

Creativity, Innovation and Competitiveness in Nigeria: An Economic Exploration

Stephen K. Dimnwobi¹, Chukwunonso S. Ekesiobi² and Emilia M. Mgbemena³

¹Graduate Research Student, Department of Economics, Nnamdi Azikiwe University, Awka, Anambra state, Nigeria, ^{2,3}Department of Economics, Chukwuemeka Odumegwu Ojukwu University, Anambra State, Nigeria
Email: stephenkcdim@gmail.com

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Abstract

Creativity and innovation are important determinants of competitiveness, without which a nation or economy hardly becomes competitive. They are central to the development of any economy and as such a country must constantly keep abreast and adapt continuously to pave the way for significant improvement in contemporary times. This paper attempts an economic discourse of creativity, innovation and competitiveness using various indices for their measurements and examining critically where Nigeria (the country of interest) is positioned. The study reveals that Nigeria has a very low degree of creativity, innovation and competitiveness, when compared to other nations and this poses a threat to the diversification of the Nigerian economy championed by the present administration. The study recommends that Nigeria should take urgent concrete steps in addressing weaknesses in infrastructure, macroeconomic policy and security; while adequate investment should be made on human capital development.

Keywords: Creativity, Innovation, Competitiveness, Economic Development

Introduction

In today's highly competitive world, most economic success depends increasingly on the ability to create and innovate. With the advent of a global knowledge economy, knowledge is increasingly the primary source of innovation, creativity and competitiveness (Ezenwakwelu & Ikon, 2014). Creativity and innovation is an important part of competitiveness. Without creative and innovative companies a national economy hardly becomes competitive (Porzse et al., 2012). Creativity, innovation and competitiveness are central to the development of any economy. Creativity is the ability and power to develop new ideas, innovation on the other hand usually implies the use of these ideas while competitiveness is a country's share of world market for its product (Oluwadare, 2015; Porter, Ketels & Degedo, 2007).

Creativity and innovation may seem similar but are actually quite different processes. Creativity is the thinking process involved in producing an idea or a concept that is new, original, useful, or satisfying to its creator or to someone else. Innovation refers to doing new

things. Creativity involves coming up with a new idea, whereas innovation involves implementing the new idea. Therefore innovation is applied creativity (Rue & Byars, 2000). Creativity is the mental and social process, fuelled by conscious or unconscious insight of generating ideas, concepts, and associations. Innovation is the successful exploitation of new ideas: it is a profitable outcome of the creative process, which involves generating and applying in a specific context products, services, procedures and processes that are desirable and viable. Naturally, people who create and people who innovate can have different attributes and perspectives (Serrat, 2009). For creativity, innovation and competitiveness to take place in an economy, a paradigm shift is required as they are vital ingredients for translating products of research into outcomes that can enhance profitability and satisfaction (Oluwadare, 2015). This seems like a tall order for a country like Nigeria where there are many forces that militate against creativity, innovation and competitiveness. Basic social amenities like electricity, water, roads, health care services, houses etc are grossly inadequate. This makes an average Nigerian worker to be pre-occupied with providing basic necessities of life on their own with little or no time left for creative and innovative thinking. Creativity, innovations and competitiveness have not been given their rightful positions in the development of the Nigerian economy. For instance, youths at different times and different geographical locations in Nigeria have produced machineries, equipments, technology methodology, products and services which were announced as laudable but not encouraged nor sponsored (Oluwadare, 2015).

Globally, competitiveness of any country depends on the stages of development as indicated by the global competitiveness index (World Economic Forum, 2015). These categories of development and transition from one stage to another, in line with well-known economic stage of development as indicated by the World Economic Forum (2015) includes: the factor-driven economy which is the first stage of development is evident where countries compete based on factor endowments. As a country becomes more competitive and transit into the second stage of development known as efficiency-driven stage, they must begin to develop more efficient production processes and increase product quality (Onukwuli, Asogwa & Akam, 2016). As a country transits to the innovation-driven stage they produce new and different goods using most sophisticated production processes and by innovating new ones. Any country maintaining competitiveness at any stage of development hinges primarily on well-articulated sub-index which borders on basic requirements sub-index, efficiency enhancer sub-index and innovative and sophisticated factor sub-index for developmental stages of one, two and three respectively (Onukwuli et al., 2016).

Increased importance of creativity and innovation provides great potential for countries to strengthen their economic and social development by providing more efficient ways of producing goods and services and delivering them more effectively to a greater number of people. Wealth creation through application of human knowledge, creativity and innovation is steadily outpacing wealth creation through extraction and processing of natural resources (Kefela, 2010). Creativity and innovation has increasingly become an important means for value creation as it is a vital commodity to countries, businesses and individuals in the 21st century. Evidence suggests that creativity, innovation and competitiveness are capable of helping nations to achieve developmental goals (Kefela, 2010).

Nigeria aspires to break into the league of the 20 leading economies in the World by the year 2020. Also diversification of the Nigerian has been a top priority of the Buhari-led administration due to dwindling oil revenue. These aspirations emerged on the realization that the endowment of Nigeria in material and human resources placed her in good stead to achieve greatness. Creativity is increasingly the cornerstone of innovation and economic progress for nations across the globe, Nigeria inclusive (Florida, Mellander & King, 2015). Regrettably, Nigeria is not ranked among the 139 countries worldwide in the 2015 Global Creativity Index (GCI), which reflects three key factors that shape long-run economic prosperity: Technology, Talent, and Tolerance. Australia takes the top spot on the Global Creativity Index followed by the United States in second, New Zealand third, and Canada fourth. Denmark and Finland are tied for fifth. Sweden, Iceland, Singapore, and the Netherlands round out the top ten. Among the African countries ranked are South Africa, Botswana, Kenya, Cameroon, Burkina Faso, Senegal, Mali, Mozambique, Benin, Ethiopia, Central Africa Republic, Algeria, Tunisia, Uganda, Egypt, Niger, Morocco and many others. Similarly the Global Innovation Index (GII) 2015 which covers 141 economies around the world and uses 79 indicators across a range of themes ranks Nigeria as the 128th economy out of 141 economies in the world. Nigeria which is the presumed 'giant of Africa' ranks below some African countries such as Mauritius (49 of 141), South Africa (60 of 141), Tunisia (76 of 141), Morocco (78 of 141), Senegal (84 of 141), Botswana (90 of 141), Kenya (92 of 141), Rwanda (94 of 141), Mozambique (95 of 141), Malawi (98 of 141) and many others (Cornell University, INSEAD & WIPO, 2015)

