

Embracing Productivity and Innovation For Sustainable Development

NzenwataChisom Beauty

P.M.B 174 Garki, G.P.O Abuja, Nigeria.

Abstract: Nigeria bags the largest labour force of its continent; this labour force was described by World Bank in 2014 as underutilized and unutilized with a high level of redundancy and dependency ratio. The unsatisfactorily result of low productivity of workers and underdevelopment is evident in the huge decline in the country's GDP. It's also observed that unresponsive labour force in a typical backward economy automatically translates into low income and low savings. This is worrisome to the government and the entire citizens due to the fact that the deadly impact of low productivity and lack of innovation cuts across all sectors of its economy including unemployment increase, poverty, poor infrastructural development etc. Stiffening labour productivity is an imperative component to this shift and to making the economic growth flexible and sustainable. The aim of the study was to identify the impediment to workers low productivity, innovation and sustainable development for economic growth. Five research questions were formulated for the study and primary data was retrieved from 264 respondents through structured questionnaire. The study applied five point likert type of rating scale and mean was used to analyze data responses. In attempt to answer the research question investigation revealed that infrastructural development and work environment is part of the impediment that affects workers increased productivity and continuous innovation. Applicable strategies which includes employees motivation, conducive work environment and advance infrastructural development were recommended by the study for aggregated productivity that will in turn increase economic growth.

Keywords: Productivity, Innovation, Sustainable Development, Labour force.

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I. Introduction

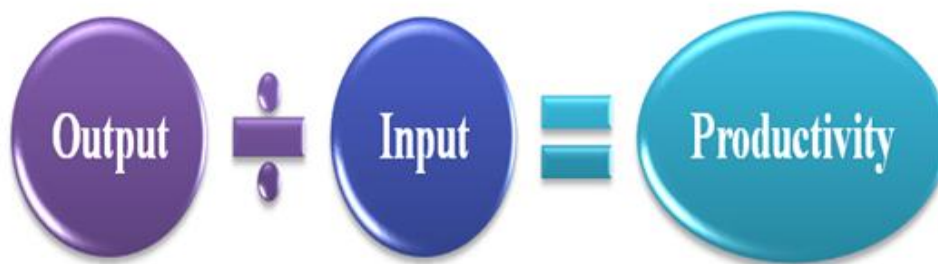
The economic growth of a country solely depends on the productivity of its labour force. In reality the quality of life and the well-being of its citizens truly lie on the effectiveness and efficiency of its general workforce. It's observed that the productivity of Nigerian labour force is low and cannot meet up to International standard. Yesufu (2000) opined that labour is predominantly considered as the most effective of all the factors that are employed for the creation of wealth, possessing the potential of energizing and serving as an instigator to all the resources. Productivity and creative innovations gains can immensely contribute exceptionally to the development of low income countries like Nigeria, by increasing the intensity of resources use, generating employment, increase in average wages income as well as relative changes in prices of goods and services. The eventual end result is poverty reduction, increase in the standard of living and a fall in income inequality. Productivity increase is penuriously associated with economic growth which broadly refers to a sustain rise in a country's economy per capital income over a long time. Notwithstanding sustainable development has a powerful connection with poverty depletion which in turns strengthens the economic growth. ILO (2004) stated that the Millennium development goal {MDG} objective is to reduce global poverty by half between the 1990 and 2015. An essential approach towards achieving this is for economies of low income countries (LIC) to grow at a high and sustained rate in area of productivity and constant innovation. However, DFID (2004) observed that global poverty has drop down overtime across the developing countries of the world, as a result of sustainable development (aggregated productivity growth) in densely populated countries like china & India .But it is a contrast story in Africa region, especially sub-Sahara Africa where poverty have not dropped significantly or worsen in some instance. ECA (2018) also observed that sustained economic growth over the last 15years has demonstrated that much of Africa's recent good growth performance is due to factor accumulation, not growth in total factor productivity. According to Dokpesi (2015) Nigerians are known to be very hard working but the productivity of its labour force which makes up 28% of its population has often been questioned. The campaign for productivity increase in Nigeria formally began in the year 1963 after the Morgan Wages Commission and the Okotie-Eboh tripartite agreement of 1964 to set up a National Wages Advisory Council to advise government on wages policy. However, Adebo Wages and Salaries Commission of 1970 recommended the setting up of the productivity, Prices and Income Board (PPIB). This grew the concern for labour productivity more especially in the public sector of the country and it orchestrated the establishment of

National productivity Centre which was recommended by the Whitely Council in 1971. In 1984, the National Productivity Centre (NPC) was finally inaugurated with the enabling decree No. 7 of 1987 now NPC ACT CAP of LFN 2004, thus legally establishing the Centre as a federal parastatal under the federal ministry of Employment, labour and Productivity Now Federal Ministry of Labour and Employment. From the forgoing NPC the apex body in Nigeria is charged with the mandate of accelerating socio-economic growth and development through productivity improvement initiatives.

