

Employees's Response to Technological Innovation and Sustainable Development in Nigeria

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Abstract

Since the beginning of industrial revolution in the early part of the nineteenth century, the introduction of technology for industrial production has been a contentious issue. In most instances, the workers either demonstrate obvious negative attitude towards such attempt, or they threaten to embark on industrial action to push for abrogation of the introduction. However, realizing that innovation is synonymous with industrial development, most management and industrial owners are enthusiastic about such programme. This paper considers this important issue, by focusing on the response of industrial employees' to technological innovation in Nigerian work sector against the backdrop of the quest towards sustainable development.

Keywords: Development; Employees; Industry; Technology; Work.

Introduction

The introduction of new technology for industrial production has since the beginning of industrial revolution been a recurrent phenomenon. The imperative for improved technology in industry is hinged on new demands, needs, challenges and constraints of people in a particular society. Such innovation often leads to improvement in the production level as well as changes in the social and structural context of industry. More importantly, the introduction of new technology to industry is often met with various reactions from the workers. Since they are the direct beneficiaries or users of any technological innovation, the workers are directly affected by such programmes and their reactions are usually swift, direct and varied. The attainment of the goals of sustainable development is quickened by improved production necessitated by technological innovation. However, such ideals take into consideration the plight of people who are the direct focus of concern for any meaningful sustainable development. This paper therefore discusses the issue of employees' response to technological innovation within the context of attaining the ideals of sustainable development in Nigeria.

Objectives of the Paper

The paper seeks to discuss the issue of employees' response to technological innovation and sustainable development in Nigeria. Specifically, the paper intends to achieve the following objectives:

- examine the concepts of technological innovation and sustainable development;
- discuss the various ways in which employees respond to technological innovation;
- consider the nexus of technological innovation and sustainable development;
- examine the relevance of the issues to the Nigerian society.

Conceptual Clarifications

Technological Innovation

Technology is defined as the application of science and can also be conceptualized as tools used to accomplish tasks along with the skills or procedures necessary to make and use those tools (Haslin, 2001). While all human groups make use of one tool or another to accomplish tasks, however, the major feature of modern society is technology, which greatly extend with ability to analyse information, to communicate it and to travel. For instance, new technology allow human race to accomplish several breakthroughs in modern society – space exploration, faster transportation and communication, information technology etc.

Sustainable Development

Sustainable development is defined as a pattern of resource use, that aims to meet human needs while preserving the environment so that these needs can be met not only in the present but also for generations to come. The Brundtland Commission on the other hand conceives sustainable development as development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987).

According to the authors of the Report, sustainable development is derived from the concern that the use of the earth's resources by the present generation was unsustainable:

Over the course of the 20th century, the relationship between the human world and the planet that sustain it has undergone a profound change.....major, unintended changes are occurring in the atmosphere, in soils, in waters, among plants and animals, and in the relationship among all of these. The rate of change is outstripping the ability of scientific disciplines and our current capabilities to assess and advice. It is frustrating the attempts of political and economic institutions which evolved in different, more fragmented world, to adapt and cope.....To keep options open for future generations, the present generation must begin now, and begin together, nationally and internationally.
(quoted in Giddens, 2001:942).

Sustainable development could then be seen as the use of renewable resources to promote economic growth, the protection of animal species and biodiversity and the commitment to maintaining clean air, water and land. Implied in this is that growth should be carried on in such a way as to recycle physical resources rather than deplete them, and to keep level of pollution to a minimum.

Sustainable development ties together concern for the carrying capacity of the natural environment with the social challenge facing humanity. The United Nations 2005 World Summit Outcome Document outlined as the “interdependent and mutually reinforcing pillars” of sustainable development to include the following:

- Economic development
- Social development
- Environmental Protection
- Cultural diversity

In general, the notion of sustainable development enjoins the present generation to take a system approach to growth and development and to manage natural, productive and social capital for the welfare of their own future generations.

Lastly, sustainable development is among the Millennium Development Goals (MDGs) which were agreed by 191 countries of the world in their quest to reduce many forms of poverty in the coming decades. The major targets of the Millennium Development Goals include among others;

The integration of the principles of sustainable development into each country’s policies and programmes;

The reversal of the loss of environmental resources;

The reduction by half of the proportion of people without sustainable access to safe drinking water; and,

Achieving a significant improvement in the lives of at least 100 million slum dwellers – all by the year 2020. (quoted in Giddens, 2001:942).

Theoretical Framework

Blauner’s alienation theory is considered appropriate for the present discussion. According to Blauner (1964) there are several factors which influence employees’ job satisfaction all of which are related to the work experience in different technological settings. He outlined four dimensions of alienation corresponding to the relationship between technology and job satisfaction. These are:

- Powerlessness – lack of opportunity for control
- Meaninglessness – lack of opportunity to feel a sense of purpose by linking one’s job with the overall production process.
- Self enstrangement – lack of opportunity to achieve self involvement or personal fulfillment at work.
- Social isolation – lack of opportunity to interact with co-workers in course of work performance.