Nigeria is evidently lagging behind with respect to global competitiveness (Blanke, Paua & Sala-i-Martin, 2005; Blanke 2008; Ozughalu, 2008; Anyanwu and Erhijakpor, 2009; Adebayo, 2010; World Economic Forum, 2015; Onukwuli et al., 2016). This has impacted adversely on the growth and development of the country. Nigeria has a very low degree of competitiveness. A snapshot of Nigeria's competitiveness by pillar in the Global Competitiveness Index as noted by the global competitiveness report 2015-2016 shows that Nigeria's performance in each of the twelve pillars leaves much to be desired. The country is plagued by weak and deteriorating infrastructure, institutions, health and primary education, insecurity and corruption (Anyanwu & Erhijakpor, 2008). This is evident in the following competitiveness scorecard; Rankings in institutions (124 of 140 countries), infrastructure (133 of 140 economies), health and primary education (140 of 140 nations), higher education (128 of 140), goods market efficiency (100 of 140), technological readiness (106 of 140) and innovation (117 of 140). Nigeria scored and ranked comparatively low in the Global Competitiveness Index and in all the pillars of the index (World Economic Forum, 2015). Nigeria's suboptimal creativity, innovation and competitiveness ranking is responsible for many of the socio-economic maladies that plague the country. Weak creativity, innovation and competitiveness leads to poor performance in international trade, poor economic growth, high unemployment rate, economic backwardness and poor quality of life. It also breeds and perpetuates poverty and underdevelopment (Ozughalu, 2008).

This paper will examine creativity, innovation and competitiveness in Nigeria in a five-section arrangement. While the first section introduces the paper, section two briefly reviews some conceptual issues relating to creativity, innovation and competitiveness. Section three discusses the global creativity and innovation index and Nigeria's position. While section four

looks at the Global competitiveness index examining critically how Nigeria has fared in the ranking, the final section articulates the conclusion and policy implications.

Conceptual Issues

This section focuses on some major conceptual issues associated with creativity, innovation and competitiveness. The concept of creativity and innovation is examined in sub-section 2.1 and 2.2 respectively while the concept of competitiveness is discussed in sub-section 2.3.

Creativity

Creativity has been viewed as the construction of ideas or products which are new and potentially useful (Fillis & Rentschler, 2010). Creativity has been identified as one of the most distinct of human attributes. It is indeed a special case of problem solving in which originality is emphasized (Achor, 2014). Creativity is marked by the ability to create, bring into existence, to invent into a new form, to produce through imaginative skill, to make to bring into existence something new. Creativity is not ability to create out of nothing, but the ability to generate new ideas by combining, changing or reapplying existing ideas. Some creative ideas are astonishing and brilliant, while others are just simple, good practical ideas that no one seems to have thought of yet (Harris, 1998). Everyone has substantial creative ability irrespective of age, class, gender or race. Creativity is also an attitude, the ability to accept change and newness, a willingness to play with ideas and possibilities, a flexibility of outlook, the habit of enjoying the good, while looking for ways to improve it, we are socialized into accepting only a small number of permissible or normal things (Okpara, 2007). Creativity is a process by which a symbolic domain in the culture is changed. New songs, new ideas, new machines are what creativity is about Mihaly (1997). Creativity is the ability to make or otherwise bring into existences something new, whether a new solution to a problem, a new method or device, or a new artistic object or form. Wyckoff (1991) as noted in Okpara (2007) views creativity as new and useful. Creativity is the act of seeing things that everyone around us sees while making connections that no one else has made. Creativity is moving from the known to the unknown (Okpara, 2007).

According to Amabile (1996), creativity is the production of novel and useful ideas in any domain. Dworketzky (1997) sees creativity as the ability to originate something new and appropriate by transcending common thought constraint. DeBono (1992) suggests that 'creative' means bringing into being what was not there before. Amabile (1987) submits that a product or a response is creative if it is novel and an appropriate solution to an open ended task. Creativity is problem solving, albeit of an original innovative nature. It is the process of sensing difficulties, problems, gaps in information, missing elements making guesses of formulating hypothesis about these deficiencies, testing and re-testing them and finally communicating the results (Oluwadare, 2015). In order to be considered creative, a product or an idea must be different from what has been done before but the product or idea cannot be merely different for difference sake, it must also be appropriate to the goal at hand, correct, valuable, or expressive of meaning. Lefton (1994), as noted by Halim and Mat (2010), views creativity basically as a term that implies the process of developing original, novel, and appropriate response to problems. Creativity in a microeconomic sense, allows an organization to take advantage of opportunities which develop as the result of changing environmental conditions. Creativity plays an important role in new product development and creativity consists of three techniques: brainstorming, visual confrontation,

morphological techniques (Phong-inwong and Ussahawanitchakit, 2011 as noted in Adegboyega, 2012).

