TECHNOLOGICAL CHANGE AND EMPLOYMENT RELATIONS IN NIGERIA: THE CASE OF THE NIGERIAN DOCKWORKERS

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INTRODUCTION

Productions of goods and services in the world today have been greatly influenced by the systematic application of physical forces through different types of technology. Technology in most organization provided the required forces through various forms by which goods and services were produced. This to Dauda (2009) may be in forms of machine equipment information and communication made up of knowledge, tools, method and system directed to work in specific manner. Technology is made up of the hardware, the software and the brain ware. The hardware is the physical structure and logical of equipment, the software is knowledge and method used for production or output from the hardware and the brain ware is the reason for using the technology in a particular way. All these depend on a particular way. Khalil (2000) sees technology to be the result of man’s learned and acquired knowledge or his technical skills regarding how to do things well.

The state of technology determines the quality and quantity of goods and services produced. Organizational and national conditional performance and development are determined by the state and types of technologies. Technology also influences living conditions of individual and groups in organizations and nations and the relationship between them. Technology is prone to change, and the state of technology have direct link to the relationship between the employer and employee. Technology, labour and capital are interconnected. Some technology use a lot of labour and some use more of other equipment or capital. Investors and manage based their selection or the quantity of both to their price and prefer or choose the one with lesser price to maximize their profit.

The choice is explicit but rapid and radical change and regulatory control may create problem that make it sometimes difficult to make a rational choice. The choice and the preference place on capital at the expense of labour may reduce labour co-operation, lowered their morale, productivity, create conflict that may reduce organisational profit.
On the other hand choice of labour may reduce the quality and quantity of goods produced and lowered organizational profit, competitiveness and profitability. Investors constantly face the dilemma of making rational choice and to balance the needs for each of them so as to make sustainable profit.

Information and communication technologies (ICT) have changed all aspects of organization direction and operation. Work systems and employment relations have been affected by ICT in nearly and its major aspects. Microchips revolution and optic fibre cable have altered technology and work as never before. Employee and managers are interconnected through network of computers and other information gadgets. Many aspects of organization, industrial, national and international relations are organized and directed through ICT networking. These networking also connect production within and outside the industry and it extends to customers, suppliers, vendors, research and development maintain its systems.

Workers of different categories, even the less educated factory workers have benefited. Internet and multimedia telephone and other communication systems have provided opportunities to all categories of employees to receive and send information from and to anywhere in the world. This has provided access to technical and non technical solution to their individual and organizational problems and increase their efficiency and effectiveness. Engineers, technologist, technicians, craftsmen and artisan now use internet to search for solution, tools and materials that may help to improve performance and solve problems which have increased individual and team performance in many organization.

This paper examines the effects of the choice of technology on manager and investors and on the employment relations in Nigeria. It uses both the descriptive and empirical method to examine this relationship and its effect in Nigerian. The extents the change in technology affect the relationship between management and dockworkers in the Nigerian shipping industry is the focus of this paper. The paper also examines man’s innovative ability to cope with changing conditions, and the extent technological change.
TECHNOLOGICAL INNOVATION AND ORGANIZATIONAL PERFORMANCE

Technological innovation rest on the creative ability of human being. Man has the capacity to use his knowledge to create new machines process and method that could enhance or improve the quality of goods and services. Innovation is required for man to satisfy his changing need and cope with the demand of the changing and dynamic environment. The production of the unusual, uncommon novel and quality, ideas and product enable man to satisfy his need despite his changing condition and requirements. Technology innovation is the changes in technology can significantly improve the organization performance, improve its process and promote its service delivery system beyond the state of the art to produce quality goods and services (Taylor, 1958, Hermon, 1956),

Shrivastava (1984) regards technology innovation as changes in technology that significantly improve the performance of organization. Organizations cope with the changing condition in its environment through technology innovation. Organizations employ different method to promote and use technology to promote its adaptability and management of the ever changing conditions and environment in which it operates. Human being takes the most active part, as he they are involved in producing and using technology and also in using and purchasing product and services that are produced by organizations through the use of technology.

