

# Faculty of Economics and Business

## Government Spending Reformation, Human Capital, and Economic Growth in Malaysia: Education and Healthcare

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## **Government Spending Reformation, Human Capital, and Economic**

## Growth in Malaysia: Education and Healthcare

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## STATEMENT OF ORIGINALITY

The work described in this Final Year Project, entitled

## "Government Spending Reformation, Human Capital, and Economic Growth in Malaysia:

## **Education and Healthcare**"

is to the best of the author's knowledge that of the author except

where due reference is made.

(Date Submitted)

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### DEDICATION

This thesis is dedicated to my mother, a gentle soul who always gave me a cushion to always fall back and taught me to be kind, positive and humble. This thesis is also dedicated to my father who taught me to always dream big and always give me best in every endeavour.

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#### ABSTRACT

# Government Spending Reformation, Human Capital, and Economic Growth in Malaysia: Education and Healthcare

#### by

#### **CHAN MEI CHEE**

The study aims to investigate the role of government spending on the relevant human capital components in the economic performance of Malaysia by adopting secondary data published by the Department of Statistics Malaysia, the Economic Planning Unit, and the United Nation Development Programme. Timeseries estimation was adopted to analyze the data. Using GDP as the dependent variable, government spending on education and healthcare along with the human development index as the independent variables, this study sought to explore the significant role of government spending towards economic growth from the human capital aspect. The empirical analysis is done using the Unit Root Tests, Autoregressive Distributed Lag (ARDL) estimation, and Toda-Yamamoto Causality Test to investigate the integration order as well as the existence of a relationship between the variables in the model. The study reveals a significant long-run positive relationship between government spending on healthcare and the human development index with the GDP. A negative significant relationship between government spending on education to GDP was found. Next, no causality is detected between government spending and the human development index. Plus, there is causality detected from education spending towards healthcare spending. The results are thus in favor of drastic changes adoption to improve the education and healthcare system to align with the current demand.

#### ABSTRAK

# Reformasi Perbelanjaan Kerajaan, Modal Insan, dan Pertumbuhan Ekonomi Negara di Malaysia: Sektor Pendidikan dan Kesihatan

#### oleh

#### **CHAN MEI CHEE**

Kajian ini bertujuan untuk mengkaji peranan perbelanjaan kerajaan ke atas komponen modal insan yang berkaitan dalam prestasi ekonomi Malaysia dengan mengguna pakai data sekunder yang diterbitkan oleh Jabatan Perangkaan Malaysia, Unit Perancang Ekonomi, dan Program Pembangunan Bangsa Bersatu. Anggaran siri masa telah diterima pakai untuk menganalisis data. Menggunakan KDNK sebagai pembolehubah bersandar, perbelanjaan kerajaan untuk pendidikan dan kesihatan berserta indeks pembangunan manusia sebagai pembolehubah tidak bersandar, kajian ini bertujuan untuk meneroka peranan penting perbelanjaan kerajaan terhadap pertumbuhan ekonomi dari aspek modal insan. Analisis empirikal dilakukan dengan menggunakan Ujian Unit Root, estimasi Lag Teragih Autoregresif, dan ujian Kausaliti Toda-Yamamoto untuk menyiasat susunan integrasi serta kewujudan hubungan antara pembolehubah dalam model. Kajian itu mendedahkan hubungan positif jangka panjang yang signifikan antara perbelanjaan kerajaan untuk kesihatan dan indeks pembangunan manusia dengan KDNK. Hubungan signifikan negatif antara perbelanjaan kerajaan untuk pendidikan kepada KDNK didapati. Seterusnya, tiada kausaliti dikesan antara perbelanjaan kerajaan dan indeks pembangunan manusia. Selain itu, terdapat kausalitas yang dikesan daripada perbelanjaan pendidikan terhadap perbelanjaan kesihatan. Hasilnya memihak kepada perubahan drastik yang diterima pakai untuk menambah baik sistem pendidikan dan kesihatan agar sejajar dengan permintaan semasa.

