



# The Labour Market Under Consideration of the Technical Changes


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## ABSTRACT

Implementing artificial intelligence (AI) into our daily lives has created new occupations and businesses. It has changed human activities and affected individual's behaviour, influencing our decisions. This study explores the opinions of individuals about the influences of implementing AI into the labour market, especially the issue of how AI could affect human employment. There are 144 participants who responded to this survey, and the data was analysed using descriptive statistics, the t-test to identify significant differences between men and women, as well as the Spearman correlation. The results provide interesting insights and only relevant statistics and significant results are presented.

## KEYWORDS

Artificial Intelligence, Employment, Human Resources, Labour Market, Work Environment

## INTRODUCTION

Digitalization and AI influence individuals' daily lives and provide new opportunities for businesses and personal use. The impact of AI on working environments and social lives have an increasing influence on society (Tredinnick, 2017; Ferràs-hernández, 2018). The creation of new businesses and the development of new solutions for customers is a great opportunity for companies to improve their products and be more successful (Fuhrer & Cucchi, 2012). This paper concentrates on the influence of artificial intelligence on employment and the situation of employees.

Artificial intelligence and digital transformation are changing the daily work of individuals. The new processes supported by new digital tools change the daily work of all individuals (Helbing, 2014). Machines are cooperating with individuals; software's are analysing situations and providing more accurate results and call centres use tools to investigate the mute of customers to improve service to them. This situation is dangerous and difficult for a number of employees because their current work will disappear or change heavily. In this context, people have existential fears and they expect

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to lose their job or not be able to fulfil the new requirements. Moreover, there is the assumption that a machine or tool is more effective and efficient and that human work will no longer be needed (Mesquita et al., 2019). This paper investigates the opinions of individuals about the new situation and provides some insights about how they evaluate their own chances and risks.

Knowing, analysing and evaluating the fears and feelings of employees or potential employees contributes to support the management of companies and their leaders to be successful. One major fear is the uncertainty if the current role of the employee will exist in the next 5 or 10 years (AGOF e.V., 2014; Frank et al., 2019; Ochetan & Ochetan, 2012). Furthermore, it is crucial to understand their fears in order to reduce the risk of employees leaving the company. Since employees are frustrated about this situation it leads to decreased productivity. Leadership and controlling are also supported by AI. The analysis of daily work is done by a software and the number of collected data is only increasing. Big data is a huge issue for companies and that is supported by AI. It also contributes to decisions being based on facts and figures (Schroeder, 2016). Companies are prepared and have the necessity to answer to their employees if they change any processes or engage in a digital transformation change (Caserta & Madsen, 2019; Archambault, 2014). Additionally, they should be responsible for supporting their employees in that difficult situation and be prepared for the future if their labour is substituted by AI. Obviously, the digitalization increases the efficiency and effectiveness of processes, eventually making the company more successful and accurate in their production. This is one change which will be an advantage for companies, but is that an advantage for employees too or would it be the reason to leave the company (Alexander et al., 2017)? Technology makes employees replaceable and leads to mass unemployment– this is called technical unemployment. These changes can increase the requirements for employees and reduce the workload (Boyd & Holton, 2018). In history, technical changes and innovations are responsible for increasing the need of employees and the creation of new employment opportunities. These innovations are responsible for the improvement of life of employees and reduction of production cost (Acemoglu & Restrepo, 2019). That motivates companies to be more competitive. For example, companies can reduce the prices of their products and stimulate demand or create more variations of their products to fulfil special needs or desires of their customers (Dahlin, 2019). The level of demand for skills and knowledge is increasing and requirements are changing.

The labour market is suffering from alterations and the number of qualified candidates is decreasing. Demographic changes put companies under pressure to find new solutions for their production because they do not have enough employees to produce their products (Čadil et al., 2014). AI can support companies to become more efficient and employees can work on more complex tasks (Sander, 2013). Fewer employees can produce more products or services if technology substitutes or supports workers to be more efficient and effective. Process changes create fear in employees as the future is unclear. AI and new technologies fill the gap of skilled employees, causing the drop out of their work. However, new technology implementation should produce new professions. For instance, the replacement of a cashier at the Amazon Go cash outlet may now substitute the sale analytics responsible to optimise the products replacement for the shelves that require human skill. That is a chance for individuals who work in roles which are substituted by AI and new opportunities for the employees.

The book stores are heavily influenced by digitalization and this is a good example about the danger of new technologies for the business. The media industry is providing a variety of e-books and online platforms selling books 24 hours 365 days with only a few employees for a large number of customers (Leenders et al., 2015). Moreover, now the competition is global and international online books shops threaten the existence of other book shops for example.

The assumption is that individuals expect dramatic changes for themselves under consideration of AI regarding their employment situation and the ability to live economically. Responsible for the changes is digital transformation, especially AI (Allmer, 2017). Digitalization provides new ways to create, develop or analyse processes for example. In the context described above, it is necessary to know and understand the consequences of AI in the job market AI is responsible for changes which

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