Man’s creativity, lead to inventions which are used for innovation by organization. Organisation’s choice and purchase of technology are determined by socio-economic conditions. Major invention may be impeded by absence of complimentary condition to innovation. A labour saving invention may not be immediately adopted when labour is abundant and capital is scarce. Poor facilities and lack of finance may hinder invention and adoption of new technology. Availability of cheap labour may hinder the use and purchase of labour saving device or innovation. Many organization attempt innovation to fulfill technical and market requirements to make more profit, but may fail when it could
not fulfill. Fulfillment of the requirements lead to innovation success and lowered innovation failure.

Market or the environment have to be analysed to enable the innovation to satisfy and respond to market need. Information have to be collected and processed in a manner organization will benefit from its uses. Organization should ensure that it has capability, capacity and need for technology before using or embarking on it. A situation where the competence capacity and management are not developed to innovate, it leads to waste of resources. Firm size may determine its capability and ability to manage innovation.

A large firm could engage and manage innovation successfully by putting in place structure and management that could influence innovations organization. This structure enable human resources to respond to change and work as a system. The structure is the organization system that could enable it to cope, move along, link and connect the environmental systems which include other organization, nations and global resources, people and conditions. Organization success depends on how it responds to change within and outside it.

Kast and Rosenzweig (1979) see a system as an organized whole consist of two or more parts, components or subsystem delineated by identifiable boundary from its environmental supra system. It could also be regarded as an assemblage of things connected or interdependent connected or interdependent so as to form a complex unity, a whole composed of parts in orderly arrangements according to some scheme or plan. General system theory could facilitate integration of broad scheme of knowledge across physical, biological and social work. Organizational structure includes human resource, work system, knowledge and skill which when effectively managed could positively influence innovation capability of individual and team for technology innovation. Work system includes all the elements that could indirectly influence human resource performance. Takeda (1993) agreed that organization should contribute to evolutionary revolutions but the two should combine with organization work system to enable individual employee and groups to reach the highest level of performance.
Work system operates through individual and group performance and interconnection of jobs. Jobs are designed to take care of employee’s skill and competence. Job design, rest on the process of specifying the context, process and relationship between different jobs, to satisfy technological and organizational requirements. Work study focus on assessment of work that needs to be done. Task analysis specifies methods to accomplish objectives. Job structure assembles a number of tasks into jobs or group of jobs. Work system rest on the assessment of the environment social, economic and political system in which organization operates.

These to Dauda (2009) should be combined with human resource system through job enrichment directed towards production and to encourage employee participation in decision that control and affect work to prevent system interruption that may hinder organization success. Job design should be directed in motivate to employees and groups of employees for technological innovation. The need for innovation is to adapt technology to environmental changes and customer needs for organizational survival and competitiveness (Roger, 1996). The extent the system control and management enable the organization adapt and cope with the changing and dynamic condition.

Human resource management based on the effective combination of interrelation component or subsystems which are human resource planning effective reward system, effective appraisal system and effective career management are provided to stimulate innovation to enable the organization to cope with change. Devanna (1986) Human resource cycle is a form of system management which lay emphasis on effective the interrelationship and combination of the employee selection, performance, appraisal, reward and development for the effective human resource management and could be used motivate employee innovation, organization which hope to have competitive advantage over its competitor and survive in the global competitive and dynamic environment should give preference to human resource management. Systems control and management could only be performed by the human resource.
Despite the sophistication of many technologies, they still need human inputs to function to achieve organizational goals and objective. All other resource in organization functions and activated through human actions and interactions (Rapacynski, 1992). Organisational performance is a reflection of the performance of its human element. Badawi (1983) reiterates that most organization failure could be traced to manager poor management of employee ‘A manager can hardly succeed if the work force is against him’ Dobbs (1999) suggest that human resources performance could be improved individual and collectively through the following methods, which are:

- A creative and supportive corporate environment which favour employee motivation
- Mutual goal setting to achieve specific performance target
- Positive behaviour reinforcement and constructive feedback
- Meaning work and career development opportunities
- Improved innovation by capitalizing on employee difference.

