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“Optimizing Innovation in Knowledge, Education and Design”

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Azni Syafena Andin Salamat
Nurfaznim Shuib

Cover design : Syahrini Shawalludin
Layout : Syahrini Shawalludin

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Assalamualaikum warahmatullahi wabarakatuh,



First and foremost, I would like to express my gratitude to the organizing committee of i-Spike 2023 for their tremendous efforts in bringing this online competition a reality. I must extend my congratulations to the committee for successfully delivering on their promise to make i-Spike 2023 a meaningful event for academics worldwide.

The theme for this event, 'Optimizing Innovation in Knowledge, Education, and Design,' is both timely and highly relevant in today's world, especially at the tertiary level. Innovation plays a central role in our daily lives, offering new solutions for products, processes, and services. By adopting a strategic approach to 'Optimizing Innovation in Knowledge, Education, and Design,' we have the potential to enhance support for learners and educators, while also expanding opportunities for learner engagement, interactivity, and access to education.

I am awed by the magnitude and multitude of participants in this competition. I am also confident that all the innovations presented have provided valuable insights into the significance of innovative and advanced teaching materials in promoting sustainable development for the betterment of teaching and learning. Hopefully, this will mark the beginning of a long series of i-Spike events in the future.

It is also my hope that you find i-Spike 2023 to be an excellent platform for learning, sharing, and collaboration. Once again, I want to thank all the committee members of i-Spike 2023 for their hard work in making this event a reality. I would also like to extend my congratulations to all the winners, and I hope that each of you will successfully achieve your intended goals through your participation in this competition.

Professor Dr. Roshima Haji Said
RECTOR
UiTM KEDAH BRANCH



WELCOME MESSAGE (i-SPIKE 2023 CHAIR)



We are looking forward to welcoming you to the 3rd International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023). Your presence here is a clear, crystal-clear testimony to the importance you place on the research and innovation arena. The theme of this year's Innovation is “*Optimizing Innovation in Knowledge, Education, & Design*”. We believe that the presentations by the distinguished innovators will contribute immensely to a deeper understanding of the current issues in relation to the theme.

i-SPIKE 2023 offers a platform for nurturing the next generation of innovators and fostering cutting-edge innovations at the crossroads of collaboration, creativity, and enthusiasm. We enthusiastically welcome junior and young inventors from schools and universities, as well as local and foreign academicians and industry professionals, to showcase their innovative products and engage in knowledge sharing. All submissions have been rigorously evaluated by expert juries comprising professionals from both industry and academia.

On behalf of the conference organisers, I would like to extend our sincere thanks for your participation, and we hope you enjoy the event. A special note of appreciation goes out to all the committee members of i-SPIKE 2023; your dedication and hard work are greatly appreciated.

Dr. Junaida Ismail

Chair

3rd International Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023)

DEVELOPMENT OF THE SOCIOECONOMIC INDEX FOR RAKYAT'S (SEIR) WELL-BEING: A HOLISTIC APPROACH

Zuraidah Mohamed Isa
Norhidayah Ali
Dahlia Ibrahim
Azyyati Anuar
Suhaida Abu Bakar
Nor Salwati Othman

Universiti Teknologi MARA, Kedah Branch, Sungai Petani Campus
08400 Merbok, Kedah

ABSTRACT

The COVID-19 pandemic has had a significant impact on the socioeconomic status of the population in Malaysia. The government's response to the pandemic, including the movement control order (MCO), has led to widespread job losses and income reductions. This has had a negative impact on the dimensions of socioeconomic status, including income, savings, occupation, food supply, health, personal safety, emotions, spirituality, and productivity. A number of researchers have studied the socioeconomic impact of the COVID-19 pandemic, but there is a need for a comprehensive measure of the impact. The Socioeconomic Index for Rakyat (SEIR) is a comprehensive index that measures the impact of the pandemic on the population's socioeconomic conditions. SEIR is based on the following dimensions: income, savings, occupation, food supply, health, medical care, emotional well-being, religion, spirituality, education, housing, networking, productivity, and personal safety. SEIR is a valuable tool for policymakers and other stakeholders to track the impact of the pandemic on the population's socioeconomic conditions and to develop strategies to mitigate the impact. While SEIR is still under development, it has the potential to be a valuable tool for policymakers and other stakeholders. The development of SEIR is an important step towards understanding the full impact of the COVID-19 pandemic on the socioeconomic status of Malaysia's population.