## **Table of Contents**

CHAPTER ONE					
1.0	Introduction1				
1.1	Bac	Background4			
1.1.1	1 F	Human Development Index (HDI)	7		
1.	1.2	Education Spending	8		
1.	1.3	Healthcare Spending	.10		
1.2	Pro	blem Statement	.11		
1.3	Ob	jective of Study	.16		
1.3.1 General Objective		General Objective	.16		
1.	3.2	Specific Objectives	.16		
1.4	Sig	gnificance of Study	.16		
1.5	Org	ganization of Study	.18		
CHA	APTE	R TWO	.19		
2.0	Intr	roduction	.19		
2.1	Res	sources	.20		
2.2	Bib	pliometric Analysis	.21		
2.	2.1 Te	erminology Focus	.23		
2.3	Sys	stematic Literature Review	.25		
2.3.1	1 ]	Identification, Screening, and Eligibility	.26		
2.4	An	alysis	.28		
2.5	Dis	scussion	.30		
2.	5.1	Research Area	.31		
	Huma	an Capital Accumulation	.31		
	Innovation Capacity				
	Foreign Aid				
	Privat	te Investment	.36		
	Politi	cal Incentives	.37		
CHAPTER THREE					
3.0	Int	roduction	.39		
3.1	Dat	ta Description	.39		
3.2	The	eoretical Framework	.40		

3.3 1	Empirical Model	43	
3.4 Methodology			
3.4.1	Unit Root Test	44	
3.4.1.1	Augmented Dickey-Fuller (ADF) Unit-Root Test	44	
3.4	I.1.2 Phillips-Perron (PP) Unit Root Test	46	
3.4	4.1.3 Kwiatkowski Philips Schmidt Shin (KPSS) test	47	
3.4.2	Cointegration Test	47	
3.4	A.2.1 Autoregressive Distributed Lag (ARDL)	47	
3.4	I.2.2 Toda-Yamamoto Causality Test	49	
CHAPTER FOUR			
4.0	4.0 Introduction		
4.1 Transforming the empirical model			
4.2 Empirical Results			
4.2.1	Unit Root Test	52	
4.2.2	ARDL Approach	54	
4.2.3	Error Correction Model	56	
4.2.4	Diagnostic Test	57	
4.2.5	Toda Yamamoto Causality Test	59	
CHAP	ΓER FIVE	61	
5.1	Summary of Findings	61	
5.2	Policy Recommendations	62	
5.3 I	Limitations		
5.4	Future Study6		
5.5	Conclusion	65	
Referer	1ces	67	

## LIST OF FIGURES

Figure 1 Malaysia Human Development Trend 1991-2020	7
Figure 2 Government Expenditures on Education from 1991-2020	9
Figure 3 Government Expenditures on Healthcare from 1991-2020	10
Figure 4 Numbers of publications relevant to the government expenditures	' impact
on economic growth	21
Figure 5 Top 20 most productive countries' publications relevant to the gov	vernment
expenditures' impact on economic growth	22
Figure 6 Network visualization map of terms based on the search results, n	=2,715.23
Figure 7 Density visualization map of terms based on search results, n=2,7	1524
Figure 8 Process of selecting criteria	27
Figure 9 Numbers of publications per year based on selected articles, 2015	to 202128
Figure 10 Numbers of publications per country based on selected articles, 2	2015 to
2021	29
Figure 11 CUSUM Test Plot	58
Figure 12 CUSUM of Squares Test Plot	58

## LIST OF TABLES

Table 1 The search string for articles extracted from Scopus Database	26
Table 2 The inclusion and exclusion criteria	
Table 3 Unit root test results	52
Table 4 Bounds Testing Results for Cointegration	54
Table 5 Estimated Long-Run Elasticities	55
Table 6 ECM Regression Result	56
Table 7 Diagnostic Test Results	57
Table 8 Toda Yamamoto Causality Test Results	59
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#### **CHAPTER ONE**