McBeath (1996) defines productivity as a measure of how well resources are brought together in organization's and utilized for accomplishing a set of results. Different scholars have different definition and measuring of productivity accordingly. Productivity describes how output and inputs are related, thus labour productivity refer to the amount of output that is produced relative to the amount of labour that is used.

Figure.1 Productivity

What is Productivity?



Productivity is expressed or measured as a mathematical division of following parameters (functions).

$$\text{Output} / \text{Input} = \text{Productivity}$$

Source: Prof.MuditKatyani

<https://kalyan-city.blogspot.com/2013/02/what-is-productivity-definition-meaning.html>

The object of innovation is known as output that meets the expectations of the public, in Nigeria there is high prevalence of low productivity because the entire labour is not innovative due to certain constraints in the labour force. Innovation can only flourish in a country where there are enabling conditions like quality infrastructure, good educational system that horns the relevant knowledge, skills and capabilities, congenial working environment etc in the absent of all these innovation is stifled. It is observed that innovations instigated by research and development as well as labour force learning by doing will definitely enhance technological advancement. However innovations are already playing vital roles in creating economic opportunities in most countries as they are paramount pilots of technological difference in any competitive labour force. Though it create new possibilities like widening gap relatively to advance in technology and also requires skilled and expertise in the labour force. Innovation on its own fosters aggregated productivity as it affects the way workers work, interact and learn in any society.

Figure 2. Innovation



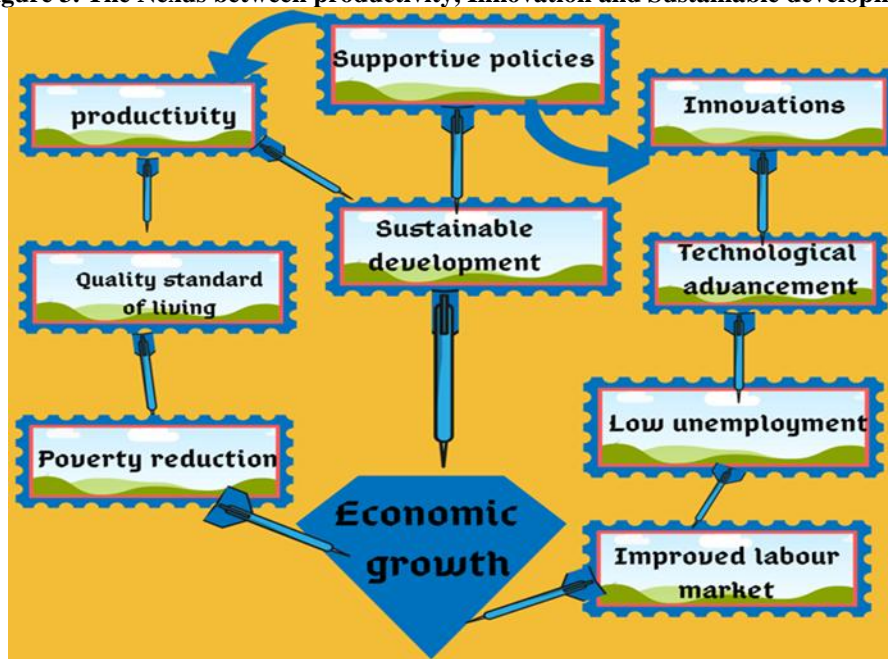
MIT Slogan Management review

<https://sloanreview.mit.edu/article/four-ways-to-get-your-innovation-unit-to-work/>

Yesufu(2000) opined that the nub for a developing economy and good standard of living starts with improved efficiency in the labour force. It is paramount to assess the impact of workforce productivity and innovations on sustainable development of Nigeria. Consequently, this research has attempted to provide answers to the following key questions:

- To what extent does workers' productivity affect sustainable development?
- To what extent does workers continuous innovation impact sustainable development?
- How does work environment affect workers' productivity and Innovation?
- What is the impact of infrastructural development on workers' productivity?
- Do government policies affect workers' productivity and innovation?

Figure 3. The Nexus between productivity, Innovation and Sustainable development



Source: author's description

1.2 Constraints to Productivity and Innovation in Nigerian labour force

Productivity and Innovation are mostly influenced by internal and external factors of the organization's environment. Akinyele (2007) categorize the factors into three namely:

1. General factors: climate, geographic distribution of raw materials, fiscal and credit policies, adequacy of public utilities and infrastructural facilities etc.