Innovation

Innovation is seen as the commercial exploitation of new ideas (Fagerberg 2005). Innovation is alternatively viewed as a process of taking ideas to market. It describes the process of adding value to creative ideas (Oluwadare, 2015). Lucke and Katz (2003) assert that innovation from an organization perspective is the successful introduction of a new thing or method. Innovation is the embodiment, combination or synthesis of knowledge in original, relevant, valued new products, process or services. Innovation is the process of turning new ideas into practical reality. As noted by Amabile (1996), innovation is the successful implementation of creative ideas within an organization. DeBono (1992) defines innovation as putting into effect something that is new. The term innovation can be described as something original and, as consequence, new that breaks into the market or society (Frankelius, 2009). Innovation is the process of creating and implementing a new idea (Hellriegel, Jackson & Slocum 1999). Innovation is the application of better solutions that meet new requirements, unarticulated needs or existing market needs. This is accomplished through more effective products, processes, services, technologies, or ideas that are readily available to markets, governments, and society. Innovation is defined as adding something new to an existing product or process. The key words are adding and existing. The product or process has already been created from scratch and has worked reasonably well. When it is changed for it to work better or fulfill a different need, then there is innovation on what already exists. Innovation is the successful exploitation of new ideas (Okpara, 2007).

Innovation is the process of bringing the best ideas into reality, which triggers a creative idea, which generates a series of innovative events. Innovation is the creation of new value. Innovation is the process that transforms new ideas into new value- turning an idea into value. You cannot innovate without creativity. Innovation is the process that combines ideas and knowledge into new value. Without innovation an enterprise and what it provides quickly become obsolete (Okpara, 2007). Innovation differs from invention in that innovation refers to the use of better and, as a result, novel idea or method, whereas invention refers more directly to the creation of the idea or method itself (Ezenwakwelu & Ikon, 2014).

Innovation generally is the term used for the process of developing new products or processes, improvements on products or processes or new ways of doing things. It can result in inventions or the ability to generate entirely new outcomes through refinement in products and processes: technology or administration in an organization either in each of these items separately or in all of them collectively. Kotler (2006) and Aliu (2010) as cited in Adegboyega (2012), define innovation as any good service or idea that is perceived by someone as new. Kuczmariski, Middlebrooks, and Swaddling (2000) suggest that innovation brings a new perceived benefit or value to a customer, employee, or shareholder. The new perceived benefit ranges from minimal to massive and may be functional, psychological, emotional, or financial. Adair and Thomas (2004) as noted in Adegboyega (2012) opine that to innovate is to introduce something new – an idea, method or device – it is a combination of processes: generating new ideas and the following implementation.

Innovation requires a fresh way of looking at things, an understanding of people, and an entrepreneurial willingness to take risks and to work hard. An idea doesn't become an

innovation until it is widely adopted and incorporated into people's daily lives. Schumpeter (1934) believes that the concept of innovation, described as the use of an invention to create a new commercial product or service, is the key force in creating new demand and thus new wealth. Innovation creates new demand and entrepreneurs bring the innovations to the market. This destroys the existing markets and creates new ones, which will in turn be destroyed by even newer products or services. Schumpeter calls this process creative destruction.

Innovation can be developed by less formal on-the-job modifications of practice, through exchange of professional experience. The more radical and revolutionary innovations tend to emerge from research and development, while more incremental innovations may emerge from practice. Innovation by businesses is achieved in many ways, with much attention now given to formal research and development for breakthrough innovations. Research and development help spur on patents and other scientific innovations that lead to productive growth in such areas as industry, medicine, engineering, and government (Mark, Katz, Rahman & Warren, 2008). Innovation processes usually involve: identifying needs, developing competences, and finding financial support (Kline, 1985). All organizations can innovate, including for example hospitals, universities and local governments (Salge & Vera, 2012). For instance as noted by Ezenwakwelu and Ikon (2014), Lagos state government in south west Nigeria in an attempt to tackle the perennial traffic jam in Lagos metropolis introduced special designated buses called "BRT Buses" to ply designated routes created for the buses in 2011. This innovative idea greatly saves time and money for all grades of workers and employers in Lagos city with a population of over 15 million people. Statistics shows that over 3 million people are transported in the BRT buses daily within Lagos metropolis (Ezenwakwelu & Ikon, 2014). Innovation is fostered by information gathered from new connections; from insights gained by journeys into other disciplines or places; from active, collegial networks and fluid open boundaries. Innovation arises from organizing circles of exchange, where information is not just accumulated or stored, but created. Knowledge is generated a new from connections that were not there before (Wheatley, 1994, as noted in Okpara, 2007).

Competitiveness

There is no universally accepted definition of the term "competitiveness" (Reiljan, Hinrikus & Ivanov, 2000). Budd and Hirmis (2004) observed that there are multifarious conceptualizations of the term. Competitiveness reflects a position of one economic entity (household, enterprise, industry, country) in relation to other economic entities by comparing the qualities or results of activities reflecting superiority or inferiority (Reiljan et al, 2000). Porter, Ketels and Degedo (2007) defined competitiveness as a country's share of world market for its product. World Economic Forum (2015) explains competitiveness as a set of institutions, policies and factors that determine the level of productivity of a country. Adebayo (2010) opined that the goal of competitiveness is to ascertain the productivity of a nation which is the major plan that paves the way for sustainable development. Prosperity is determined by the productivity of an economy, which is measured by the value of goods and services produced per unit of nation's human capital and natural resources. The productivity level also determines the rate of return by investment in an economy, which in turn are fundamental drivers of its growth rates (Onukwuli et al, 2016).

The United Kingdom department of trade and industry (1998) defines competitiveness as the ability to produce the right goods and services of the right quality, at the right price, at the right time. It means meeting customer needs more efficiently and more effectively than other firms. The definition above relates to competitiveness of firms which differs from a macroeconomic perspective that is interested in competitiveness of nations. OECD (1996) views competitiveness from the macro standpoint and defines national competitiveness as “competitiveness of a nation in the degree to which it can, under free and fair market conditions, produce goods and services which meet international market standards, while simultaneously maintaining and expanding the real incomes of its people over the long term”. This implies that any nation that does not produce enough goods and services which sufficiently meet the demands or requirements of international market cannot be said to be competitive. Fagerberg (1996) captures national competitiveness as the ability of a country to secure high standard of living for its citizens relative to the citizens of other countries, now and in the future.