Human resource management that could stimulate employee innovation should be proactive and anticipating rather than to respond only to change. Good leadership qualities that could spur the employee, to work towards achievement of organizations objectives and nation visions to be exercised by manager. A renewed and new vision have should continuously be created, communicated, translated and implemented for new innovation.

TECHNOLOGICAL CHANGE AND EMPLOYEE RELATIONS

Many industries and nations in the developed and developing countries have established research and development units, departments and organizations to enable them to cope with technological change. The degrees of aggregation of technological innovation by organization and nation determine its performance and development. This is related to management and control of internal and systems and its response to external system. Significant improvement in output, productivity and growth are achieved when they use new technology. Increased productivity and general economic growth in most developed nations have been attributed to increasing technology and technological innovation. In these countries a significant proportion of R & D expenditure are devoted to the
introduction of new product. Productions of large quantity and quality of goods and services have been traced to improved technology through R & D.

Organization have also tend to lay emphasise on capital in terms of machinery and equipment and less on labour to increase their profitability. But these have not positively increased labour productivity. The substitutions of capital for labour have not really improved labour productivity or performance. The substitution of one by the other depends on the organization assessment of its environment and needs rest. Companies where large number of labour are displaced or removed to be replaced by capital without proper assessment may not record significant price and profit. Improved performances of many organizations were often traced to the improved performance of all the factors of production and the number of customer not only on technology (Dauda, 2000).

Investors and manager may consider improvement in either technology or labour to respond to customer desire for lower prices and to increase profit improved performance. Employees demand for increase wages may be traced to increase performance and productivity that are often due to management and control of technology system. There may be no scope for increased wages profit margin and price of unit of service if the cost of technology is high and the demand is not high enough to increase profit margin. (Dauda, 2000). In advanced countries the cost of technology is low, but that of labour is high and quantity of goods and services are large and the number of customer, are many. These may offset labour cost, reduce price margin and increased profits. In most developing nations low technological progress reduces the ratio of marginal product of labour to that of capital but in the developed nations where rapid technological change reduces price of capital and increase that of labour.

Unemployment and labour reduction due to technological advances may be prevented by proper management of the level of aggregate demand. Structural unemployment occurs because the unemployed do not posses the skills required by the expanding industries despite the expansion of aggregate demand. This situation leads to structural unemployment different from deficient unemployment caused by lack of job. Structural
unemployment can be reduced by improving employee skills in forms of training and development and of education. Since the works in industry have been divided into smaller and simpler parts it will be easy for the unemployed to acquire necessary training and reduce the level of unemployment and be re–integrated into the system.

In most conventional high tech industries individual employee received two or three weeks training as against four years engineering apprenticeship training required for factory worker. Technological advances in industry may in three major ways affect employment effect employment. Technological change is labour saving biased or capital saving biased, the latter could led to reduction in total cost of production and the latter and the former enhance labour productivity. In the second instance, same output can be produced with fewer men; the third is the reaction of demand to any consequent change in relative price which increases production and efficient. This expands output and promote employment prospect.

Despite these, the rate of the transition from older technologies is accelerating and is creating what Joseph Schumpeter regarded as “creative destruction” whereby innovation would destroy existing technologies and method of production. (McKnight et al 2001) Technological change has created newer and more efficient machines which workers will replace them. Technologies have destroyed organization in the following major traditional areas which are:

Industry structure,
Regulatory approaches,
Competitive positioning strategies and
Technological assumption.