2. Organizational and Technical factors: the degree of integration, percentage of capacity, size and stability of production, etc.

3. Human factors: labour- management relations, social and psychological conditions of work, wage incentives, physical fatigue, trade union practices.

Oloko (1991) identified some socio-cultural factors affecting productivity and excellence in numerous organizations in Nigerian below;

*Low level of national consciousness.

* Absence of a keen sense of punctuality

*Existence of wide spread corruption.

*Personalization and monopolization of offices by the bureaucrats.

*Intense and negative class consciousness on the part of bureaucratic elites in their relationship with their subordinates.

There are many factors that inhibit productivity and innovation in the country; some of these are listed below.

Lack of motivational packages

Leadership style

Poor infrastructure

Lack of constant training

Poor reward system

Redundant labour

Delayed payment of wages

Gender inequality

Lack of creativity and innovation

Defective work environment

II. Literature Review

Adeosun (2016) observed that the economic growth of Nigeria, though a bit stable in the past few years, began to experience some downward trajectory in the fourth quarter of 2014. OECD (2001) asserts that measures of “productivity growth constitutes core indicators for the analysis of economic growth”. A key indicator of the living standard that captures both concepts is the per capital income and its sustained rise is a precondition for poverty reduction in developing countries. Blanchard (2009) stated that capital accumulation will continue to propel aggregate productivity growth until the economy reaches its steady state at which output per worker and capital per worker are no longer changing. In the case of underdeveloped countries, it tends to be below the steady state and thus there is acceptable latitude for increasing the level of capital to enhance productivity growth. Beyond or above the steady state, capital accumulation has no impact on economic growth that occurs at this stage rather it’s attributed to origin of technological change. Emefiele (2014) also opined that the endogenous growth model which treats technological change as endogenous provides explanation on the mechanism through which technological progress can help an economy overcome “capital non-effectiveness” beyond steady state, so that aggregate productivity can continuously rise with capital deepening. It is also generally observed that technological change is solely based on the knowledge which is driven by innovation in any process of production and it depends heavily on research and development (R&D), this in turn relies on the allocation of labour marketing aiming to maximize business profits and market opportunities. Kniivila (2007) stressed that technological change and innovations are essential sources of structural change in any economy. Thus referring to the work of Schum Peter, who noted that “innovations leads to creative destruction, a process whereby labour force associated with old technological decline and new sectors emerge and grow. ILO (2015) opined that to foster domestic demand to countries will also need to pass on productivity gains to workers and strengthen investment in human resources to further improve productivity and competitiveness. Burnstein and Fisk (2003) stated another strategy used to influence the productivity of private sector workers that is less effective with public sector employees is disciplinary action. According to Paul Krugman (1992) stressed that improving a country’s ability to raise its people’s standard of living over time solely depends entirely on its ability to raise output per worker. He also argued in his study of 1994, that in the age of diminishing expectations productivity isn’t everything but in the long run it is almost everything. In Balas (2004) study, he opined that many organizations have attempted to solve their productivity problems through the application of various innovative management techniques. Brenner (2004) affirmed that the ability of employees within an organization to share knowledge at workplace depends on the conditions of their work environment. His study revealed that corporate executives from different organizations disclosed that many sectors do not fully leverage their physical work environment to enable increase collaboration, innovation and improve work effectiveness. It is also observed that employees tend to be more productive in a well-facilitated work environment; thus the level of satisfaction and their increased productivity solely depends on the quality of comfort they derive from

their work environment. Berkowitz (2018) stressed that organizing applications are requisite for the development and dissemination of innovations for SD; he further recommended a meta-organizational approach for the governance of sustainable innovations while Rantala et al. (2018) investigated sustainable factors behind the taking on of innovations for SD and discovered that the more an organization values the economic dimension of sustainability, the greater the probability that it will embrace sustainable innovations due to the fact that innovations are continually making a difference in the external environment and our way of life. Silvestre et al (2014) opined in their study that one of the key areas that have been addressed by the SD discourse is the role of innovations in enhancing sustainability.

III. Materials And Methods

In other to conduct a thorough survey, it was carried out in Abuja Federal Capital Territory of Nigeria. It houses the majority of Ministries, Departments and Agencies (MDA) headquarters, including tertiary educational institutions as well as private owned commercial and industrial companies. Survey research design was adopted for data collection in other to assess and analyze the response of workers in Nigeria. Purposive sampling method was applied in selecting the organization for the study while stratified sampling technique was utilized to select the respondent from different organization involved in the study. A structured self-administered questionnaire was incorporated, 10 MDA's, 4 educational institution and five 5 companies amounting to 305 administered questionnaire. 264 were properly responded and captured in the study while 41 were incomplete. The purpose for the circulation was to capture and analyze the responses of workers in Nigeria in a unique and authentic manner. Five point likert-type rating scale was employed; it includes frequency distribution and mean scores. The questionnaire captured specific data which includes organization, gender, religion, Impact of work environment etc.

