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# The Impact of Automation on the Economic Empowerment of the B40 Group in Malaysia: A Case Study in Batu Pahat, Johor, Malaysia

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***Abstract***

*The unemployment problem among the people in Malaysia, especially the B40 group, is unsatisfactory level and needs to be overcome immediately. Malaysia is an increasingly advanced country in terms of the automation sector and various fields. Every day, the issue of unemployment is becoming more contagious and rampant among Malaysians in general. This happened as a result of various issues that arose brought about by groups in our society. This study will examine the extent to which unemployment in the field of automation has increased in Malaysia from the perspective of the B40 group in Parit Raja, Batu Pahat, Johor. Automation can replace jobs such as in the retail, manufacturing, education, food and beverage, and delivery sectors. This writing will use qualitative methods by referring to various forms of research such as journal articles, newspapers, and many more. In addition, this writing also uses a quantitative method involving several respondents consisting of 250 respondents who are B40 group. The result of this writing found that several aspects of the study that are the main aspects, namely aspects of development, acceptance, effects, and issues that arise, factors of improvement, and suggestions on how to overcome unemployment in the field of automation.*

***Keywords:*** *Automation, Economic Empowerment, B40 Group, Malaysia*

## INTRODUCTION

In this era of globalization, the virtual explosion in the automotive industry is very challenging where technology plays a major role and has a great impact on the value of human capital. Increasingly sophisticated technology such as digital technology, such as computers and robotics has changed the situation in the economic aspects of a country. The increase in the economy in the country is getting higher but it has an impact on human values and further creates a big issue in the country, which is unemployment.

Based on data released by the Department of Statistics Malaysia (2023), Malaysia's population is estimated to be 33.5 million people in 2022 and the population growth rate is 0.2 percent. Based on the Labor Force Report (2023), in July 2023 it was found that the unemployment rate was 3.4 percent which is a total of 579,200 people. Malaysians have been categorized into three main levels namely T20, M40 and B40. The projected income for the T20 tier is between RM 10,960 to more and RM 15,039.00, M40 is between RM 4,850.00 to RM 10,959.00 and B40 is less than RM 4,849.00 (DOSM, 2022). Aware of the projections found that in 2022, a total of 48.8 percent of households in Malaysia have an income of less than RM5,000.00, 34.6 percent of households have an income between RM 5,000.00 to RM 9,999.00 and only 19.7 percent of households have an income of more than RM 10,000.00. (DOSM, 2022). This shows that the B40 group is most of the population in Malaysia.

Automation refers to technology that reduces the use of human labor and replaces it with the use of machines or information technology. It applies various control systems for operational equipment such as machinery, factory processes and so on that are more qualitative, fast and efficient than using human labor. In operational complexity it can range from simple on-off control to multi-variable high-level algorithms (Groover, 2014). Automation can be defined as a situation where tasks that can be done by humans are now replaced by machines. This machine increases the productivity and efficiency of a thing or process. Heavy work that requires a lot of human labor can be automated. The existence of this automation has indirectly made humans the

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second choice in the industry and humans are no longer a necessity in an industry that has the sophistication of automation, they will only be used as a complement to the automation tasks and finally create a new phenomenon which is unemployment.

Unemployment means a situation where a person wants to work but does not get a job opportunity. These people are classified as the labor force of a country, that is, those aged 15 to 64 who are willing to work. Unemployment will have a huge negative impact especially in relation to crime and other social problems. The rate of unemployed workers shows the level of efficiency in the use of human resources of a country and becomes an index for economic activity (Othman, 2008).

So, what do these two aspects have to do with each other? In fact, the link between automation and unemployment is complex and multi-faceted. In a negative perspective, automation can cause job replacement because machines and AI (Artificial Intelligence) take over tasks previously performed by humans and even cause unemployment in certain sectors or industries.

In addition, the existence of AI has revolutionized the world with its own innovative techniques and applications. With the advancement of technology, AI has now become a very sophisticated tool that can be used in the automation of various fields such as health, finance, education and many more. Automation in Malaysia has many benefits from optimizing business operations to improving public services. One of the most significant benefits of AI in automation is its ability to revolutionize the way businesses operate. AI algorithms can help businesses analyze large amounts of data to gain insights into consumer behavior, market trends and other valuable information that can be used to improve business strategy and decision making.