Trade unions in developed countries have also through television videotape, radio and other media sensitize and inform their member of the danger which unilateral employers decision on purchase of new technology posed to their members employment. Labour union mobilization of their member through media is low in Nigeria. In developed countries, trade union have consistently requested for law that will make technology
subservient to the needs of the people rather than the other way round. Trade unions in Nigeria have not sufficiently make use of the media to educate and mobilize their members. Management unilateral decisions on technology have not been criticized and it is not part of the bargaining issue on collective bargaining and negotiation in many collective bargaining and agreements. (Dauda, 2010)

The Nigerian dockworkers and the shipping industries were affected in all these areas. Their employees, trade unions and management in the shipping industry have to terminate appointment may of train their managers and employee, restructure, reengineer and reposition their organization to maintain a system that will enable them to cope with rapid and radical technological change.

EFFECTS OF TECHNOLOGICAL CHANGE ON SHIPING OPERATIONS AND NIGERIAN DOCKWORKERS PERFORMANCE.

In Nigeria, sea ports facilities are categorized into four. The first are the water space, which is the space of shipping maneuvers, the second is the berth facilities, such as crane, trailers, forklift etc. the third is channel accessibility which determine the size of ship that can be in a port and the fourth is the linkage to land transport system such as roads and rail network which connected the ports to mainland for easy offloading of goods in a ship. One of the major developments in the last decade is the containerization of the cargo trade between Nigeria and developed countries. Cargoes are different in size and shape and their handling are done through the clearing and forwarding agencies, shipping and stevedoring companies.

Cargo handling and delivery time are determined by the type of equipment put in place in port. Increase in the number and size of ships in a port should go along with increase in the facilities and equipment. The volumes of cargo carried by a ship determine and the sizes of cargo and the time spent in a port. Ship owner pay for each day and hour spent by a ship in a port. Unnecessary wasting or spending of longer time than necessary has a very serious financial implication on ship and cargo owners. Improved cargo handling
methods reduce time and improved performance. Ship owners and customers gain economic of scale from increasing vessel size and reduction of cargo handling berth time.

In Nigeria ports, many aspects of cargo handling and stowage are still labour intensive. In many areas Nigerian dockworker are still using obsolete or outdated equipments. Many big ships could not offload their cargo in the Lagos sea port because of the inadequate equipments and facilities. Labour related handling method are used to offload into smaller ship from the high sea, Port time of ships are determine by the type of cargo handling equipment that are provided. The developments of cellular container systems have in the recent times made it easy for ship to offload without the use of a heavy equipment and folk lift. In Nigeria port average general consignment is small, and face with the less than container (LCL) and consolidation stripping/stripping at consolidation depots. Most ports activities labour intensive that are formerly labour intensive are gradually being substituted with new equipment. Port finds it difficult to provide employment to less than ten percent of workers that are seeking for job at the Nigeria ports.

Most cargo handling methods are still the conventional break bulk system which makes labour cost per ton to be ten times higher than container system. The roll-on –roll-of (Roro) permit the rapid handling of wheeled cargo into layer garage decks and this combine most of the flexibility of cargo liner with quick turn around of cargo container ship. Roro system is better because its cargo handling relies on both technology and labour. The cost of labour most especially in developed countries makes them to prefer cellular system. The capital and operating cost of a ship in a Roro system is higher than other system as it is physically bigger and have higher cubic / cargo weight ratio. Roro system is known to have performed effectively in response to many short–run port congestion by increasing effective port capacity.

But Roro has not led to saving in waiting time costs which out weigh the low density cargo storage and resultant space lost especially in Nigeria where road trailer is the most dominant. The rail way transportation which could have reduced the cost and compensate
for the cost of labour is no longer operating in Nigeria. Despite this, ship owners due to privatization and deregulation of the port Nigerian have started to take advantage of modern cargo handling method, which have serious implication on the labour intensive shipping industries and employment prospect of the dockworkers in Nigeria. The barge carrying vessel (bcv) ideally suited for the shipping of semi processed or finished material is now been used in Nigeria, but inadequate infrastructure, low production and collapse of the major manufacturing and raw material processing industries have undermined the relative advantage of its low cost of handling. Ship- to –shore transfer in a container berth in Nigeria is generally done by 1abour above intensive method rather than through shore- based gantry with a lifting capacity of 30-40 tons and average cycle time of 2-3 minutes.