Keywords: COVID-19, outbreak, socioeconomic, index, well-being

INTRODUCTION

The world was slammed with the COVID-19 pandemic, which first broke out in Wuhan, China, in 2019 and spread to several countries at the start of 2020. The World Health Organisation (WHO) declared the COVID-19 pandemic on March 11, 2020, due to its rapid spread and enormous number of death cases. As of July 2023, the number of COVID-19 cases stands at 690,976,085, with 6,896,035 deaths reported in 231 countries: Malaysia at the 28th position (Worldmeter, 2023). The Malaysian government's measures to mitigate the COVID-19 pandemic with a few phases of the movement controlled order (MCO) had put the country into economic instability when the majority of the population were affected in terms of lost income and jobs. Zubir (2020) believed that many Malaysians will be out of employment due to the COVID-19 pandemic. Due to this reason alone, it is essential to look into the relationship between the COVID-19 pandemic and the socioeconomic status of the population. A considerable amount of socioeconomic research were conducted in various fields of study that investigates the after-effect of COVID-19. However, they are still limited. Therefore, this study

attempts to create a model that links the socioeconomic index that measures the economic condition of the society. The dimensions used in this model include income, savings, jobs, food, health, personal safety, emotions, spirituality, and productivity.

RESEARCH METHOD

This study aims to develop a socioeconomic index on society's well-being. The investigation was conducted using qualitative methods and library research. This research strategy entails gathering data on variables from notes, papers, books, articles, journals, and the Internet (Arikunto, 2009). Three primary steps were involved in library research: gathering relevant information, the data collection process, and presenting the summary of the findings. Journals, conference proceedings, books, reports, and other electronic sources from the selected databases were used to collect the necessary data. The procedure involved searching for data using criteria such as COVID-19 outbreak, socioeconomic, and index.

LITERATURE REVIEW

COVID-19 has significantly impacted the mental health and well-being of the entire Malaysian society, with the most visible consequences being poor mental health and the loss of employment (Yong and Sia, 2021)). On the other hand, according to Irfan (2021), the crisis also led to a rise in anxiety, a mental health issue affecting the general population and the education system, where teachers and students' mental health is an important factor. Wong and Alias (2021) strongly argued that the government is not doing enough to alleviate the mental illness conditions in society. They suggested that the government's intervention is imperative to mitigate the mental illness condition of society.

COVID-19 also had a significant impact on household income, with an increase in the number of people falling into poverty. India reported an increase in income from 9% at the end of February to 44.6% in the middle of April 2020 (Keelery, 2020). Some studies have also shown that the impact of COVID-19 on income varies across various individual characteristics. For example, according to Schady, Holla, Sabarwal and Silva, and Yi Chang (2023), employment losses are evident among young adults, which leads to financial insecurity. The public is faced with reduced cash savings, as mentioned by Baumann and Rosshirt (2021), who opined that the COVID-19 pandemic is the cause; 19% of respondents experienced a decrease in savings over the previous year, compared to 15% who experienced an increase. Seven percent of people who experienced COVID-related issues experienced a significant decline of 25% or more. On that scale, only 2% of respondents reported increased savings.

In addition, COVID-19 has led to a record number of job losses. The World Bank predicts that COVID-19 will have a direct effect on the GDP (gross domestic product) of major economies and will lead to a sharp rise in unemployment (OECD 2020). According to Saruhan (2022), many aviation employees lost their jobs or were forced to work for low wages and with job uncertainty that could have a negative impact on their well-being. In fact, according to recent news, unemployment is expected to double this year compared to the previous year, with up to 60,000 people expected to lose their jobs in 2023 (Anonymous, 2023).

Saboori et al. (2022) indicated that the COVID-19 pandemic has a negative impact on the nation's food security, particularly in low-food supply countries. The pandemic has caused an increase in food prices combined with a decrease in income, thus, posing food insecurity

problems such as reducing the quality and quantity of food consumed. Similar results are also found in another study by Manyong et al. (2022) due to the COVID-19 outbreak. Society is even thrown with a 20% increase in food prices in the near future due to inflation and rising cost of operation (Faiz, 2023).

In tandem with the factors mentioned above, some people feel like they need to be alert 24 hours a day regarding personal safety (MD Zain 2020). However, Boman and Galuppe (2020) argued that crime has declined due to official responses to the pandemic, large-scale lockdowns, and stay-at-home orders from state governments. They argued that the drop in crime could be attributed to the decrease in relatively low-level offences, which often involve groups of people. In fact, according to Estévez- Soto (2021), crime dropped significantly during the pandemic, and some of this decrease was due to changes in daily life. As such, personal safety is considered the least factor that contributes to the negative socioeconomic condition.

