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The Role of Industrial-Organizational Psychology in Sustainable Development: Implication for 21st century Employee Management Strategies

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Abstract:
The emerging technologies in the 21st century have created development issues for many African nations; resulting in a dire need to keep up with the pace of advancement across the globe without jeopardizing the wellbeing of the citizenry. The needed intervention lies in the attainment of sustainable development, the term that describes a people’s right to continuous survival and wellbeing. The key drivers of this development are the government, business organisations and the employees. The employees are deemed as the most important of these three because they determine the success of the others. The lack of synergy among these development drivers may be at the core of Africa’s economic setbacks. It becomes imperative to seek professional input in the management of these key drivers of sustainable development in a rapidly changing world. To this end, this study explored the concept of sustainable development in the 21st century; the key drivers of sustainable development; the employees as the principal driver; the nature and role of Industrial and Organisational Psychology (the behavioural science concerned with building and retaining highly competitive employees, effective organisations and robust economies) in the pursuit of sustainable development. This study concluded that effective employee management is central to the attainment of sustainable development in the 21st century and that Industrial and Organisational Psychology provides very useful tools to achieve this feat. Therefore the principles of Industrial and Organisational Psychology was recommended as major requirements in 21st century employee management programs towards sustainable development.
1. Introduction

Over the years, humans have mounted so much pressure on existing natural resources in their quest for survival. The resultant effect has been environmental degradation as well as socio-economic and political instability aggravated by the technological revolution of the 21st century. The 21st century is a period of technological advancement marked by information expansion, internet communication, networking and globalization among others (Dike, Odiwe&Ehujor, 2015). The emerging technologies of the 21st century created development issues for many African nations placing demand on the available resources and resulting in a dire need to keep up with the pace of global advancement without jeopardizing the wellbeing of the citizenry. The current state of the natural environment has raised global concern about the wellbeing and survival of present and future generations. Consequently, there have been worldwide efforts at improving the living conditions and ensuring the preservation of environmental resources in the 21st century. The approach to environmental preservation and improved quality of life in the short and long run is referred to as sustainable development.

United Nations General Assembly (1987) suggested that development can only be deemed sustainable if it meets the needs of the present generation without jeopardizing the chances of future generations to meet their own needs. In other words, sustainable development is the development aimed at economic advancement without endangering environmental stability. Most African countries, particularly Nigeria, are struggling with attaining this level of development. For a long time, Nigeria had the reputation of being the giant of Africa. The nation outshines other African nations in sports, economy, military power, natural and human endowments among other indices. But in recent times, Nigeria has been adjudged next to South Africa in economic growth. By implication, Nigeria is now considered the second biggest economy in Africa. Despite her enormous natural and human endowments, the nation is known for her over dependence on oil sector, dwindling agricultural engagement, poor industrialization, bad governance, high level poverty and untold hardship. No doubt, Nigeria requires economic revitalization to survive as a nation and reclaim her position as Africa’s leader.

In response to this challenge, efforts have been made to protect the environment, advance humanity and ensure optimal use of natural resources. These efforts towards the achievement of sustainable development are exerted at three levels, which are: the national, organisational and individual levels. At the national level, the government, as the custodian of all the natural and human endowments, makes and implements plans and policies to protect and judiciously utilize these resources for the good of all. Similarly, at the organisational level, business organisations utilize human and natural resources within the boundaries of stipulated plans and policies of the country they operate in.

Although government agencies and the organized private sector all operate within stipulated development and economic policies, the current state of the Nigerian economy has failed to validate the efficacy of these plans and policies (Olowookere, 2012). The 2008 submissions of the 14th Nigeria Economic Summary Group (NESG 14) pinned the failures of economic plans and policies on problems of governance and institutional capacity (Ezirim, Okeke&Ebiriga, 2010). Likewise, Olowookere (2012) linked the failures of the development plans to human resource management issues. Yet, less attention has been paid to the human capital (employees) as a major catalyst for sustainable development in the 21st century. This is important because even the most viable development policies will be of no effect without proactive, resourceful and committed human capital to ensure effective implementation. Studies have shown employees’ performance and contributions to organisational effectiveness and nation building (Mezel&Eslavath, 2019; Omonijo, Oludayo, Uche, Eche and Ohunakin, 2015; Muruganandham, &Ragupathi, 2019; Mohan, Prabhu&Birdawod, 2019;Mohammed, 2019). This is an indication that workers contributions represent...
the individual level efforts at achieving sustainable development (Sundarka & Panchal, 2019).

