

Impact of automation and computerization on jobs



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During the early 1990's the processes of automation and computerization were changing the work place of corporations in the newly developing countries. Discuss how these processes had affected employees with low skills to bargain for their compensation packages in developing countries.

Introduction

Automation and computerization were the by-products of globalization in the 1990s. Due to increasing mechanization and industrialization of work activities, a technological boom started which had huge impacts on the role of low skilled workers within an organization. The task structure changed and so did the wages and incentives paid to the employees. As a result, the low skill workers tried to regain their power by developing strategies to bargain

for compensation packages with the managers. The following paper is based upon this issue. It attempts to highlight the impacts of change along with worker's role to deal with these processes of change.

Impact of Automation and Computerization on Jobs

Automation refers to the use of automatic machinery instead of manual labor to carry out factory work activities whereas computerization is related to the increasing use of technological change in the organizations. As technology grows, the methods to do manufacturing jobs are changed and as a result, the whole occupational structure is changed. Computerization involves numerical control (NC) technologies that change the staffing patterns and company structure (Cappalli, 1996).

When tasks are transferred to automatic machines, job opportunities decrease as less people are involved in final creation of a product. But on the other hand, in some cases, more people are required to run those machines. But in the latter case, the workers get reduced wages. So, Computer integrated manufacturing systems (CIM) have developed easier application systems for the organizations but at the same time, it has increased the concerns of the worker labor class due to decrease in opportunities and wages (Krueger, 1993).

Impact of Automation on Worker Skills

Apart from change in structure of tasks, the nature of skills required to perform the job are also changed. Two types of worker skills are important to consider while exploring the impact of computerization and automation on low skilled workers (Juhn, Murphy, & Pierce, 1993).

1. Skill Depth: It includes two major areas: judgment and time proficiency.

Low skilled jobs that require little time proficiency to master the work (e. g. filing or food servicing) as well as judgment have much lower wages as compared to those skills that are more complex and require more time to learn. Automation has reduced the proficiency time required for certain jobs therefore; it has also reduced worker wages. Skill depth is reduced because of transformation of complex manual labor to simple mental tasks. On the other hand, computerization might allow workers to have greater freedom in the distribution of tasks. NC technology is used to distinguish programming from machine operations. So, this CNC technology can facilitate in reducing proficiency time by combining programming and machine operation. CAD system were also developed which allowed low skilled workers to create faster and better output through easy learning and less effort.

2. Skill Breadth: This concept was of importance for employees involved in manufacturing, maintenance and repair tasks. It involves the changing of job content as a result of technology. Although it reduces the effort of manual input but with regards to the compensation programs, this technique did not attract the low skilled laborers.

Decrease in worker wages

The above facts show how the dynamic world brought with itself a changing organizational pattern. The fast and easy work done by machines and computers used to leave workers in the lurch. Organization's focus shifted towards profit generation by increasing productivity through the use of smarter machines. This had severe consequences on the overall economic

structure of developing countries. The economic progress was hampered and unemployment was increased. The workers, who formed a major chunk of the population felt depressed because their sources of earning were severally impacted and they had to negotiate with the managers for their wages and compensation (Katz & Murphy, 1992). Following analysis indicates how the workers in 1990s strived in the changing world of automation.

Strategies to bargain compensation packages

In the developing countries, automation and computerization created unemployment. Such impacts of technological change dispersed greatly across various geographical regions in manufacturing and service industries. Therefore, the dilemma of marginalized workers increased the topic of setting wages in the 1990s. When the workers felt that they are not in a power to negotiate wages with the managers, particularly in the middle class developing countries, they created unions whose sole purpose was to bargain worker wages according to international standards in order to provide increased benefits and fair incentive to the people for the amount of effort they put in (Hirshorn, 1984).

This process was severely impacted when countries created minimum wage laws for low skilled workers. It further deteriorated the process because increasing inflation and minimum wage laws reduced the power of manual workers to such an extent that they remained nothing but merely a cog in the machine. In the developed countries, the power of individual bargaining is available to the workers but in developing countries this right is strictly curtailed, therefore; labor institutions are formed for this purpose. Research

indicates that unnecessary wage legislation has increased the problems of low skilled workers in developing countries therefore; a proper system must be developed to protect the rights of workers, both economically and socially, in the technical global world (Zuboff, 1988).

Conclusion

The above analysis explains how the process of automation, computerization and technological change changed the job structure and the skills required. These changes increased unemployment in the developing countries and increased wage concerns of the workers. In order to receive equitable wages, unions were created to bargain prices with the managers. These unions have been successful in driving power for low skilled workers in some cases but the fact remains that automation and technology has changed the overall work landscape which is irreversible. Therefore, proper mechanisms must be developed to regulate wage laws in the world of computerization and automation.

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