#### **INTRODUCTION**

#### 1.0 Introduction

In the past several decades, the government has played an important role in the distribution, allocation, and stabilization of economic development. The government spending role in economic growth is traced back to the idea given by Keynes. To explain further, this theory supports the statement whereby having an expansionary fiscal policy plays a crucial role to protect people's livelihood, supporting businesses, and mitigating the fallout of economic activities from the crisis hence contributing to the economic value of the nation generally (Keynes, 1936). The government interfering with economic activity by increasing spending or lowering taxes to compensate for a slower pace of economic activity and reduce short-run swings in output and employment is known to be the central theme of the early literature on government spending. However, the views and theories on the effectiveness of this fiscal instrument have often been contradictory due to the reason of the crowding-out effect did not take into consideration of its long-term impact (Khanchaoui et al., 2020). The crowding-out effect happens due to the reason whereby the government is spending more than its revenue, thus bringing out the situation where it needs to look for extra funding which is borrowing. Taking that into account, this will then affect the private investment as the government borrowing will soak up the available financial capital, leaving less for the private investment. Therefore, the crowding-out effect will then reduce the implication of the multiplier effect of the government spending accordingly, trickling down the economic growth generally.

To fill this gap, the importance of investment expenditures has been emphasized by many previous studies stating the statement that investment expenditures have the potential of creating a greater multiplier compared to other consumption expenditures. This theory was stressed by the economists of Endogenous Growth Theory whereas the distinction between different types of expenditure was made to distinguish its impact on the economic value. As stated by the theory of endogenous growth, investing in human capital will help in promoting economic growth. This is because the current investment expenditures will not simply flow and dissipate in the end, but will be a vital component in improving output levels in the future, thus contributing to long-term economic growth (Purnastuti et al., 2016). Moving on, the fundamental concept of human capital can be defined as an intangible resource that is crucial for a nation to achieve its prosperity. This is due to the factor as quality human capital can contribute to the productivity level of labor (Goldin, 2016). Meanwhile, quality human capital can be formed throughout the process of training followed by the formulation of new knowledge and competencies which act as crucial driving factors in achieving high productivity levels of a nation. This statement is then further explained by the study of Muhamad et al. (2018) stating that knowledge formation has the capability of increasing the rate of return on investment with the spillover effects on the production progress. This has to do with the fact that knowledgeable manpower tends to have the better capability in functioning the production process, thus contributing to the productivity level generally. Perhaps new learning and training cannot be measured easily, but health and education status has been the most commonly used human capital measures in literature to discuss the relationship between human capital and economic growth (Ogundari & Awokuse, 2018). In that manner, education and healthcare can be considered the most significant human capital investments which have the potential to improve the economic value of the nation. As the demand for competent human capital is increasingly critical in today's volatile and ambiguous world, Malaysia must respond

to the global changes and development activities for sustainability and survival. To achieve this distinction, public investment shall take into consideration, especially in developing countries that are still highly dependent on the government's role in achieving its high-income status.

Human capital spending is positively correlated to economic growth since investment tends to boost productivity. The process of educating a workforce is regarded as a type of investment, but instead of capital investment such as equipment, the investment is in human capital (Steven, 2021). To achieve this, the governments as the main embodied have a crucial role in expanding a country's population's skill sets and educational levels. Some countries are actively working to improve human capital by providing free higher education to citizens. These governments recognize that education contributes to the development of a country's economy and growth. As the proverb says workers with more education or better skills tend to have higher earnings, which in turn increases economic growth through additional consumer spending (Brent, 2021). Meanwhile, the study by Saad and Norashidah (2018) also suggested that there is a strong link between health spending and economic development in low-andmiddle-income countries. Besides, government spending on healthcare will as well contribute to the technology advanced throughout the spending on medical equipment. This statement can be supported by the study of Sunny and Osuagwu (2016) stating that lacking investing program and spending in the healthcare system might cause the issue of inadequate facilities whereby impact the health status of a nation in general. Since health status correlates with the productivity level of manpower, health investment will be expected to have a similar effect on the development process.