The government, business organisations and employees all contribute significantly to nation building and sustainable development but employees are the key determinants of success across all levels. In other words, all efforts at ensuring sustainable development is dependent on the quality of the human capital. By implication, happy, resourceful and committed employees foster organisational effectiveness, which in turn results in national and sustainable development. It is imperative to harmonize individual, organisational and national efforts towards sustainable development. This synergy will be best achieved through the knowledge and implementation of the principles guiding human behaviours.

Psychology is that science that studies human behaviour and mental processes with the aim of understanding, organizing, directing, predicting and modifying behaviour across various contexts. Industrial and Organisational Psychology is the sub field of psychology that applies psychological principles in solving organisational and workplace issues. It is the behavioural science focused on building and retaining highly competitive human capital, effective organisations and robust economies. Industrial and Organisational Psychology promotes excellent performance at individual, organisational and national levels. Therefore, it is germane to examine the relevance of industrial and organisational psychology in the pursuit of sustainable development. Consequently, this study explored the concept of sustainable development, the contributions of the key drivers of sustainable development (government, business organisations and the employees) and the nature and role of Industrial and Organisational Psychology in the quest for sustainable development.

2. Sustainable Development in the 21st Century

Nations of the world have competed on economic wellbeing and resourcefulness since the primordial era. The superiority of one nation over the others was a function of how developed this nation is compared to others. Development in the 1970s was defined by economic growth and productivity resulting in over exploitation of the natural environment and the attendant consequences, which include environmental degradation, poverty, health issues among others (Šimleša, 2003). The continuous depletion of the natural resources raised serious concerns for the sustainability of such provisions to meet the needs of future generations. Consequently, the call for sustainable development became a global challenge, especially in the 21st century.

The 21st century started on the 1st January 2001 and ends 31st December 2100, a period marked by intense competition for economic sustainability and global relevance. Sustainable development was first mentioned at the United Nations Conference on the Human Environment in 1972. However, it was officially reported and defined in 1987 by the World Commission on Environment and Development (WCED). Sustainable development was defined as the development that caters to the needs of the present generation without jeopardizing the wellbeing and survival of future generations (WCED, 1987). It is a necessity across the nations of the world because of the need to preserve human existence (Adedokun, 2019). To this end, sustainable development aims to achieve three main goals, which include: economic growth, environmental stability and equitable distribution of resources among the citizens. These goals are further broken down into specific objectives, which include: creation of new markets, increased opportunities for sales reduced cost, optimal use of resources, promotion of employees’ health and safety, community development and reduced environmental pollution among others. The actualization of these objectives in this era of technological revolution is ensured at the national, organisational and individual levels, depicting the three key drivers of sustainable development.

2.1 Key Drivers of Sustainable Development

Some authors have shown that sustainable development is driven at the national, organisational and individual levels across nations of the world (Omonijo, Uwajeh and Anyaegbunam, 2019). At the national level, the government is the key driver of this development initiative. As a global effort to replace the elapsed Millennium Development Goals (MDGs) in 2015, the United Nations with the support of the Governments of member States came up with the Sustainable Development Goals (SDGs) out of concern for environmental sustainability and
the advancement of humanity that spans future generations. The sustainable development goals are a set of 17 goals comprising of 169 targets and 230 indicators to be actualized by the year 2030 (Sustainable Development Goals Indicators Baseline Report, 2016).

The Government, as indicated in some literatures, plays very crucial role in the actualization of these goals (Kashyap & Dua, 2019; Adetola and Omonijo, 2019). According to the Declaration of the United Nations Conference on Human Environment (1972), governments are responsible for preserving and maintaining human environment. They provide and control the platform for all other stakeholders to contribute their inputs to the development process. Governments provide the necessary infrastructures, protect the rights and interests of stakeholders, formulate and monitor the implementation of policies. They directly control, fund and own public sector organisations and agencies in order to ensure social development, equal access to infrastructures and natural resources, provision of employment opportunities and high-quality goods and services for increased GDP.

At the organisational level, the National Bureau of Statistics (2017) noted that business organisations in Nigeria significantly contribute to her GDP in the areas of real estate management, manufacturing, construction, entertainment and telecommunications. These business organizations perform corporate social responsibilities as a way to impact their immediate environment thereby complimenting the efforts of government and civil society in the quest for sustainable development. Similarly, Petkoski, Jarvis and Garza (2006) suggested that business organisations are key drivers of economic development because of their roles in employment, investment, finance, competitiveness and manpower development.