Therefore, questions arise regarding the application of AI through the automation of some tasks such as unskilled work in the construction and food sectors. Akinradewo et al. 2021 says that robotics and the use of construction automation increase productivity by replacing labor that is less efficient compared to the speed and consistency of automation machines.

Therefore, this study was conducted to see the impact of automation on the economic empowerment of the B40 Group in Malaysia. In addition, the study will also explain the causes and effects of unemployment and further analyze the influence of automation on the formation of ethical values of the B40 group in Malaysia.

## LITERATURE REVIEW

The issue of 'automation causing unemployment' has appeared since the beginning of the 17th era (1750-1850), which is the first industrial revolution in Europe. The Industrial Revolution occurred with massive changes in the fields of agriculture, manufacturing, transportation and technology and had a profound impact on the social, economic, and cultural worlds that originally used human and animal labor but changed to the use of machines.

The use of machines to do work to produce products, agriculture and so on contributed to the emergence of a capitalist economy. Capitalism is an economic and social system that tends towards the accumulation of wealth by individuals. The effect of the emergence of the Industrial Revolution saw the rise of the labor class who lost their jobs due to unemployment due to the use of machines (Mujahid, 2019).

In addition, the Second Industrial Revolution, also known as the Technological Revolution, is a phrase for the rapid industrialization in the late 19th and early 20th centuries. Muntone (2013) said that progress in the field of manufacturing and production technology gave a significant increase to the national economy, but also caused problems such as the First Industrial Revolution, that is, workers who do manual and simple jobs such as handwork and production processes that require special skills that no longer needed in the new production process.

It is expected that 7 million jobs will shift to the use of automation before 2025 while the percentage of unemployed is 3.6% as of 2023. There is a possibility that some of the number of unemployed have lost their jobs due to the existence of automation. The popularity of automation raises ethical concerns about the responsibilities of employers and policy makers in mitigating potential negative effects on workers, including job losses and lack of job security guarantees. The increase in the unemployment rate was found to be

influenced by automation where the age group range was concentrated around 25-40 years. Automation can replace jobs such as in the retail, manufacturing, education, food and beverage, and delivery sectors. Then several questions arise: how the unemployment rate is affected by automation, what is the impact of unemployment due to automation on society, and what is the perspective of employers and the unemployed towards the ethics of consumption that has replaced living workers.

Additionally, machine learning algorithms as an important component of AI have played an important role in driving the growth of automation. These algorithms aim to improve system performance by learning from specific task examples or repeated experiences. Machine learning finds practical use cases in speech recognition, spam filters, online fraud detection systems and product recommendation systems. With the continuous advancements in AI, its impact on various aspects of human life is set to revolutionize society. Malaysia's proactive approach in investing in and embracing AI demonstrates its commitment to remain globally competitive. By defining the role of AI in human life, we can foster a balanced relationship between humans and AI, harnessing its potential for a better future.

AI accelerates large screening of applications quickly and effectively compared to traditional methods. This capability is important because it ensures that the processing and evaluation of various applications is carried out efficiently thereby minimizing the risk of overlooking potentially suitable candidates or exceptional talent. Using certain criteria or filters, AI tools can perform these tasks quickly, resulting in time savings, especially in urgent recruitment situations.

A study conducted by (Aziz et al., 2020) argues that with the existence of this technology it has changed life, work and communication. This is because, because this technology has reduced communication and dependence on human labor. He also thinks that with the existence of this technology it has usurped the universal norms of human life. From the point of view of artificial intelligence technology, it has been widely used in the process of finding new molecules in the effort to manufacture a vaccine for COVID 19. With this kind of technology, there is no need for a group of experts in one place and the data can be shared through Big Data. Thus, face-to-face communication can be reduced.

Furthermore, since the 1940s, AI intelligence has evolved, and all modern electronic devices have integrated AI in their systems. refers to a study that has been carried out by Noor Hazfalinda Hamzah (2022). A study conducted by Noor Hazfalinda Hamzah in his book titled Artificial intelligence in forensic science, that AI is very important in forensics worldwide because it is needed in the investigation, acquisition, preservation and recovery of digital data especially with the increase in cybercrime around the world.