But this not sustainable in Nigeria due to low berth occupancy, low ratio of ship working time to total ship time at berth, poor box storage facilities especially for small ship and multi-port in itineraries. The problems of transfer of containers between quayside and storage area and for the land transportation of cargoes in Nigeria are mainly through the dry ports which require a large space and large investment in trailers. Modern shipping technologies have reduced capital requirement and unit cost in port and shipping sectors. The use of new technologies which combine low cost cargo handling with the flexibility in the use of carrying capacity have led to the reduction of labour necessary for cargo handling and other shipping businesses, Shippers now benefit from economy of scale as capital requirements for new technologies move down as against that of labour.

The purchases of new technologies also reduced ship waiting period and improved workers performance but have led to reduction of workers in the Nigeria ports. Unskilled worker which form a large part of the labour in the ports have been relieved of the job and few highly skilled technical personnel have replaced them. The uses of computerized office equipment and information and communication technologies (ICT) have improved work performance. Fact based managerial decision making based on the use of ICT. ICT also reduce bureaucracies and increase the managerial and employee action which further improve performance of all aspect of Nigeria port operation. Effective co-ordination of
custom, shipping companies, clearing and forwarding and others have improved through the ICT. Port performances in Nigeria have improved but this have also led to the reduction of managers and employees in many areas of port operation.

**METHODOLOGY**

Data for this study were collected through the administration of structure questionnaire to a sample of dockworkers in the Tin Can Island ports, which is the major Nigeria port. More than eighty five percent of the Nigerian dockworker works in this port. Result of assessment of the dockworkers position in this port could be representative of the Nigeria dockworkers. The dockworker in this paper include worker of the merchant navy officers, dock labourer, seafarers, workers of terminal operator and other that constitute the maritime industry worker’s union of Nigeria One hundred and fifty (150) copies questionnaires were administered randomly to all categories of dockworkers. One hundred and forty (140) copies of the questionnaire were duly completed and returned which formed the basis of this analysis.

The two major variables examined in this study are technological change and employment relation. Two hypotheses derived from these two variables were formulated. The first determine the relationship between technological change and employee skill, the second is between technological change and dockworkers working condition and the third is between technological change and dockworker’s union responses. Twelve questions based on the hypotheses were formulated. These questions were based on five point likert scale of agreed, strongly agreed, undecided or neutral, strongly agreed and strongly disagreed. numerical values was attached to each point considering the extent to which respondent take each of the statement The responses were coded and mapped into numeric values of 12345. For example, the use of information and communication technology on employment retentions in the shipping companies was based on these five point like scale of Strongly Agree – 5, Agree – 4, Undecided or Neutral – 3, Strongly Disagree – 2, Disagree – 1.
Inferential statistics of Pearson Correlation was carried out on the collected data to determine the relationship between the three hypotheses. Question derived from the hypotheses were asked to determine respondents responses to technological change and employee job displacement, job enrichment, employee and union involvement in decision to purchase new technology and others. This is based on Shaken (1986) assertion choice of greater percentage labour or technology is influenced by his bias or motives moderated or control by relation of power between employers and employees in the work places. He reiterates the importance of industrial democracy or collective bargaining at the work place, absence of which social control of technology become a mere “illusion”. He argued further that employer should not exploit workers and they should be given opportunities or power to take part in decision making and in determining organization directions in all vital issues, which include the replacement of old and the purchase of new technology.

The inferential statistic of correlation is employed to determine the relationship between each of the two variables. The strength and the kind of relationship are used to make prediction on the effect of technological change on variables relating to employment relation. The relationship between independent and dependent variable for each hypothesis are determined by Pearson correlation statistic to produce results using statistical Package for the Social Sciences (SPSS) in computing correlation co-efficient. The extent of correlation for each of the hypothesis is considered at 0.01 level of significance. Findings reveal the extent of technology change on employee skills, working condition and trade union responses.