Several studies, including those of Pedrosa et al. (2020), Roger et al. (2022), Gismero et. al (2022), González et. al (2022) and Chiagavalloti et. al (2021), have reported that the COVID-19 pandemic has been associated with a range of emotional and psychological disorders, such as fear, anxiety, and depression, as well as suicide. Providing spiritual support to vulnerable people is, therefore, of utmost importance. For example, research by Robert et al., (2022), Aboobaker (2022), Rathakrishnan et. al (2022) and Oliveira-Cardoso et al. (2022) found a positive relationship between spirituality and emotional resilience during the COVID-19 pandemic. The higher the level of fear, the higher the spirituality.

COVID-19 had a significant impact on the productivity of society, particularly when work-from-home (WFH) became a norm. Many employees and workers were required to work from home, resulting in decreased productivity. Molino (2020) examined the work habits of 209 WFH employees in a cross-sectional study. He found that self-leadership and autonomy had a positive impact on WFH productivity and employee engagement. The COVID-19 pandemic has forced most organizations to adopt WFH, often with little or no employee training.

In conclusion, the factors mentioned above are thought to play a role in the socioeconomic status of a society. In 2020, Mogi, Kato and Annaka proposed a more in-depth analysis of the relationship between socioeconomic disparities and the geographical spread of COVID-19 to understand how COVID-19 impacts people differently in different communities across different geographies. The results of this study are expected to provide new insights into the function of contextual demographic, socioeconomic, and geographical variables that can explain racial disparities in COVID-19 suffering and offer new insights for future COVID-19 research.

THE SOCIOECONOMIC INDEX FOR RAKYAT

The COVID-19 pandemic has far-reaching implications for a nation's health, social, and economy, where it significantly influences life routines, businesses, trades, and movements around the world. COVID-19 is a pandemic that created sequence effects, threatened social engagement development among individuals, and a setback to the economy. Although the immediate concern is to save lives and contain the outbreak's spread, it is still important to understand how the outbreak affected the population's socioeconomic conditions. Therefore, a comprehensive Socioeconomic Index for Rakyat (SEIR) is developed through the Malaysia socioeconomic index, and the selection of these dimensions is also based on the available

studies on the socioeconomic index of individuals.

In light of this, this study restructured the available dimensions of socioeconomic conditions to the following, a) income, b) savings, c) occupation, d) food supply, e) health, f) medical care, g) emotional, h) religion, (i) spirituality, (j) education, (k) housing, (l) networking, (m) productivity, and (n) personal safety.

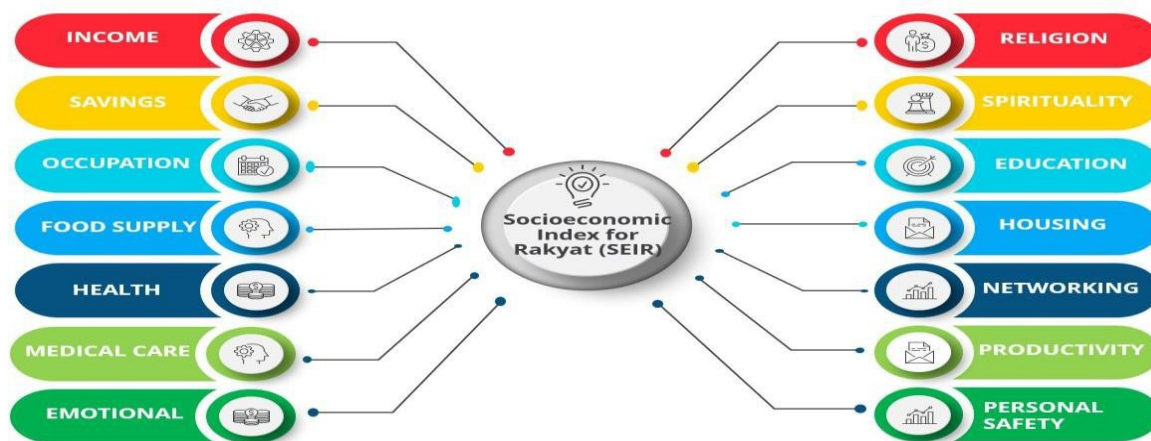


Figure 1. Socioeconomic Index for Rakyat (SEIR)

CONCLUSION

In conclusion, the Socioeconomic Index for Rakyat (SEIR) is a comprehensive assessment tool that aims to understand the socioeconomic conditions of the population in the context of the COVID-19 pandemic. It considers various dimensions: income, savings, occupation, food supply, health, medical care, emotional well-being, religion, spirituality, education, housing, networking, productivity, and personal safety. By considering these dimensions, SEIR provides a holistic understanding of the multifaceted effects of the pandemic on individuals' lives and the nation's socioeconomic well-being.

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