

Chapter 20

Industry 4.0 and Its Impact on Working Life

Gokhan Ofluoglu

Bulent Ecevit University, Turkey

ABSTRACT

The natural development of history of humanity confronts the societies with a new industrial wave making use of the opportunities of the information and communication technologies. While the concept of labor depending on muscle force that produced the emergence of modern societies withdraws from production process, the gap is filled by intelligent machinery which automatically decides by itself by employing machinery automation and internet technologies. In the new social order, people determine their own standing according to their intellectual build-up instead of muscle power. Industry 4.0 brings a lot of advantages together with the reduction of source consumption, energy productivity, production efficiency, stabilization of rising workforce expenditures, and prevention of the impact of aging societies on production. Although problems come up on the issues of setting the intelligence of machinery and accomplishing workforce market that fits the industrial revolution, technological developments and the subsidies draw the actualization date of the process forward.

INTRODUCTION

Great transformations that take place in technology and new changes that globalization generated in the structure of management and organization brought new discussions about the future of working life at the same time. The process of Industry 4.0 is expected to affect the development level of countries, to cause distinction at the level of activity branches by the concept of internet of things (IoT), and even to change labor markets directly. Countries that can adapt to Industry 4.0 process which is qualified as intelligent production systems will increase their compatibility at global level as they have flexible and lesser cost production that is transformed according to the demand process. These improvements, on the other hand, in the market of the workforce will increase the necessity for qualified workers increasing the unemployment of unqualified workers (Kutal, 1997). The concern and stress of being unemployed lead to exhaustion which is another problem of working life (Özbucak Albar, 2017). It is asserted that the

DOI: 10.4018/978-1-7998-1125-1.ch020

idea that Industry 4.0 will contribute to employment, new profession types and employment areas will emerge with compare to the lost professions. These profound changes have also affected trade unionism and collective bargaining. Trade unions have rapidly lost members in some countries. In addition, serious changes have occurred in the level and content of collective bargaining. The most effective means of protecting and developing the rights and interests of the unions is collective bargaining. The level of collective bargaining and its content varies according to country-specific conditions. Today, there is multi-level collective bargaining in European countries. Collective agreements are carried out at various levels from negotiations between confederations to workplace regulations. In some countries, collective bargaining is done on the basis of business, while in some other countries, it is done at the level of the workplace. The most important reason for collective bargaining to reach the firm level is that in a world where globalization and Industry 4.0 are becoming increasingly competitive, business management needs to make more flexible decisions. For these reasons, companies prefer collective bargaining at the workplace level to make quicker decisions. Today, individual labor law has become important in the face of collective labor law. Besides the perception of syndicalism will also change and a transition process will be lived that ranges from wage syndication towards social movement syndication (Kutal, 1997).

The intense application of industrial 4.0 and Microelectronics Technology in production has affected the field of industrial relations and has changed the structure of the workforce. In the face of these developments, trade unions faced new challenges and had to produce new policies. Trade unions have to adapt to the requirements of new technology. Innovations have been observed in the working areas of the unions. As a result, they cooperated with the employer. The collective bargaining scheme was affected by these developments. Collective bargaining has emerged at the level of business. Also, the practices of participation in management are discussed. In addition, strikes and lockouts have decreased (Kutal, 1997).

At the same time, both global and technological developments brought growing and spreading poverty which are the main current issues of arguments. Poverty is experienced in contrary to increasing wealth as the consequence of the rising unfair distribution of income. The conditions are self-explanatory. While polarization between wealth and poverty, rising method and managing problems are among the main arguments topics. Poverty and its new types will appear in the near future due to the new conditions with different characteristics. In this study, Labor Economics deals with different aspects of the matter which are in relation to labor and wages by taking care of the gradual increase of impoverished worker.

Now, with the increase of unemployment in many sectors both in developed and developing countries, the widespread application of social welfare and its practice are on the agenda of Western countries.

New types of impoverishment arose due to the adjustability of employment, working conditions, decrease of wages and salaries, weakening of family interrelations as a consequence of individualism and the state which restricts social expenditures. In this study, the transformation of impoverishment in parallel with the changing conditions will be analyzed. The most important aspects of poverty in the information society, together with the degrees and reasons of poverty will be explained.

THE CONCEPT, IMPORTANCE, AND SCOPE (EXTENT) OF INDUSTRY 4.0

The concept of Industry 4.0 was first announced as the modernization of the German government in Hannover fair in 2011. This concept states the fundamental changes that will affect all activity branches deeply and cause a lot of changes in workforce structure. From this point of view fundamental changes that may take place, technological attempts which shelter improvements such as darkened factories,

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/industry-40-and-its-impact-on-working-life/235587

Related Content

IT and Business Can Succeed in BI by Embracing Agile Methodologies

Alex Gann (2011). *International Journal of Business Intelligence Research* (pp. 36-51).

www.irma-international.org/article/business-can-succeed-embracing-agile/55587

Measuring Agreement Among Ranks: Sustainability Application

Kathleen Campbell Garwood and Alicia Graziosi Strandberg (2016). *International Journal of Business Intelligence Research* (pp. 45-62).

www.irma-international.org/article/measuring-agreement-among-ranks/161673

A Case Study to Improve Data Vendor Selection

Rick McGraw (2014). *Information Quality and Governance for Business Intelligence* (pp. 314-328).

www.irma-international.org/chapter/a-case-study-to-improve-data-vendor-selection/96157

Evaluation of the Length of Hospital Stay through Artificial Neural Networks Based Systems

Vasco Abelha, Fernando Marins and Henrique Vicente (2016). *Applying Business Intelligence to Clinical and Healthcare Organizations* (pp. 153-168).

www.irma-international.org/chapter/evaluation-of-the-length-of-hospital-stay-through-artificial-neural-networks-based-systems/146067

Modeling of Maintenance Operations

Mehmet Savsar (2014). *Encyclopedia of Business Analytics and Optimization* (pp. 1569-1580).

www.irma-international.org/chapter/modeling-of-maintenance-operations/107349