Work and Technology

The connection between technology and work has long been of interest to scholars. The question has often been asked: How is our experience of work affected by the type of technology that is involved? As industrialization progressed, technology assumed an ever greater role at the workplace –from factory automation to the computerization of office work. In the contemporary society, the advent of revolution in information technology has led to renewed concern and interest on the issue of the relationship between work and technology.

While technological innovation can lead to greater efficiency and productivity, however it also affect the employees’ work experience in a number of ways.

Employees's Response to Technological Innovation

Schaefer (1999) asserted that technological innovations are examples of changes in material culture that have often provoked resistance. The industrial revolution which took place between 1760 and 1830 was purely a scientific revolution focused on the application of non-animal sources of power to labour tasks. As the revolution proceeded, societies began to rely on new inventions that facilitated agricultural and industrial production and on new sources of energy such as steam. In some industries, the introduction of power-driven machines reduced the need for factory workers and made it imperative for employers to cut wages.

Workers resistance to the action of management/employers in cutting wages and introducing other anti-labour policies was swift. For instance, in England, masked craft workers took violent measures in 1811 by conducting raids on factories and destroyed some of the new machines. The Luddites riot became the first expression of hostility to the introduction of new technology in the history of industrial revolution. The government hunted them and banished some while few others were hanged.

Modern societies have cultural norms which encourage certain values like personal autonomy, individuality and self expression. Technology then becomes a source of resentment, conflict, rivalry and opposition by employees. Individuals' motives and interest – work orientation, is then seen as a source of action which is socially located and in which technology play an important role as a non-social condition of action (Bechhofer, 1973).

Technology plays an important role in the work experience of employees both in the pre-industrial and industrialized societies. Each type of work has its own technology. However, for majority of employees, the technology employed is central to their work experience. These technologies are more often than not, chosen, designed and its mode of use dictated by other individuals different from those who would have to use it. These people are usually with higher status and higher pay and have greater autonomy in their own work experience than those employees who are directly employing the technology.

Every employee tend to be aware of and take into account the general motive of the technology in their prior orientation to work. However, once they resume work, their attitude and behavior would have to be determined by any of the following factors:-

- The extent to which the technology enables them to mix with other employees;
- The freedom it allows them to use discretion in the dispensation of their work;
- The level of belongingness which the employee can have with the outcome of his activities;
- The extent to which the employee can express satisfaction with his contribution to the final outcome of his activities.
- Two main factors are known to be very important with regards to technology, namely,
- The structure of the job itself
- The way in which the relationship between supervisors and the operator was shaped.

The import of the above is that it is not the technology itself that operates on the employees. Rather, it is the opportunity which the technology allow for personal discretion and the role this plays in the power relationship between the managers and the managed.

The Nigeria Case

- In the Nigerian industrial sector, technological innovation has been most obvious in the aspects of computerization, information technology as well as communication technology.
- In the past ten years, Nigeria has witnessed profound transformation with regards to the introduction of computer, information technology and high-tech communication systems to key sectors of the economy.
- In most organizations in the country – industry, service, government, high technology has been widely used.

- Specifically, firms in the financial sector has rely heavily on high technological innovation to conduct transactions in local and international financial markets.
- Manufacturing firms also depend on communication equipments to conduct their production processes.
- Customers of customer-service firms such as banks, insurance, hotels, expect 24-hour-a-day services either through direct access to their accounts or through the internet or general mobile service (GSM).
- While some of these new technologies have made the worklives of several employees easier, many of them are concern about the negative effects which they impose on their worklives and other social, economic and health implications.
- Reliance on information technology may jeopardize social networks among workers.
- While there is a great demand for IT employees in the Nigerian labour market, those who lack such skills find themselves out of job. This has increased the number of unemployed in the Nigerian labour market.
- One implication of the rise in the proportion of IT-complid employees in Nigeria is the emergence of two classes of employees – a priviledged class with IT skills who have unlimited access to promotion, enhanced status and another class who are relegated to lower status work because they lack IT skill.
- Frequently, the second category of workers have grievances and resentments with the management over such issues as wages, hours and condition of work, benefits and promotion. These problems have led to heightened tension between the management and the Nigerian workers resulting to various forms of industrial conflict – strike, absenteeism, lock-out among others.
- Technological innovation allows for increased production on a large scale. However, the process also make workers more easily replaceable. Workers’ response to this has been in form of resentment and other negative attitude.

Summary and Conclusion

This paper has discussed the issue of workers’ response to technological innovation and sustainable development in Nigeria. It considers the various ways in which the Nigerian economic sector have experienced technological innovation. The paper also examined the implications of technological innovation on the Nigerian workers and their responses to these experience in their workplaces.

While technological innovation is considered as positive to the production process, however, its attendant effects on the workers which provoke their negative responses may jeopardize the realization of the ideal of achieving sustainable development in the country.

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