In order to retain relevance locally and globally, businesses must maintain competitiveness through the process of continuous improvement. They must retain proactive and highly resourceful manpower, premium quality products, best practices and maximum productivity. While all these are fundamental requirements for sustainable business development and increased GDP for the nation, the manpower need is regarded as the most important (Guest. 2001 cited in Fulmer & Ployhart, 2014) because all the other needs depend on the quality of manpower for their fulfilment. In congruence, Sawicki (2016) described employees as the driving force of successful businesses. Therefore, employees may be considered as key drivers of sustainable development at the individual level, and catalysts to organisational effectiveness in both public and private sector organisations. This is because employees’ work attitudes and behaviours are critical determinants of organisational success and survival (Jahangir, Akbar & Haq, 2004).

According to Bukhari, Ali, Shahzad and Bashir (2009), the brain in human life is synonymous to employees’ positive work behaviours in organisational life. They claimed that the role of employees’ citizenship behaviours in organisational success and continuity is the same as the role of the brain in human survival. This implies that positive employee behaviours are indispensable in the pursuit of competitiveness and sustainability at both organisational and national levels. This interrelatedness of the key drivers of sustainable development is depicted in Fig. 1.

![Fig. 1: Key drivers of Sustainable Development](image-url)
proposed synergy among the key drivers of development can be actualized through effective management and coordination of manpower and other resources towards the achievement of shared goals. The major task is getting individual employees to own and voluntarily give their utmost towards the achievement of corporate goals. The fostering of these laudable work behaviours requires an in-depth understanding of human behaviour and mental processes. This feat can be achieved through professional input in the behavioural sciences, manpower management and coordination.

Behavioural sciences attempt to demystify the complexities in human behaviour as it relates to decision making, choices and survival through an understanding of their cognitive processes and interactions within their environment. Disciplines categorized as behavioural sciences include psychology, economics, sociology, anthropology, social neuroscience, cognitive science, political science, semantic networks, social psychology, psychobiology, ethology, social neuroscience, neural networks among others. The knowledge from these disciplines are used to explain, predict and modify human decision making and cognitive processes involved in organizational behaviours, consumer behaviours and operations research among others.

Psychology may be considered central to all other disciplines because of its scientific approach to solving problems associated with human behaviour across contexts, hence the application of psychological principles to medical science, accounting, engineering, sports, economics, law, architecture and all other disciplines involving human interaction. This led to the rise of various sub fields in psychology, which includes: social psychology, clinical psychology, forensic psychology, industrial and organisational psychology, experimental psychology, consumer psychology, environmental psychology, sports psychology, counselling psychology, political psychology, etc. Many problems encountered by humanity in various contexts are either caused and/or solved by human behavioural adjustments. Likewise, Litchfield, Cooper, Hancock and Watt (2016) noted that pace of technological advancement is a lot more rapid than the corresponding attitudinal and behavioural adjustment. Furtherance to this, the current study highlighted the role of industrial and organisational psychology in the pursuit of sustainable development in Nigeria and across the globe.

3. The field of Industrial-Organisational Psychology (I/O Psychology)

Psychology as a discipline was defined as the scientific study of the behaviours and mental processes of both humans and animals in order to understand, organize, direct, predict and modify behaviours (Olowookere, 2012). Industrial and Organisational Psychology is the sub field of psychology that applies psychological principles in proffering solutions to workplace problems. It is also known by others names, which include: work psychology, occupational psychology and business psychology among others. This field of psychology may be described as the behavioural science focused on building and retaining happy, committed and highly competitive human capital, effective organisations and robust economies in the pursuit of sustainable development. In corroboration, Landy and Conte (2004) cited in Augustyn and Cillie (2008) suggested that the principles of I/O psychology serve as insights and major catalysts for successes in both public and private organisations.

The practice areas of the discipline include human resource management, organizational behaviour, organisational development, organisational effectiveness, employee motivation, leadership, etc. Furthermore, Münsterberg (1913) cited in Augustyn and Cillie (2008) noted that I/O psychologists are concerned with hiring the best fit for the job, optimizing work processes (by securing access to best practices and technological know-how) and ensuring excellent work outcomes. Deductively, the major focus of I/O psychology is to ensure satisfaction, wellbeing and excellent performance of individual employees, business organisations and the nation as a whole. This is contrary to the belief that I/O psychologists are simply management’s mouthpiece, protecting the interests of management over those of their employees. In actual fact, I/O psychologists strive to achieve a win-win situation between management and employees, where employees are provided with the opportunity to discover, unleash and actualize their full potentials.
while pursuing organisational success. The focus areas of the discipline are depicted in Fig 2.

