digital atmosphere, social networking systems such as Facebook have the capability to deliver a learning platform where the students are at the centre of all selected learning activities. It can be used in Higher Education teaching and learning to leverage student participation and transform pedagogy.

Intellectuals conceptualise technology from a holistic point of view. They do not just look at it from a social point of view, but also from inclusive perspective. Inclusivity is a broad area that is at the heart of education regardless of level of study. All students need to be included in the education system at school, college or university levels. Many students have barriers to learning, which include different types of disabilities. More often than not, students who require additional support in order to achieve their educational goals are neglected. But, the use of technology has been recommended because of its abilities to encompass all students regardless of the nature of their disabilities.

Intellectuals advocate for the curriculum to be digitised. This is because technology enhanced learning environments have the ability to make way for equality and equity in the teaching and learning process, which include sharing resources, social involvement and participation of students with disabilities [50]. Technology makes it possible for learners with disabilities to learn without experiencing any form of exclusion as they would be in a better position to navigate through their studies by using digital strategies. A research about assessment related experiences of partially sighted students at a university in South Africa found that the use of technology provides a milestone of achievement towards students' abilities to write assignments and examinations effectively [51]. Partially sighted students use assistive technology, which undoubtedly improves their learning and preparation for examinations [52].

Assistive technology should be put in place in order to make students access assessment related information in the same way as their normal sighted counterparts. It (assistive technology) allows visually impaired students to use Internet, talking maps, digital cameras like flipper and screen reading software [52, 53]. All these technological devises and software enable visually impaired students to adjust the font size of text to suit their conditions. In that way, they would have access and ability to use information to prepare for their tests and examinations just like any other student without a visual impairment.

Assistive technology can be used to empower students with different types of learning disabilities [54]. Some of the learning disabilities that can easily benefit from assistive technology include supporting students with dyslexia [55], mobility and hearing problems [56, 57]), severe physical disabilities [58] and intellectual disabilities [59]. Saad et al. [59] postulate that

integrating technology into this twenty-first century curriculum helps students with intellectual disabilities by increasing their confidence and motivation through creative activities and web browsing. Computer technology generally benefits students with different types of disabilities as it allows them to obtain immediate feedback on their learning, self-paced learning and independence of learning [59].

It can therefore be summed that using educational technology is one of the best ways to provide equitable and equal education to all students. It is commendable in this digital era as it enables disabled students to reach out learning facilities with easy and more importantly to enrich their learning experiences by permitting them to learn anywhere and anytime [50]. Intellectuals do not just advocate for technology to be in a twenty-first century curriculum because technological enthusiasts say so. Intellectuals take an academic stance of taking into consideration what scholarship in different contexts say about the matter. Research done by different scholars in many countries around the globe comes to a conclusion that technology in the curriculum results in improved learning.

A research conducted by Avsec and Kocijancic [60] in Slovenia found that technological knowledge helped students develop skills such as problem solving, critical thinking and decisionmaking. It made students browse through the web in search of various approaches to solve educational problems and make recommendations which can be used by other students in different contexts.

In the South African context, Stott and Hattingh [61] state that deep learning among university students was effectively promoted by using conceptual tutoring software. The main advantage of using conceptual tutoring software is its ability to provide immediate and individualised formative feedback to students' activities [62]. Various software and applications can be used to facilitate deep learning among students by engaging with activities and share responses that they get from the computer with other students in class. All that can be done while students are on campus or at home as long as they have Internet connection to facilitate their communication online. Electronic tutoring can also be used as a tool for promoting conceptual change [63] on the way in which students study in order to improve their engagement and academic performance in institutions of higher learning.

In the United States of America, technology was used to facilitate effective online collaborative learning environments [64]. Students successfully did group work using online systems. This was not only a cost effective strategy but also a way of promoting technological skills and engagement of students in different geographical locations. Such learning facilitation is contemporary and very encouraged in this global milieu where universities are pairing their students with other universities internationally as part of education in the global world [65]. There is a lot of collaboration that is happening in universities today. Current collaborations that are happening in universities today see students learning a lot from other students in various countries without necessarily travelling. Technology is a tool that is being used to facilitate this international education which is characterised by high student engagement and less travelling.