To measure the competitiveness of nations in a robust manner, Porter (1990) proposes that an industry-by-industry evaluation should be done first using a simple model known as the “Diamond of National Competitiveness”. This model considers the competitive capacity of a nation in a specific industry as its capacity to entice firms to use the country as a platform from which to conduct business (Ozughalu, 2008). The diamond model highlights and describes four major factors that affect firms’ decision. Porter (1990) further opined that after assessing the strength of the “diamond” for each industry, governments should concentrate their effort on boosting the industries in which the diamond is strong rather than weak. The world economic forum has developed what is known as Global Competitiveness Index in order to assess the national competitiveness of countries. The Global Competitiveness Index though simple in structure provides a holistic overview of factors that are critical to driving productivity and competitiveness (Ozughalu, 2008).

Global Creativity and Innovation Index: The Nigerian Case

The Global creativity index is a broad-based measure for advanced economic growth and sustainable prosperity based on 3Ts - Talent, Technology, and Tolerance. It rates and ranks 139 nations worldwide on each of these dimensions and on our overall measure of creativity and prosperity. To create these rankings, creativity is defined as the product of three measurable variables, “the Three Ts”: Technology, Talent and Tolerance. “Technology” rankings were determined by looking at investment levels in research and development, plus patents per capita. National “talent” is evaluated as a composite of the percentage of adults with higher-education degrees and the percentage of workforce involved in creative industries. Interestingly, the third factor in the creativity index was “tolerance”; a ranking based on how each country treats its immigrants, racial and ethnic minorities, and lesbian, gay, bisexual, and transgender (LGBT) residents (Flanagin, 2015). To come to these results, 139 countries were analyzed and ranked within each category. Countries for which complete data could not be sourced were not included (Nigeria inclusive), and it is worth noting that these are generally places with relatively low levels of economic development. Overall creativity (GCI) is quantified as the average of each country’s rankings across categories, and divided once more by the total number of observations used to determine each T (Flanagin, 2015).

Global creativity, as measured by the Global Creativity Index, is closely connected to the economic development, competitiveness and prosperity of nations. Countries that score highly on the Global Creativity Index have higher levels of productivity (measured as economic output per person), competitiveness, entrepreneurship, and overall human development. Creativity is also closely connected to urbanization, with more urbanized nations scoring higher on the Global Creativity Index (Florida, Mellander & King, 2015). The Global Creativity Index is associated with higher levels of equality. Nations that rank highly on the GCI also tend to be, on balance, more equal societies. There are two approaches to balancing creative economic growth and inequality. A high road path, associated with the Scandinavian nations, combines high levels of creative competitiveness with relatively low levels of inequality. The low road path, associated with the United States and the United Kingdom, combines high levels of creative competitiveness with much higher levels of inequality (Florida et al., 2015).

Table 3.1

Global Creativity Index (GCI) and Related Indices for Some Selected African Countries for 2015

Rank (out of 139 countries)	Country	Technology	Talent	Tolerance	Global Creativity Index
39 th	South Africa	30	62	57	0.564
59 th	Mauritius	-	76	68	0.477
61 st	Botswana	-	73	75	0.462
70 th	Kenya	82	-	52	0.417
72 nd	Cameroon	-	103	59	0.408
75 th	Burkina Faso	-	122	46	0.382
85 th	Senegal	-	112	64	0.355
89 th	Mali	-	114	64	0.347
90 th	Mozambique	63	117	50	0.346
96 th	Benin	-	101	86	0.311
98 th	Ethiopia	103	95	42	0.295
101 st	Central Africa Republic	-	128	67	0.286
102 nd	Algeria	68	77	116	0.279
104 th	Tunisia	-	72	131	0.260
117 th	Uganda	-	108	109	0.197
118 th	Egypt	93	66	134	0.196
119 th	Niger	-	132	89	0.185
120 th	Morocco	78	98	120	0.178
122 nd	Cote d'Ivoire	94	115	89	0.171
127 th	Malawi	-	133	101	0.135
133 rd	Liberia	-	121	120	0.109
138 th	Ghana	-	116	136	0.073

Source: Florida, Mellander and King (2015). The Global Creativity Index

Nigeria was not ranked in the 2015 global creativity index as shown in table 3.1. Other relative smaller African countries such as Botswana, Kenya, Cameroon, Niger, Uganda, Liberia, Cote

d'Ivoire, Malawi were all ranked but Nigeria didn't make the cut. This places serious doubts on the viability of development ambitions and aspirations of the country going forward. Innovation is fast gaining prominence in all kinds of economic activity around the world. All the economies of the world are finding that innovation is one of the main drivers of economic growth. This renewed understanding of the significance of innovation is having a growing impact on the course of policy formulation in many countries. A closer look of the global innovation index 2015 suggests that developing nations are gradually keeping pace with high-income ones in their efforts to introduce policies that will increase their innovation capacity (Cornell University, INSEAD & WIPO, 2015). The Global Innovation Index (GII hereafter) focuses on improving ways to measure innovation, understanding it, identifying targeted policies and good practices. The GI helps to create an environment in which innovation factors are continually evaluated. Each year the variables included in the GI computation are reviewed and updated to provide the best and most current assessment of global innovation and it provides a key tool of detailed metrics for 141 economies in the year 2015, representing 95.1% of the world's population and 98.6% of the world's GDP (in current US dollars). Four measures are calculated: the overall GI, the input and output sub-indices and the innovation efficiency ratio as shown in figure 3.1. The overall GI score is simply the average of the input and output sub-index scores; the innovation input sub-index comprises of five input pillars that capture elements of the national economy that enable innovative activities: Institutions, human capital and research, infrastructure, market sophistication, and business sophistication. Similarly the innovation output sub- index provides information about outputs that are the results of innovative activities within the economy which are knowledge and technology outputs and creative outputs (Cornell University, INSEAD & WIPO, 2015).