Ibrahim & Hassan (2019) showed that job application statistics for civil engineer positions in the Ministry of Public Works Malaysia in 2019 showed that out of more than 17,000 applicants, only 2,575 candidates were shortlisted for interviews to fill 74 vacancies. The integration of AI technology streamlines the uptake and leverage of online communication platforms and global connectivity. Krishnamacharyulu (2019) argues that the use of AI will increase operational efficiency and ultimately impact profitability by automating repetitive tasks and allowing the workforce to focus on strategic initiatives while customer service is handled by automated systems.

## METHODOLOGY

According to Sabitah Marican (2009) and Ahmad Munawar Ismail and Mohd Nor Shahizan Ali (2014), methodology is defined as a method used to carry out research on a specific research subject according to an organized discipline. Several methodologies are required to obtain sufficient data to meet the study criteria. This is so that a study can be carried out systematically and the researcher can obtain the correct data. To build a systematic research methodology, the researcher will discuss the study design, study sample, study limitations, study instruments and data analysis procedures. This helps answer the research questions that have been presented and achieve the objectives of this study based on true and authentic and reliable facts.

Instruments are tools used by researchers to conduct a study through concepts related to attitudes, perceptions, views and background information. The instrument helps the researcher get information for the study in a

more systematic way. Research instruments can also be used as a basis for obtaining data. The research instrument covers several parts of the questionnaire and reference form.

A study sample is a process of selecting study objects that can represent a large group that is selected. In this study, the research sampling technique used is a simple random sampling technique. A total of 250 respondents from the B40 group in Parit Raja, Batu Pahat, Johor, Malaysia was selected.

Researchers obtain accurate and quality information by referencing research or studies that have been conducted by others and that research has been presented in reference books, online publications, or other methods. Researchers can also refer to information from government documents or council dictionaries to realize and complete this study. By using this method, the researcher can save time and focus on the discussion of research findings.

There are three parts in this questionnaire which are the demographics of the respondents, the perception of the B40 towards automation in the country and the perception of the B40 regarding the long-term effects of the increase in the unemployment rate.

## ANALYSIS AND DISCUSSION

a) Demographics of Respondents

Table 1 shows from the aspect of gender 150 respondents are male which is 60 percent of 250 respondents and 100 respondents are female which is 40 percent. While in terms of age, respondents aged between 36 and 45 years are the highest at 60 percent, followed by more than 45 years at 31.6 percent and 25 to 35 years at 8.4 percent. In terms of ethnicity, 66 percent are Malay, 16 percent Chinese and 18 percent Indian.

**Table 1- Demographics of Respondents**

| Demographics Respondents | | Frequency | Percentage (%) |
|---|---|---|---|
| Gender | | | |
| | Male | 150 | 60 |
| | Female | 100 | 40 |
| Age | | | |
| | 25 - 35 years old | 21 | 8.4 |
| | 36 - 45 years old | 150 | 60 |
| | > 45 years old | 79 | 31.6 |
| Etnic | | | |
| | Malay | 165 | 66 |
| | Chinese | 40 | 16 |
| | Indian | 45 | 18 |

b) The perception of the B40 towards automation in the country

Table 2 refers to the perception of the B40 towards automation in Malaysia. There are three perceptions expressed in this study. The first statement is that automation will cause the industry to produce high quality services. Based on the statement, 60 percent of respondents strongly agree and 20 percent agree with this statement while only 18 percent disagree and strongly disagree. The second statement is that through automation the industry can reduce the cost of paying workers' wages/salaries. Based on this statement, 200 respondents or 80 percent strongly agree and agree with the statement and only 19.2 percent disagree and strongly disagree. The third statement is that automation will help increase production efficiency in the industry. Based on this statement, 82 percent agree and strongly agree with the statement and 44 respondents or 17.6 percent disagree and strongly disagree. This shows that the B40 group knows about the capabilities of automation and the impact of automation in their lives.