Fig.2: Major focus of I/O Psychologists

Furthermore, Katz and Kahn (1978) described an organisation as an open system in the similitude of living organisms. Just as living organisms exchange nutrients with their environments, organisations exchange resources/benefits with their immediate environment, that is, the nation within which they operate. The implication is that business organisations draw resources from their countries as guided by stipulated policies, and in turn contribute immensely to the GDP. In other words, increased productivity in business organisations ultimately results in economic growth and sustainability. By inference, I/O psychology plays very crucial roles in organisational success and national development. It is therefore imperative to explore the roles of I/O psychology in the pursuit of sustainable development.

4. Theoretical Perspectives in I/O Psychology

4.1. Classical Theories

The Classical Theories on organisations described the way work was structured after the industrial revolution, when there was a shift from subsistence farming and craftsmanship to seeking employment in the industries, there was a mass influx of people from the villages to the industrialized cities. These industries had many employees at the time without a matching level of productivity. Many of the workers were unskilled and without defined job description and accountability. This chaotic state of the industries and the quest for order prompted scientists to research the best way to organize production for maximum productivity. The basic assumption of the classical theories include: the primary reasons organisations exist is to make economic gains; scientific investigation will reveal the one best way to organize work for maximum productivity; production is best enhanced through specialization and division of labour; and that both the employees and the organisation are driven by economic benefits. Two examples of Classical Theories are the Scientific Management Theory by Fredrick Taylor and Bureaucracy by Marx Weber.

Through scientific investigation, the Classical Theories build organisational frame into which they put every employee with the expectation of predetermined results without consideration for individual differences and the peculiarities of contexts. Employees were treated as mere components of organisation - wide machines that can be easily replaced. While the Classical Theories are credited for organizing the workplace and increasing productivity, contemporary schools of thought arose with more consideration for employee motivation and context peculiarities. These category of theories are called the Humanistic Theories.

4.2. Human Relations Movement

The Human Relations Movement emphasized the importance of favourable working conditions and contexts on employees’ work motivation. McGregor (1964) described the outcome of the previous management theories in Theory X, which depicts a negative view of employees as lazy, selfish, hating work, unambitious, lacking initiative, only concerned with economic gains and should be coerced to work etc. The Human Relations Movement noticed the self-fulfilling prophesy as employees reacted to the negative perception and attitude of the management. On the contrary, McGregor (1964) expressed an optimistic view of employees, described them as having the ability and the willingness to exert the required effort for maximum productivity when provided with necessary tools, working conditions and leadership. For these employees, work is as pleasurable as play.
and they are ready to commit their time and energy to the achievement of set organisational goals.

Furtherance to this, Ouchi (1981) propounded Theory Z as an effective approach to employee motivation and management. This Theory is based on the principle of communism, with emphasis on shared responsibility and shared benefits. The employees are seen and treated as stakeholders in the business and they in turn perceive the organisation as one big family to which they pledge their allegiance. The effectiveness of this Theory was evident in the Japanese economy as reported by Ouchi (1981). Employees have moved from the forced compliance generated by Theory X to the commitment generated by Theory Y to the loyalty generated by Theory Z. This kind of loyalty is required for organisational effectiveness in 21st century and ultimately for sustainable development.

4.3. Herzberg’s Two-Factor Theory

The Two-Factor Theory (also known as Motivator-Hygiene Theory) was propounded by Herzberg (1966) in an attempt to identify the factors responsible for job satisfaction and dissatisfaction. He described the factors associated with job satisfaction as motivators and those associated with dissatisfaction as hygiene. Motivators in this regard refer to growth and esteem needs such as recognition, awards, achievement, competency, status, self-esteem, etc. The motivators are synonymous with the higher order needs (esteem and self-actualization) in the hierarchy of needs developed by Maslow (1970). These motivators stem from the content of work. On the other hand, hygiene factors are typical of the lower order needs (physiological, safety and belongingness) in Maslow’s theory. This category of needs include pay, job security, working conditions, interpersonal relations, company policies and other factors associated with the context of work.