**DATA ANALYSIS AND FINDINGS**
Correlation co-efficient between technological change and employees skills, between technological change and union response and between technological and employee working conditions are represented in table 1.1, 1.2, 2.1 and 2.2 Table 1.1 and 2.1 show that the relationship between that technological and employee skills are high. But the mean response of 1.67 and a standard deviation of 0.65 explain that technological change is not as high as dockworkers skill, and working condition in the Nigerian shipping
industries. This is because many dock workers skills could not move along or cope with technological change in the shipping industry. Many workers in the shipping industry could not cope with technological change. Technology is now an important ingredient in several strategies choice which most shipping companies have initiated to meet the challenge of change. Technology is being used by these companies for competitive advantage, re-engineering, and improved performance and to meet the challenge of the global economy. Technology is indispensable in the shipping industry. It can be used to form global alliance with other shipping industry to form global alliance with other shipping companies’ supplies, customers and dockworkers and to raise money in the global market.

**Table 1.1:**

**Descriptive statistics (Technological change and dockworkers skill)**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Total</th>
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<tbody>
<tr>
<td>Technological change</td>
<td>1.67</td>
<td>0.65</td>
<td>70</td>
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<tr>
<td>Dockworkers skill</td>
<td>1.91</td>
<td>0.45</td>
<td>70</td>
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**Table 2.1**

**Descriptive statistics (Technical change) and dockworkers working condition**

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<th></th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Total</th>
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<tbody>
<tr>
<td>Technological change</td>
<td>1.67</td>
<td>0.65</td>
<td>70</td>
</tr>
<tr>
<td>Dockworkers working condition</td>
<td>1.87</td>
<td>0.43</td>
<td>70</td>
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</table>
Table 3.1
Descriptive statistics (Technical change and trade union response)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Technological change</td>
<td>1.87</td>
<td>0.65</td>
<td>70</td>
</tr>
<tr>
<td>Trade union response</td>
<td>1.65</td>
<td>0.41</td>
<td>70</td>
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</tbody>
</table>

The Pearson correlation co-efficient of technological change and dockworkers skill is 0.301, the technological change and dockworkers working, condition is 0.29% and technological change and dockworkers union responses is 0.293. These shows that correlation are significant at 0.01 (3 table). However the results show that technological changes have a higher correlation with dockworkers skill, dockworkers union responses and condition of employment. These could be attributed to the inability of the dockworkers to cope with technological change. The employer and investors in the Nigerian shipping industry give preference to technology in order to operate profitably in a competitive global environment of continual and unpredictable changes. Technology give a company competitive advantage. Technology is employed to substitute many aspect of the dockworkers job. It automates many aspect of the task or process used to accomplish most jobs. Technology is either use to replace or argument human effort and transforms task.

Table 1.2
Correlation (Technological change and dockworker’s skill)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Technological change</td>
<td>Pearson correlation sig (2 tale)</td>
<td>1.00</td>
<td>0.301***</td>
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<tr>
<td></td>
<td>N</td>
<td>-</td>
<td>0.000</td>
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<td></td>
<td></td>
<td>70</td>
<td>70</td>
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<tr>
<td>Dockworker skill</td>
<td>Pearson correlation Sig (2 tailed)</td>
<td>0.296</td>
<td>1.000</td>
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<td></td>
<td></td>
<td>0.000</td>
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<td>70</td>
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Correlation is significant at 0.01 levels (2 tailed)
Table 2.2

Correlation (Technological change and dockworkers working conditions)

<table>
<thead>
<tr>
<th></th>
<th>Technological change</th>
<th>Dockworkers Working condition</th>
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<tbody>
<tr>
<td>Technological change</td>
<td>Pearson correlation</td>
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<tr>
<td>Sig (2 tailed)</td>
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<td>0.296***</td>
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<tr>
<td>N</td>
<td>70</td>
<td>0.000</td>
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<tr>
<td>Dockworkers Working</td>
<td>Pearson correlation</td>
<td>0.293</td>
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<tr>
<td>condition</td>
<td>Sig (2 tailed)</td>
<td>0.000</td>
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<td>N</td>
<td>70</td>
<td>1.000</td>
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Correlation is significant at 0.01 level (2 tailed)