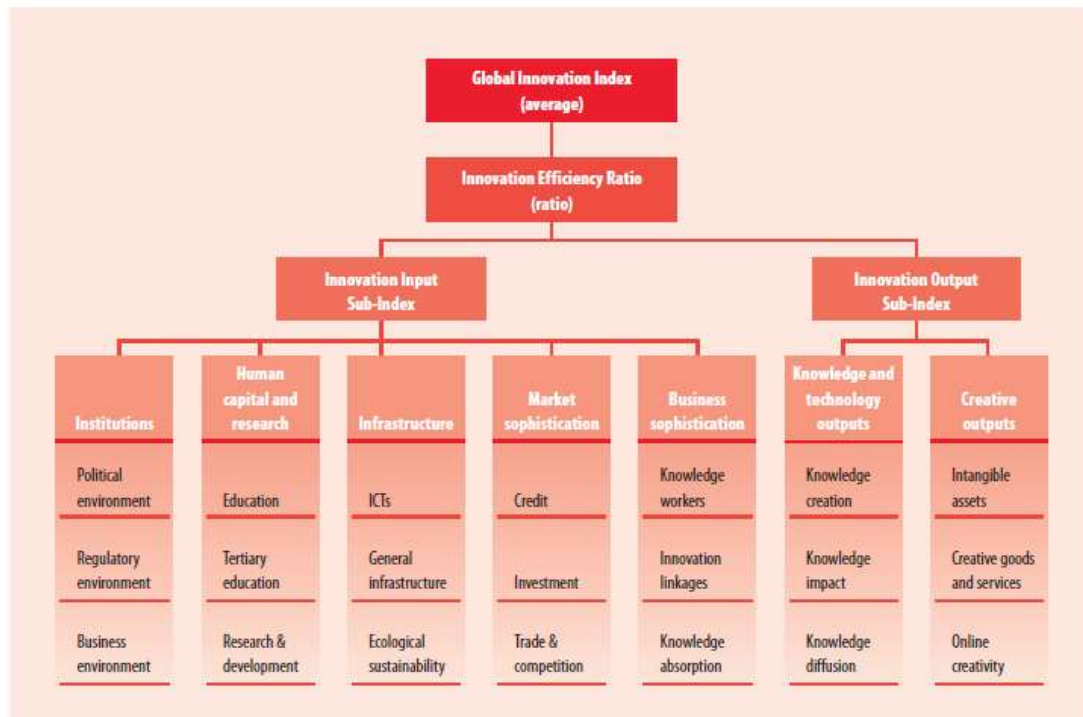


Figure 3.1: Framework of the Global innovation index 2015

Source: Cornell University, INSEAD & WIPO (2015)

However, the innovation efficiency ratio is the ratio of the output sub-index score over the input sub-index score. It shows how much innovation output a given country is getting for its inputs. As shown in figure 3.1, each pillar is divided into three sub-pillars and each sub-pillar is composed of individual indicators, for a total of 79 indicators.

The Global innovation index report is a useful barometer on an economy’s innovation performance and it further provides tools that every economy wanting to enhance its innovation capacity can use. The top three economies in the GII rankings of 2015 for each region are as follows: in Sub-Saharan Africa, the top three are Mauritius, South Africa, and Senegal as shown in table 3.2; in Central and Southern Asia, these are India, Kazakhstan, and Sri Lanka; in Latin America and the Caribbean, these are Chile, Costa Rica, and Mexico; in Northern Africa and Western Asia, these are Israel, Cyprus, and Saudi Arabia; in Southeast Asia and Oceania, these are Singapore, Hong Kong (China), and the Republic of Korea; in Europe, these are Switzerland, the United Kingdom, and Sweden; in Northern America, there are only two-the USA and Canada (Cornell University, INSEAD & WIPO, 2015).

Table 3.2

Global innovation index rankings for some selected African countries

Rank (Out of 141 countries)	Country/Economy	Score (0-100)	Rank (Out of 141 countries)	Country/Economy	Score (0-100)
49 th	Mauritius	39.23	110 th	Cameroon	27.80
60 th	South Africa	37.45	111 th	Uganda	27.65
76 th	Tunisia	33.48	112 th	Gambia	27.49
78 th	Morocco	33.19	116 th	Cote d'Ivoire	27.16
84 th	Senegal	30.95	117 th	Tanzania	27.00
90 th	Botswana	30.49	118 th	Lesotho	26.97
92 nd	Kenya	30.19	120 th	Angola	26.20
94 th	Rwanda	30.09	123 rd	Swaziland	25.37
95 th	Mozambique	30.07	124 th	Zambia	24.64
98 th	Malawi	29.71	125 th	Madagascar	24.42
100 th	Egypt	28.91	126 th	Algeria	24.38
102 nd	Burkina Faso	28.68	127 th	Ethiopia	24.17
103 rd	Cape Verde	28.59	128th	Nigeria	23.72
105 th	Mali	28.37	133 rd	Zimbabwe	22.52
107 th	Namibia	28.15	134 th	Niger	21.22
108 th	Ghana	28.04	136 th	Burundi	21.04

Source: Cornell University, INSEAD & WIPO (2015). *The Global Innovation Index 2015: Effective Innovation*

The poor rankings of Nigeria in all the indices of development vis-à-vis the rest of the world raises so many fundamental questions begging for answers. As evidenced in table 3.2 Nigeria ranks 128th out of 141st innovative economy in the world thereby ranking lower than many African countries.