Table 1: Does workers' productivity affect sustainable development?

S/n	Variables	5	4	3	2	1	N	\bar{x}
1	Slightly affect S.D	74	51	104	23	8	260	3.6
2	Totally affect S.D	112	77	46	28	-	263	4.0
3	Does not affect S.D	44	52	63	85	20	264	3.1

Source: field survey 2019

From the data retrieved from the survey, it obviously indicates that low productivity of Nigerian workforce affect sustainable development of the country. The table above shows that low productivity totally effects S.D with a mean score of 4.0, slightly affects S.D 3.6 while does not affect S.D had a mean score of 3.1

Table 2: Does workers continuous innovation impact sustainable development?

s/n	Variables	5	4	3	2	1	N	\bar{x}
1	Totally agree	108	93	39	20	4	264	3.9
2	Slightly agree	62	120	44	16	23	265	3.7
3	Do not agree	30	54	70	100	10	264	2.9

Source: field survey 2019

The respondents rated totally agree highest with a mean score of 3.9. This also agrees with previous research that observed work environment as a factor, it's also clear from indication that enabling environment is one of the paramount motivations for workforce continuous innovation. Some respondent slightly agree with a mean score of 3.7 due to the fact that Nigeria is still not technological advanced while the least score was 2.9 they believe that Nigeria can sustain its development without innovation.

Table 3: How does work environment affect workers' productivity and Innovation?

s/n	Variables	5	4	3	2	1	N	\bar{x}
1	Availability of working materials	77	80	38	49	18	262	3.5
2	Periodic training of workers	67	53	72	46	25	263	3.3
3	Lack of qualification	93	60	47	46	25	263	3.7
4	Conducive work environment	105	84	34	24	15	262	3.9

Source: field survey 2019

Conducive work environment was rated most important with a score of 3.9 while lack of qualification was rated second with a mean score of 3.7 due to the fact that most organization employs unskilled workers who cannot adequately do the job they are employed to do. Availability of working materials had a mean score of 3.5, during the study it was observed that most organization do not have sufficient working materials it thereby affects the labour productivity of worker's at the workplace. Periodic training of workers was the least effect

with a mean score of 3.3, this fact is generally noted to be a big problem in the Nigerian workforce; some attribute it to availability of funds or trainees in a specific field. Employers should take note of the conditions of their work environment; if they are not favorable workers' productivity cannot be optimal. The above survey strongly agrees with Brenner (2004) who stated that improvements of workers' productivity solely depends on the management of an organization efforts in putting the organization together by creating a conducive work environment and improving motivational packages for workers, he further recommended PRIDE model for employers to apply in modeling work environment for quality work life in an organization.

Table 4: What is the impact of infrastructural development on workers' productivity?

S/n	Variables	5	4	3	2	1	N	\bar{x}
1	Housing	85	61	55	36	27	264	3.5
2	Medical care facility	110	85	58	10	-	263	4.1
3	Power supply	93	98	49	15	6	261	3.9
4	Good roads	73	67	58	44	20	263	3.4
5	Transportation	60	81	63	59	-	262	3.6
6	Communication Network	36	56	94	45	32	263	3.1

Source: field survey 2019

The study strived to comprehend the impact of specifically identified factors that affect the productivity of workers; a number of infrastructural facilities were recognized to have a major impact on the productivity. As observed from table 4 medical care ranks highest with a mean score of 4.1, the availability of good and affordable medical facilities is very crucial as it is believed that good health is wealth. A healthy worker can give in his/her best for aggregated productivity. Power supply, adequate and constant electricity supply rank 2nd with a mean score of 3.9, respondent opined that in most cases their motivation to improve is demoralized due to power outage in their respective work environment. While some attribute it to transportation which has limited most workers ability to function actively at work it has a mean score of 3.6; it is observed by the study to be paramount for easy and timely movement of general citizens of a country. Housing rank 4th with the mean score of 3.5, they stressed that provision of decent and convenient accommodation for workers can improve their productivity at work. Good and accessible road has a mean score of 3.4, thus considered as a constraint in the active participation at work. Some respondent confidentially disclosed that bad roads have delayed them from arriving to work early, not only that it also exhausts their energy before arriving their workplace thereby rendering them unproductive. The least important identified by the respondent with a mean score of 3.1 is communication network. The availability of affordable and dependable communication network in work environment makes work schedule easier to deliver thereby increasing their individual productivity. This result concurs with Okpachi 1999 research which opined that Nigerian labour force productivity can be aggregated by basic infrastructural facilities such as good drinking water, constant flow of electricity, reliable transportation systems, good roads and health facilities etc.

