Complementarity between the employees skill level and technological innovations

Technology

CONCLUSIONS AND RECOMMENDATIONS

This research looks at the attitude of manual workers and the industry towards robotics, Artificial Intelligence, and other modern technologies as well as how they affect employment and future business prospects. The analysis uses original survey information of 30 firms that operate in the United States private and public sectors. Out of this, a lot of speculative arguments have come up with regards to the social and economic impacts of the technological innovations; however, the limited quantitative evidence is presented. Even though the study has included calculations from the cross-sectional survey as well as information relating to Artificial Intelligence related technologies (subjective assessments), it shows novel findings with regards to the topic.

The study results imply the following: first of all the companies that operate within the service sector overall possess positive attitudes towards utilization of technology innovations and the effects of the robotics and Artificial Intelligence. This finding illustrates that people have to pay more attention the industries that are utilizing robotics including most service industries which indicate Information Technology revolution. This is due to the fact that improvement of productivity performance of service industry is imperatively able to enhance the potential level of growth of the advanced economies like the United States through application and diffusion the AI-related technologies within the service industry which is highly expected.

Secondly, the complementarity between the employee’s skill level and technological innovations is seen. Particularly, it is essential to be attentive

to the significantly strong complementarity identified at a relatively high end of the skill distribution. Hence, this finding shows that to accelerate diffusion and development of modern technology as well as maintain the employment opportunities, human capital has to be upgraded like increasing employee numbers with the postgraduate education.

Thirdly, the firms that operate within the international markets implied positive attitudes to the effect of Artificial Intelligence related technologies, this shows that the globalization of the economic activities like expanding Economic Partnership Agreements (EPAs) can facilitate development as well as diffusion of the innovations that are AI-related; active investments can also be utilized in the new technologies which can later promote the progress of economic activities through globalization. Interestingly, existing evidence shows that the introduction of modern technology is linked with a high employment growth which could vary depending on the size of the establishment.

The main outcome of the automation has led to a statistically significant enhancement with regards to the labor productivity both in the long and short-term effects. Moreover, automation was seen to reduce employment rates in the short term while it also leaves or raises employment which could be unaffected as a long-term effect. One main method that can evaluate technology advances' economic importance is through considering possible implications in case a particular industry has as many industrial robotics as the country's industry.

It is important to note that the initial industrial robots fulfilled specific tasks in the manufacturing industry so that the production volume could increase. An increase in the production of the goods offered manufacturers a chance to offer their finished products at an affordable price. The result of this was that more individuals purchased the goods and this triggered higher demand which eventually led to high production volumes. Automation and robots solution have been supported as the technology advanced and this has affected production in that it has become more efficient because it met the consumers' demands. The robots have not just increased the production volumes but the production speed as well. Nonetheless, the consumers were spared from having to wait long periods of time for new products due to the fact that the automated processes make it possible for the goods to be manufactured using limited time. Therefore, the companies have the chance to ensure reliable and fast supply of the products.

Currently, goods are much cheaper because of their direct connection to automation procedures. The modernized manufacturing procedures require organizations to employ less manual workers as compared to before. Consequently, the personal costs contributed to the general production costs is the reason why the companies are still trying to cope by using fewer workers rather than more. In the working areas that are automated, robots have the ability to assume the roles of most human workers that would have otherwise worked in plenty of shifts. The companies still require humans but they must be properly trained as well as just responsible for controlling the robot's programming. Therefore, this means that the human labor has

become even more qualified as compared to the way it was several decades ago.

Utilization of the robotic devices in the manufacturing sector also affected the goods development. The designers presented newer possibilities to form products due to the fact that the machines had the ability to produce them using alternative ways as compared to the way humans could. The robots were very precise and strong when it came to the accomplishment of their tasks. Hence, the future manufacturers produced newer and innovative products for the customers. In many factories, the robotic solutions influenced other improvements while focusing on their safety. Most of the tasks connected to the heavy metal works, for example, need many people. However, accidents are still prone to happen despite the fact that robots enforce more safety to hazardous work. This is the sole illustration where the robots contributed to the safety of the employers. This is similar to the tasks which involve the dangerous chemicals and nuclear materials. The robots also handle these operations easily and cannot become affected by any of the related dangers.

The industrial robots have had significant effects on society and since the development of the computer technology much more influences have been seen on people; s daily lives. The most important illustrations, in this case, are the GPS systems and the internet because of the change they have triggered in lives. First of all, the internet is the tool which has brought most of the comforts that are being experienced in our daily lives especially communication, banking operations and online shopping. Evidently, this

means that technologies possess a major share of the process of globalization which has become inevitable over the last couple of years.;