In Korea, a research done to investigate the user's perception and attitude of Computer-Based Assessment (CBA) found that both students and instructors agreed to use it (CBA) as a supplementary tool in evaluating students [66]. CBA is dependent on computer technology.

It (CBA) is very effective on the learning of students in higher education [67] as it enhances student participation and academic performance [68]. Zakrezewski and Bull [69] concur that there is evidence which shows that CBA improves students' test and examination results.

Thus, one can safely argue from the intellectuals' point of view that technology into the curriculum presents vast opportunities for improving teaching and learning. It can however be a threat to quality education if it spirals out of human control. Gandawa [70] postulates that technology is a blessing, but it can also be a curse if humanity loses control of its usage. Technology can present opportunities associated with student centred learning, which is heavily condoned by social constructivism and social learning theories. It can be a threat or curse when it erodes a reading culture or when students abuse it by posting hurtful information to others, for example, on social media.

OECD [27] postulates that the future of education will be bleak if technology is not devised correctly. Technology has to be controlled by humans in order to achieve good educational goals not the other way round (technology controlling humans). Its usage as an educational resource needs to be monitored and channelled towards effective teaching and learning. There is need for a balance to be strike in order to ensure that both digital immigrants and digital natives maximise the usage of technology to enhance learning opportunities.

5. Summary and conclusion

Technology has transformed education in this twenty-first century. It has brought a lot of amazing teaching and learning experiences to both lecturers and students. It will be inadequate to only shower blessings about how technology has moved education on the positive side without also reflecting on threats which have come along. Technology has come as a double-edged sword, which has positive impacts as well as potential risks and threats to the education system [27]. There are some serious educational threats which came about as a result of technology in the curriculum. The threats include a total loss of a reading culture among students and bringing the whole education system into disrepute as a result of overdependence on some online dubious sources. This makes it a bit difficult for one to give a clear cut response to whether or not technology is the way to quality education. This resonates with Selwyn [7] who concluded that there is no clear answer to the question: 'Is technology good for education'. Complications around answering that question are what filled this section. The section collected and collated views about technology from three fundamental perspectives: technology from the critics' perspective, technology from enthusiasts' viewpoint and technology from an intellectual point of view.

Considering the fact that we are currently living in a digital environment where everything is done using technology in one way or the other, this study concludes that it is imperative for academics to embrace emerging technologies in their teaching. A very good example is that of primary and secondary schools in Cape Town, South Africa. A good number of schools in Cape Town have computer labs where students are expected to use computers in their learning. In some schools, learners have tablet computers and there is Wi-Fi connected by the Western Cape Education Department for teachers and learners to use. In such a context, it is

imperative for trainee teacher institutions to teach students using technology so that when they graduate, they will integrate easily in their workplaces (schools). Most of the universities around the globe have a common graduate attribute of inculcating graduates who can use technology. This is because employers today want graduates who have a combination of disciplinary expertise and graduate attributes such as technologically adept. In that case, various technologies need to be used to facilitate teaching and learning in order to adequately prepare graduate for the world of work. Views of technology critics do not hold water in this twenty-first century as students can be afforded opportunities to study various content embedded in digital books.

Students of today enjoy spending time using their technology gadgets such as smart phones. They like to use social media such as Facebook, WhatsApp and Twitter. Why cannot curriculum be revised to accommodate various technologies and use them to teach students effectively? Learning management systems like blackboard and Moodle allows blended learning to take place and that is what students like the most. A flexible curriculum needs to make provision for all that.

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Globalization is a process of interaction and integration among people, businesses, institutions, and governments of different countries in many aspects surrounding human lives. It is not a threat to sovereignty or a form of Westernization.

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