Table 3.3

Correlation (Technological change and dockworkers union response)

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<th>Technological change</th>
<th>Dockworkers Working condition</th>
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<tbody>
<tr>
<td>Technological change</td>
<td>Pearson correlation</td>
<td>1.000</td>
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<tr>
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<td>0.293</td>
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<tr>
<td>Dockworkers Working</td>
<td>Pearson correlation</td>
<td>0.293</td>
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<tr>
<td>condition</td>
<td>Sig (2 tailed)</td>
<td>0.000</td>
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<tr>
<td>N</td>
<td>70</td>
<td>1.000</td>
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Correlation is significant at 0.01 levels (2taile)

Evidence shows that 92% of the companies in the Nigerian shipping industry give preference to technology. They use a large percentage of their finances on the purchase of new equipment and machines in order to move along with the technological change in the global shipping industry. Technological change influences major aspect of human resource management. Selection nearly all employee is based on the technical competence or technological know-how. The performances of an employee depend on
the extent he could understand and use technology to accomplish result and his appraisal and competence based on the use and management of technology. Employee rewards are determined by his technical completion of required or appropriate knowledge, skill information skill to cope with technological change make many dockworkers to resist technological change (Plant 1987). Most shipping companies conceive of technology as a replacement for human labour, many of companies in Europe and America shows continuous improvement in productivity and profitability because they consider to be tool rather than a substitute for labour (Brooks and Macoby, 1986)

Behavioural and systematic resistance to technology denied many company of reaping the benefits of their investment in Technology/Workers conditions were not improved despite their improved productivity that were the outcome of the use of new machines and equipment. Employers and investor make profit but wages of dockworkers remain the same. Many dockworkers were retrenched when new technology were purchase to perform their job 75% of the respondents strongly agreed that their salary and other condition of employment were bad 60% believe that retrenchment was due to the use of new technology and 25% believe that employer lack of interest in the wellbeing of workers and not technology was the major cause of their retrenchment 70% of the respondents strongly agreed that dockworkers unions do not understand the threat which new technology pose to their members jobs and 80% strongly agree that purchase of new equipment and technology has never form part of collective bargaining or agreement. Work job were substituted with machine in all major department.

CONCLUSION AND RECOMMENDATIONS

This paper highlighted the interrelationship between technological change, organizational performance and employment relations in Nigeria through the case of dockworkers. Investors, ship owners and management purchase new machines and equipment to increase their efficiency and competitiveness and to make more profit. Findings from the study reveal that the adoptions of new technologies in the recent years have improved the performance and profitability of many shipping industry. Dockworkers performances have also increased due to the use of new technology. But introduction of new
technology have not really improve performance and working condition of the dockworkers. Management have not substantially benefited from investment in technology. Antagonistic relations between management and dockworker’s union have undermined the benefits of the new equipment and machines or technological change. It has also led to low morale and productivity, corruption among all categories of the dock workers and poor industrial relations climate in the Nigerian ports and ship companies.

In order to benefit from their investment strategic human resource management which considers improvement of dock workers skill through training, apprenticeship and development should be given to the employee before new technology is introduced. Dockworkers, working conditions to be improved and their salary and allowance are made to move along with increasing productivity and profitability in the industry. Dockworker’s union should ensure that the effects of technological change on their member’s jobs are considered. Technology in the shipping industry should be monitored and they should anticipate rather than to react to technological change. They should organize training and retraining for their members that are affected or likely to be affected by technological change. The present management methods have created apathy, lowered productivity and create lack co-operation and crisis between workers and management. Government should take interest in the workers living and protect them from complete substitution by machines and equipment. This could reduce unemployment and improve socio-economic development of the nation. Technology change should be complemented with good employment relations practice to enable employers and employees to benefit from technological change and to protect the interest of all the stakeholders.
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