**Table 2- Perception of the B40 towards automation in the country**

| The perception of the B40 towards automation in the country | | | | |
|---|---|---|---|---|
| **No.** | **Perception** | **Scale** | **Frequency** | **Percentage(%)** |
| 1. | Produce high quality services | S A | 150 | 60 |
| | | A | 50 | 20 |
| | | N | 5 | 2 |
| | | D | 20 | 8 |
| | | S D | 25 | 10 |
| 2. | Reduce the cost of paying workers' wages/salaries | S A | 160 | 64 |
| | | A | 40 | 16 |
| | | N | 2 | 0.8 |
| | | D | 30 | 12 |
| | | SD | 18 | 7.2 |
| 3. | Increase production efficiency | SA | 165 | 66 |
| | | A | 40 | 16 |
| | | N | 1 | 0.4 |
| | | D | 20 | 8 |
| | | SD | 24 | 9.6 |

* SA = Strongly Agree, A = Agree, N = Natural, D = Disagree, SD = Strongly Disagree

c) The perception of the B40 regarding the long-term effects of the increase in the unemployment rate

Referring to table 3 below which is The perception of the B40 regarding the long-term effects of the increase in the unemployment rate, as many as 68 percent or 170 respondents strongly disagree and disagree with the statement that through automation domestic development will decline and 22 percent or 55 respondents agree and strongly agree with the statement. This is because the respondents think that development in the country can only be positive if human capital is applied in the best way while those who agree see that automation can increase the amount of production in a product. For the second statement that automation will increase the poverty rate, 92.8 percent or 232 people agree and strongly agree that automation will cause poverty because it will cause the existence of limited job opportunities and further affect the unemployment rate and ultimately lead to the issue of poverty.

The third statement that automation will increase the crime rate showed 92.8 percent agreed and strongly agreed while 5.2 percent disagreed with the statement. This finding is related to the second statement because if the poverty rate increases it will have an impact on the crime rate because every human being needs the same necessities of life. Therefore, if job opportunities are very limited, it will cause various crimes to be committed in order to meet those needs. The fourth statement is related to the second and third statements, which is that automation will cause a decline in family institutions. A total of 202 respondents or 80.8 percent agreed with this statement because the effect of the lack of employment opportunities is that households need to focus more on having two to three jobs a day to meet the needs of the family and in turn will affect the family institution because the time allocated to work is much longer compared to family and the rest of the family will be neglected. However, 3.2 percent or 8 respondents did not agree with the statement.

**Table 3 - Perception of the B40 regarding the long-term effects of the increase in the unemployment rate**

| Perception of the B40 regarding the long-term effects of the increase in the unemployment rate | | | | |
|---|---|---|---|---|
| **No.** | **Perception** | **Scale** | **Frequency** | **Percentage(%)** |
| 1. | National development declined | S A | 5 | 2 |
| | | A | 50 | 20 |
| | | N | 25 | 10 |
| | | D | 155 | 62 |
| | | SD | 15 | 6 |
| 2. | Increase poverty rates | SA | 192 | 76.8 |
| | | A | 40 | 16 |
| | | N | 15 | 6 |
| | | D | 3 | 1.2 |
| | | SD | - | - |
| 3. | Increasing crime rate | SA | 177 | 70.8 |
| | | S | 40 | 16 |
| | | N | 20 | 8 |
| | | D | 13 | 5.2 |
| | | SD | - | - |
| 4. | Decline in family institutions | SA | 132 | 52.8 |
| | | S | 70 | 28 |
| | | N | 40 | 16 |
| | | D | 8 | 3.2 |
| | | SD | - | - |

* SA = Strongly Agree, A = Agree, N = Natural, D = Disagree, SD = Strrongly Disagree

## CONCLUSION

Overall, through this study there are positive and negative impacts of automation on society, especially the B40 group. The positive impact of this automation is the rate of production and the quality of products produced in the country is increased and better. In addition, in terms of expenses, the industry only focuses on increasing the level of automation and the payment of wages and salaries can be reduced. In addition to having a positive impact, automation has also left a negative impact, especially involving job opportunities and crime rates. This will have a big impact on the national income due to the increasing unemployment rate.

Therefore, all parties need to join hands to find the best method in overcoming these issues. The Government, the private sector, NGOs and the community, especially the B40 group, need to work together to find a solution so that the negative impact can be reduced, and human capital can be used in the best possible way.

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