In the case of Malaysia, education and healthcare are two areas that are considered to be closely linked to government spending. This assertion is supported by the fact that education continues to get the biggest allocation among the social sector categories in Budget 2022

3

(Ministry of Finance Malaysia, 2021). The second-largest budget allocation is for healthcare, as the government is concerned about the well-being of its citizens (The Star, 2021). In essence, the funds funneled to education were intended to be used for school construction, upgrades, and restoration, as well as to increase training and education programs. On the other hand, healthcare funding is mostly used for the building and upgrading of public hospitals and clinics. It's also worth noting that the government's most recent Budget (2022) demonstrates the government's efforts to maintain its expansionary fiscal policy to foster long-term economic growth.

### 1.1 Background

Malaysia is one of the South East Asia countries and is classified by the World Bank as an upper-middle-income country. Since its independence, the Malaysian Government has focussed on social development policies to improve the standard of living, particularly in the areas of health and education. On its path to achieving high-income status, it is widely acknowledged that human capital investment plays quite a role with the potential in creating indispensable value for economic growth. This is because the government believes of investing in human capital is a key factor in soaring economic growth along with its potential in assisting the shift of economic sectors to knowledge-intensive activities, such as increasing worker productivity and attracting foreign investment to Malaysia. This statement can be well justified by the fact as Malaysia has achieved notable achievements of human capital accumulation on its road to achieving the Malaysia Tenth Plan that covers the range from 2011 to 2015. The notable achievements include improving labor market institutions, mainstreaming TVET, promoting lifelong learning as well as improving education system delivery (Economic Planning Unit, 2015). To put it simply, it is reasonable to conclude that human capital development has been a critical enabler for driving and sustaining Malaysia's economic growth.

Moving on, Malaysia continued this path under the Eleventh Malaysia Plan that covers the range from 2016 to 2020 with a well-charted transformation journey for human capital development by providing a range of measures to improve the labor market. To achieve this distinction, it was coming along with the strategies in strengthening lifelong learning for skills enhancement and improving the education systems with better education outcomes expectations. The efforts of advancing the nation's education system came along with the Malaysian Education Blueprint that was launched in 2013 to continuously improve the education system with the core of equipping Malaysian students holistically and ensuring the student's ability to fulfill their full potential. The Blueprint act as a core for the education reformation that outlines five system aspirations, six student aspirations, and eleven shifts of transformation of the education system. By building on the range of the key initiatives introduced, it sets out the fundamental changes that are required by the Malaysian Education System which include the way learning is approached, recruited along with the principal's right of the way of how the Ministry of Education operates (Ministry of Education, 2013). Therefore, the Education Blueprint acts as a comprehensive plan for a rapid and sustainable transformational education system through to 2025. Collectively, all of these focus areas aim at producing the world-class talent base that our nation needs in the final leg of its journey toward becoming an advanced nation. In pushing the human capital to a higher level, the government introduced the first university called Malaya University then followed by the University Kebangsaan Malaysia as the medium for lessons. Generally speaking, Malaysia has placed a strong emphasis on increasing educational standards. This can be well explained by the government following through on its commitment to convert student debt into a scholarship if they achieve First Class Honours (The Star, 2012). The goal of this campaign is to encourage students to improve their academic performance which also explains the fact that the government aims to raise the quality achievement of the students. Aside from that, the

government has as well implemented efforts to increase access to postsecondary education, including the establishment of the PTPTN National Higher Education Loan Fund. Such efforts required fundamental funding by the government with the budget allocated to the economic sector consistently. Above all, it can be proclaimed that the government takes quality education policy into account to develop talent with both knowledge and skills to thrive in the globally competitive and ever-changing world.