Nigeria and Competitiveness Performance: Exploring The Global Competitiveness Index

The World Economic Forum has been studying national competitiveness for almost three decades. During that period it has worked with leading academics, always taking into account relevant new ideas, literature and evidence (Anyanwu & Erhijakpor, 2009). The Global Competitiveness Index was introduced in 2004 and defines competitiveness as the set of factors, policies and institutions that determine the level of productivity in a country. Enablers and indicators of competitiveness include domestic investment, trade (exports and imports), net foreign direct investment and domestic innovation (Anyanwu & Erhijakpor, 2009). Productivity describes how efficiently available resources are used and therefore the growth performance of an economy (Sala-i-Martin et al., 2007; Porter et al., 2007). Thus, what is assessed is the potential of an economy to achieve sustained economic growth over the medium to long-term. But the micro-foundations of such productivity include three interrelated elements: The sophistication and capabilities with which domestic companies or foreign subsidiaries compete, the quality of the microeconomic business environment in which they operate and the state of development clusters that provide benefits through the proximity of related companies and institutions. Therefore, the index provides a methodological framework to assess the set of institutions, policies and factors that

determine the level of productivity of a country and identifies a large number of macro and microeconomic drivers of growth.

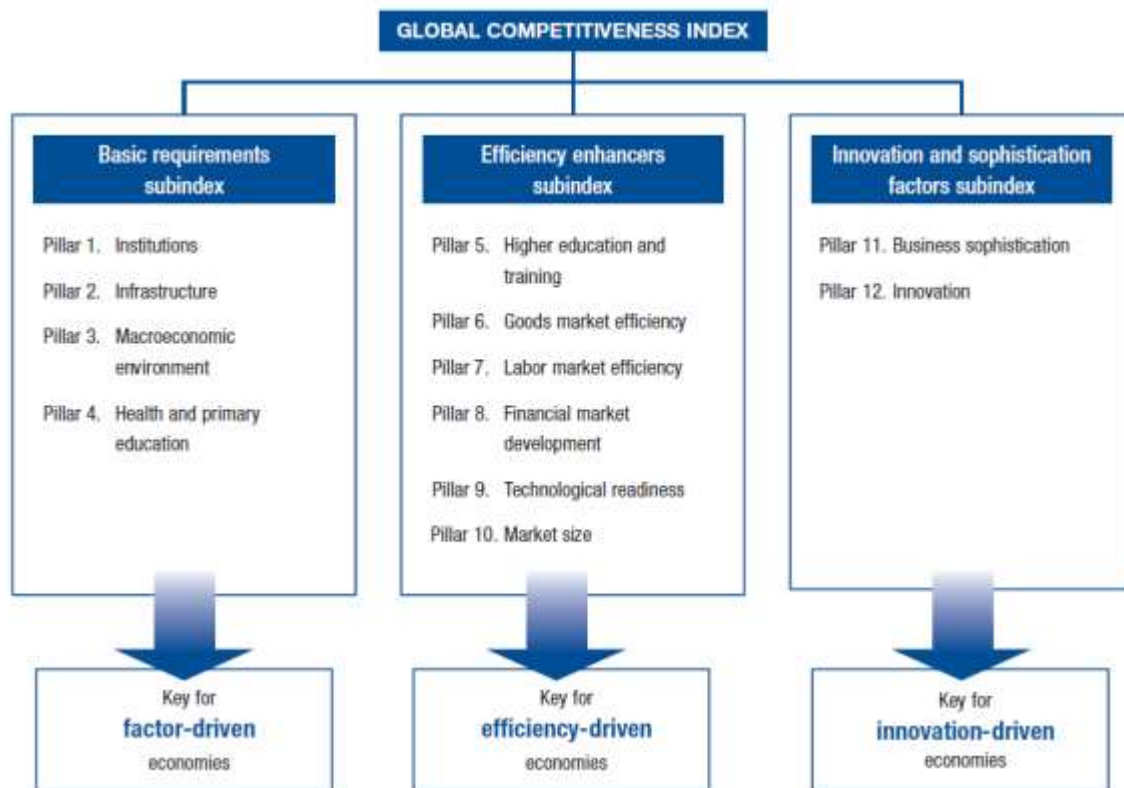


Figure 4.1: The Global Competitiveness Index Framework
Source: World Economic Forum (2015)

The Global Competitiveness Index builds on the awareness that competitiveness is an extremely complex phenomenon that cannot be explained by one or two causes; rather, competitiveness and sustained growth are determined by the interrelationships among several and diverse factors. Figure 4.1 shows the 12 pillars of competitiveness identified by the Global Competitiveness Index. Nigeria is currently placed in the transition stage, transiting from stage one to stage two, same as Gabon, Botswana and Algeria but behind South Africa, Swaziland, Namibia, Egypt, Tunisia, Cape Verde and Morocco who are already in stage two - the efficiency-driven stage of development as shown in table 4.1. Mauritius is the only African country that is transiting from stage 2 to stage 3.

Table 4.1

Selected Countries/economies at each stage of development

Stage 1: Factor-driven	Transition from stage 1 to stage 2	Stage 2: Efficiency-driven	Transition from stage 2 to stage 3	Stage 3: Innovation-driven
Bangladesh	Algeria	Albania	Argentina	Australia
Benin	Azerbaijan	Armenia	Brazil	Austria
Burundi	Bhutan	Bolivia	Chile	Belgium
Cambodia	Botswana	Bulgaria	Costa Rica	Canada
Cameroon	Gabon	Cape Verde	Croatia	Denmark
Chad	Honduras	China	Hungary	Finland
Cote d'Ivoire	Iran	Colombia	Latvia	France
Ethiopia	Kazakhstan	Egypt	Malaysia	Germany
Gambia	Kuwait	Georgia	Mauritius	Iceland
Ghana	Moldova	Jordan	Oman	Ireland
Guinea	Mongolia	Morocco	Panama	Japan
Haiti	Nigeria	Namibia	Poland	Malta
India	Philippines	South Africa	Romania	Norway
Kenya	Saudi Arabia	Swaziland	Seychelles	Qatar
Malawi	Venezuela	Tunisia	Turkey	Spain
Mali	Vietnam	Ukraine	Uruguay	Sweden