Table 5: Does government policies affect workers' innovation?

S/n	Government policies	5	4	3	2	1	N	\bar{x}
1	Strongly agree	94	86	67	16	-	263	4.0
2	Slightly agree	63	90	51	41	19	264	3.5
3	Do not agree	41	38	75	88	22	264	2.9

Source: field survey 2019

From table 5, it is observed that strongly agree had the highest mean score of 4.0, workers also pointed that favorable government policies can aggregates continuous innovation in workers while slightly agree had a mean score of 3.5, the respondent further stated that it can also affect workers creativity and innovation in most cases depending on the type of innovation idea. Finally do not agree score the lowest with a view that government policies do not have any impact on the innovation of Nigerian workforce.

IV. Productivity And Continuous Innovation For Sustainable Development

The position of productivity as a veritable tool in the actualization of Nigerians vision 2020 and the government transformation agenda cannot be over emphasized. The originating point would be addressing all the challenges to productivity. However, in specific term it is relevant that the welfare packages of Nigerian workers be considered in all the sectors of the economy for increased productivity. This will result in positive GDP; it will also reduce unemployment and ensure sustainable development.

- It is very pertinent for investment in education to be considered, as it improves human capital and human innovation. Nigerian government needs to invest on high standard education and knowledge production which is essential for individual innovation. The knowledge garnered from this is hereby ploughed back into various sectors of the Nigerian economy in other to boost her economy.

- Managers in organization has a vital role to play in Nigeria labour milieu, as the fight for improvement is not for the government alone rather it involves employer, employee and the government. It is recommended for employers to devise a means of recognizing their workers that have satisfactorily prove themselves worthy in the area of creativity. They should be rewarded adequately so as to stimulate them to work harder and also challenge other workers to increase their productivity.
- There are favorable prerequisite and requirement to benefit from International Technology diffusion which should be secured adequately in order to promote increased productivity. In addition to high quality human resources, incentives for technological advancement must be elevated and organizations should function optimally.
- Employers of labour should improve the condition of their work environment for undiluted service delivery of their employees. They should also maintain an overall benefits structures that are equitable to workers efforts, it should be tied to performance in other to gain increase productivity and also be robustly indexed to the vagaries of inflation.
- There is need for innovative education policies to be created by the government of Nigeria, mandatory courses and training for both workers and students should be signed into law. This can be adopted from Singapore; their type of policy offers adults personal accounts which can be utilized to purchase individual trainings. Another policy applies tax incentives to invigorate organization to invest more in their lower paid workers.
- NPC the advocate of productivity has a very vital role to fashion a national framework to dimension productivity standards in citizenry. Monitoring and evaluation should be implemented periodically to measure, compare and encourage productivity improvements among organizations in all sectors of the Nigerian economy.
- The quality of the Nigerian educational system should be improved in such a way that technological innovations are imbibe into the system, this will get young individuals ready for the labour market and thereby aggregating productivity, alleviating poverty and unemployment in the future.

V. Conclusion

The study has identified the impediment to workers low productivity, innovation and sustainable development for economic growth. Consequently, Innovation has a predominant part to play in elevating the growth of productivity which in turn translates into economic development as well as sustainable development an essential demand for poverty reduction in low income countries. The indisputable link in terms of conceptual nexus spells out conspicuously that poverty reduction, more often than not, translates to reduced income inequality, minimizes social tension, advances technological innovation and aggregated productivity. This study still reaffirms previous observations from researchers that S.D nor economic growth can neither take place in a vacuum; workers' productivity is solely involved. Thus it becomes pertinent for the Federal Government of Nigeria at all levels to take long term view to enact appropriate fiscal and monetary policies that would speed up the pace of the entire productivity in Nigeria. Consequently, trade, foreign exchange and supply side policies should be strongly supportive of the productivity agenda of the country. An integral approach is highly recommended to tackle the nimity of impediment pointed out in this study that influence productivity. The federal government of Nigeria's 2030 Agenda can take part in a significant contribution through directing and accelerating the move to sustainable Developments Goals which will foster productivity growth this in turn creates an ethical cycle between sustainable development and productivity. Note that partial solution will not be effective due to deepness of low productivity damage.

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