The Two-Factor Theory suggested that job satisfaction does not imply the absence of job dissatisfaction. The reason is that two different set of factors are responsible for each of the outcomes. The presence of motivators results in job satisfaction and their absence in no job satisfaction. In the same vein, the presence of hygiene factors results in no job dissatisfaction and their absence in job dissatisfaction. The 21st century employees belong mostly to Generation X (Born between 1965 and 1980) and the Generation Y (born after 1980). They are more receptive to the emerging technologies and are motivated by esteem and higher order needs. They enjoy recognition, awards, challenging tasks, capacity building, initiative and resourcefulness and learning, etc.

5. Role of I/O psychology in Sustainable Development

Olowookere (2012) stated that Nigeria’s development problem did not stem from a lack of natural, financial or technological resources but from the quality of available manpower. I/O psychology is that discipline with huge potentials to convert a previously purposeless workforce into an outstanding and result-oriented team. Therefore, nations of the world and Nigeria in particular require the knowledge and application of its principles in the pursuit of sustainable development. The contribution of I/O psychology to organisational competitiveness and nation building is embedded in the proposed I/O psychology model of sustainable development as shown in Fig 3.

![Fig.3: Model of Sustainable Development](image)

Just like the popular statement that employees are the most valuable asset of an organisation, the I/O model reveals that the quest for sustainable development begins with the attraction, development and retention of satisfied, committed and highly resourceful employees who will effectively coordinate all other resources towards effectiveness and sustainability. These employees do not only impact private businesses, as civil servants, they also determine the effectiveness of public sector organisations and other government agencies. The indirect influence of manpower quality on sustainability is felt through the contributions of effective business organisations to the GDP of the country.
Specifically, I/O psychology ensures that both the employees and the organisations perform at their best in the global milieu. The practice areas of the discipline include: employee motivation, recruitment and selection, training and development, human resource planning, compensation and benefit management, employee health and safety, leadership development, organizational behaviour, organisational effectiveness and organisational development among others. Based on the concept of individual differences and the knowledge of human behaviour and mental processes, I/O psychologists are experts in understanding, organizing, directing, predicting and modifying behaviour in work contexts for maximum productivity. The discipline provides employees with needed interventions to enable them adjust and keep up with the evolving technologies associated with the 21st century workplace.

6. Twenty-first Century Employee Management Strategies in Africa

The main obstacle to sustainable development in Africa has been linked to human resources both in enterprise and government. The existence of highly resourceful manpower in business organisations and government are the basic ingredients for development across the continent. It becomes imperative to engage effective employee management strategies for the desired outcome. Employee management in the 21st century requires the understanding of human behaviour and the caliber of workers in the labour market at this time. Jenkins (2019) highlighted four generations of the workforce to include: Silents, Baby Boomers, Generation X and Generation Y.

In the 21st century, the silents (aged 94 -73 years old) have been phased out by retirement and are closely followed by the baby boomers (aged 72 -55 years old). The current workforce is characterized by the generation X (aged 54 -39 years old) and generation Y (younger than 39 years old). These generations of employees are daring and well-adjusted to the demands of the 21st century workplace. Therefore, the traditional employee management strategies that proved very effective with older generations of workers will not be adequate for these millennials. In validation, Litchfield et al., (2016) observed a gap between the technological advancements of the 21st century and the required work attitudes and behaviours.

Contemporary employee management strategies should consider technological trend and the peculiarities of the workforce. These strategies should include continuous improvement in work processes, products/services, productivity and most importantly, the people. Managers should ensure improved communication systems, stimulating work content, training and development and organisational learning etc. I/O psychology offers professional services that effectively delivers on these tasks, assisting employees, organisations and the nation as a whole to effectively adjust to emerging technologies of the global economy.

7. Conclusion and Recommendation

The relevance of employees to organisational, national and global development cannot be overemphasized (Jahangir et al., 2004; Drucker, 2006). Employee work attitudes and behaviours are the major determinants of sustainable development in the 21st century. In other words, the effective management of employees’ work behaviours at the organisational and national levels is the major solution to the development issues in Nigeria and other African nations. Africa is in dire need of strategic human resource management tailored to meet the needs of the 21st century employees while spurring them to give their best possible performance in the pursuit of the corporate goals. This study concluded that the principles of I/O psychology are the essential requirements for effective human resource management, organisational effectiveness and sustainable development in the 21st century. Therefore, it was recommended that I/O psychologists be consulted for expert inputs in all matters of employee management, organisational effectiveness and nation-building for enhanced sustainability in the 21st century.

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