Source: World Economic Forum (2015)

The 12 pillars play a crucial role for all countries as drivers of competitiveness, but their importance differs according to each country's stage of development. Different pillars affect different countries in different ways. The elements driving productivity and therefore competitiveness change as countries move along the development path. Accordingly, the Global Competitiveness Index classifies countries into three specific stages of development: Factor driven, efficiency-driven and innovation-driven. In the factor-driven stage, countries compete on the basis of their factor endowments, primarily unskilled labour and natural resources and their economies are centered on commodities and/or basic manufactured products (Anyanwu & Erhijakpor, 2009). At this stage of development, competitiveness rests mainly on efficient and transparent public and private institutions (pillar 1), well-developed infrastructure (pillar 2), good macroeconomic fundamentals (pillar 3), and a healthy and literate labour force (pillar 4) (Anyanwu & Erhijakpor, 2009).

The global competitiveness index framework as shown in figure 4.1, assumes that in the first stage, the economy is characterized by factor endowments, primarily unskilled labour and natural resources. Companies sell basic products or commodities with their low productivity reflected in low wages (Onukwuli et al., 2016). Maintaining competitiveness at this stage of development hinges primarily on well-functioning public and private institutions, a well developed infrastructure, a stable macro-economic environment and a healthy workforce that has received at least a basic education, all these are basic requirements. As a country becomes more competitive, productivity will increase and wages will rise with advancing development (Onukwuli et al, 2016). Countries will then move into the efficiency driven stage of development, under this situation, they begin to develop more efficient production process and increase product quality because wages have risen and they cannot increase price. At this

point, competitiveness is increasingly driven by higher education and training, efficient goods market, well-functioning labour markets, developed financial market, the ability to harness the benefits of existing technologies and a large domestic or foreign market. All these are known as efficiency enhancer sub index required for competitiveness.

As countries move into the innovation driven stage, wages will have risen so much that they are able to sustain those higher wages and the associated standard of living only if their businesses are able to compete with new and unique products. At this point, companies must compete by producing new and different goods using the most sophisticated production process and by innovating new ones. Such innovation and sophistication factors sub index are critical in the innovation driven stage. The three stages of sub index are not independent; on the contrary the sub indexes are interrelated and reinforcing. To drive home this point, Adebayo (2010) illustrates that innovation is not possible in a world without institutions (Factor- driven) that guarantee intellectual property rights, cannot be performed in a country with poorly educated trained labour force (efficiency driven) and will never take place in economies with inefficient market (efficiency driven) or without extensive and efficient infrastructure.

Table 4.2

Nigeria's Performance with regard to Global Competitiveness and the Various Pillars of the Index (2015-2016)

Indices	Overall Rank (Out of 140 countries)	Score (1-7 Points)
Global Competitiveness Index	124	3.46
A. BASIC REQUIREMENTS	136	3.19
1 st Pillar: Institutions	124	3.19
2 nd Pillar: Infrastructure	133	2.10
3 rd Pillar: Macroeconomic Environment	81	4.61
4 th Pillar: Health and Primary Education	140	2.86
B. EFFICIENCY ENHANCERS	81	3.87
5 th Pillar: Higher Education and Training	128	2.75
6 th Pillar: Goods Market Efficiency	100	4.07
7 th Pillar: Labour Market Efficiency	35	4.55
8 th Pillar: Financial Market Development	79	3.75
9 th Pillar: Technological Readiness	106	3.03
10 th Pillar: Market Size	25	5.07
C. INNOVATION AND SOPHISCATION FACTORS	114	3.22
11 th Pillar: Business Sophistication	94	3.65
12 th Pillar: Innovation	117	2.78

Source: World Economic Forum (2015)

Table 4.2 shows Nigeria's performance with regard to the global competitiveness index and the various pillars of the index. Nigeria is ranked 124th improving by three places to the

previous year rankings. Table 4.3 shows that Nigeria is ranked lower than relatively smaller African countries in the 2015-2016 global competitiveness report. Global Competitiveness index shows the capacity of a national economy to ensure higher performances with lower costs when competing on the world market (Tosici & Iordan-Constantinescu, 2014).

Table 4.3

Global Competitiveness Index rankings for some selected African countries

Country	Rank (out of 140 countries)	Score	Country	Rank (out of 140 countries)	Score
Mauritius	46	4.43	Kenya	99	3.85
South Africa	49	4.39	Gabon	103	3.83
Rwanda	58	4.29	Ethiopia	109	3.75
Botswana	71	4.19	Senegal	110	3.73
Morocco	72	4.17	Cape Verde	112	3.70
Namibia	85	3.99	Ghana	119	3.58
Algeria	87	3.97	Nigeria	124	3.46
Cote d'Ivoire	91	3.93	Mali	127	3.44
Tunisia	92	3.93	Burundi	136	3.11
Zambia	96	3.87	Guinea	140	2.84

Source: World Economic Forum (2015)

The country's performance with regard to the Global Competitiveness Index in general and all the pillars of the index in particular, show that she has a low degree of competitiveness. This is evident in the low productive capacity and capability of the country and her perennial dependence on petrodollar to the detriment of the non-oil sector. Assessing the performance of the country on the specifics of each pillar reveals the following; Improvements in property rights, the efficiency of the legal framework to settle and challenge disputes, and the accountability of the private sector lift the country's institutions up by five places, albeit remaining low overall (124th). The picture is mixed on efficiency of the goods market (100th), where a less competitive domestic environment outweighs improvements to encourage foreign competition; the financial market (79th), where banks are rated as relatively sound but access to finance remains problematic; and the labour market, which is one of the region's most flexible (18th) but is dragged down by an inefficient use of talent (68th) and a comparatively low female participation rate (87th). Priorities include investment in infrastructure (ranking 133rd and singled out as the most problematic factor for doing business) and human capital, where poor health in the workforce (134th) and inefficient higher education (128th) holds the country back from fulfilling its potential (World Economic Forum, 2015).

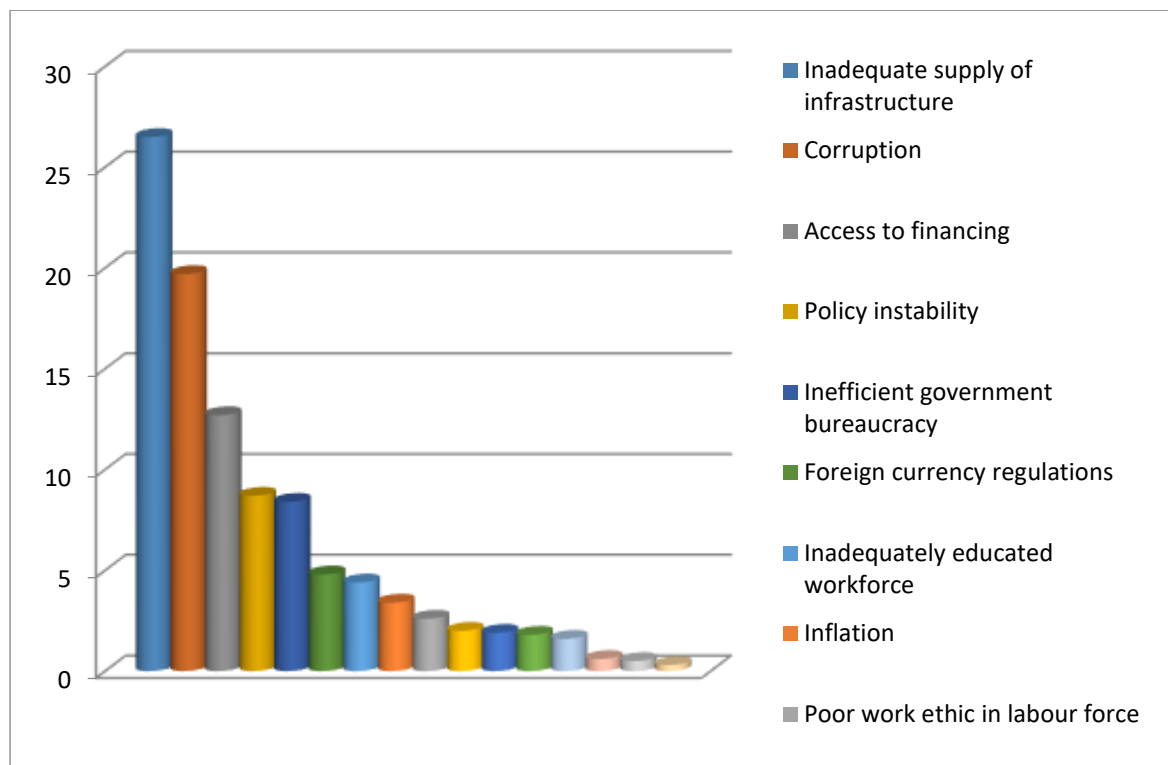


Figure 4.2: The most problematic factors for doing business in Nigeria

Source: World Economic Forum (2015)

A nation's competitiveness and prosperity depends on the capacity of its industries to innovate and upgrade and not just on its natural endowments (Porter, 1990). The economic incentives and regulations required for a dynamically functioning business environment in Nigeria are quite inadequate. The most problematic factors for doing business in Nigeria as displayed in figure 4.2 are enormous. An adverse business environment can add substantial production costs to firms and stifle innovation and entrepreneurship. Business obstacles in Nigeria include inadequate supply of infrastructure, corruption, access to financing, policy instability, inefficient government bureaucracy and so many other variables as shown in figure 4.2. There is need to strengthen the capacity of legal provisions to ensure transparency and accountability in the business environment (Oluwadare, 2015b).

Conclusion and Recommendations

Creativity and innovation are important elements of competitiveness. Without creative and innovative companies a national economy hardly becomes competitive. They are central to the development of any economy and are dynamic concepts and for any country to become and remain a creative, innovative and competitive economy, such a country must constantly keep abreast and adopt relevant changes that pave the way for significant improvement. The importance of creativity, innovation and competitiveness as a tool that could be used to achieve developmental goals of nations cannot be over emphasized. They are of a decisive importance in economic development of countries and are now profoundly reshaping the patterns of the world's economic growth and activity. An economy with a weak creativity and innovation base will lack strong competitiveness and will frequently experience poor growth and such a nation will be entrapped in poverty and underdevelopment. Economies that are competitive are increasingly dependent on their capability to create, use and diffuse

knowledge. In this paper, the necessity of creativity, innovation and competitiveness have been discussed using various indices for their measurements and examination, with particular attention to Nigeria.

The study reveals that Nigeria has a low degree of creativity, innovation and competitiveness, when compared to other nations and these pose a great threat to the diversification of the Nigerian economy championed by the Buhari-led administration. Nigeria's weak creativity, innovation base and competitiveness are responsible for many of the socio-economic maladies that plague the country. Weak creativity, innovative base and competitiveness lead to poor performance in international trade, poor economic growth, high unemployment rate, economic backwardness and poor quality of life. The study recommends that Nigeria should take urgent concrete steps in addressing weaknesses in infrastructure, macroeconomic policy and security; while adequate investment should be made on human capital development – with no room for half measures - as human capital development holds the key to high level of creativity, innovation and competitiveness. This will guarantee the availability of the requisite knowledge base in the country in the right quantity and quality to drive the 'change' the economy direly needs. In addition, useful and profitable new ideas, products and processes should be more recognized, rewarded, sponsored and patronized as this will ginger the populace to be creative and innovative thereby paving the way for the economy to be competitive.

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