Historically, there has been major recognization of healthcare services in the country since the Independence of Malaysia in 1957 (Susan et al., 2011). The Tenth Malaysia Plan covering from 2011 to 2015 also attempted to improve healthcare services capacity and coverage to deliver better healthcare to Malaysians. A notable achievement includes the World Health Organisation (WHO) had recognized Malaysia's health system as one of the best among 37 member states of the Western Pacific region in 2013. Next, the Bloomberg survey also ranked Malaysia as one of the world's top 30 countries with the most efficient health system in 2014. It is also worth mentioning that among the top six countries that obtained the best ratings in the category of Best Healthcare in the World in 2019, Malaysia ranked first with a score of 95 out of 100 (Malaysia Today, 2020). Taking that into account, Malaysia continues with the effort of improving the health of its people by providing universal access to quality healthcare in its Eleventh Plan, 2016-2020. To achieve this, the government aimed to enhance the targeted support, improving its system delivery to ensure better health outcomes, as well as expanding the capacity to increase accessibility followed by intensifying collaboration with the NGOs and private sector.

#### 1.1.1 Human Development Index (HDI)

The HDI was established to underline that people and their talents, not just economic progress, should be the primary criterion for judging a country's development. The HDI can also be used to examine national policy choices, such as how two countries with the same GNI per capita can achieve such disparities in human development (Human Development Reports, 2021). Thus, these disparities have the potential to spark discussion regarding government policy goals. In essence, the Human Development Index (HDI) is a measure of average accomplishment in essential aspects of human development, such as living a long and healthy life, being knowledgeable, and having a decent standard of living. For each of the three dimensions, the HDI is the geometric mean of normalized indices. All of these criteria are well known to have their greatest impact on human resources quality enhancement. Typically, it can be well said that the HDI act as the benchmarking for measuring the human capital quality of a country.



Figure 1 Malaysia Human Development Trend 1991-2020

**Source: United Nation Development Programme (UNDP)** 

Figure 1 manifests the trend of the Human Development Index of Malaysia from 1991 to 2019. The index considers the health, education, and income in a country to provide a measure of human development in a country. The improvement of the HDI in Malaysia can be seen over the years with the upward increasing trend. The Human Development Index (HDI) is divided into four tiers in which 0.8 to 1.0 is considered very high human development, 0.7 to 0.79 is high human development, medium development is defined as an index that is between 0.6 to 0.55, and low human development is below 0.55. In the case of Malaysia, the index was at its medium development from 1991 to 1996. After that, it reached high development until 2015. Then, the country reached its first very high human development in 2016 and was able to maintain it until recent 2020. However, it should be noted that Malaysia's 2019 HDI of 0.810 is below the average of 0.898 for countries in the categories of very high human development groups (Human Development Report, 2020). Thus, it can be said that our country has been having an improvement on our Human Development Index (HDI), but only with a moderate upward trend as shown by the graph above.

#### **1.1.2 Education Spending**

The government is responsible for improving education in Malaysia as well as ensuring that all citizens have equal access to education. Although there is private education provided in Malaysia, the number of public education institutions still easily outnumbers private institutions. Malaysia's education system extends from preschool to the university level. Preschool through secondary school is referred to as pretertiary education, and it is supervised by the Ministry of Education (MOE). Tertiary or higher education is provided by universities, which are also overseen by the Ministry of Education (MOE). Malaysia's government is known to have a vision of transforming Malaysia into a center of educational excellence and to be well-known as the hub of education in the Asia region with the education sector has always enjoyed the highest allocation (The Star, 2020).



Figure 2 Government Expenditures on Education from 1991-2020

#### **Source: Economic Planning Unit (EPU)**

Figure 2 illustrates the government spending on education from 1991 to 2020. It can be well seen that the trend fluctuated substantially among the years starting with a steadily growing trend recorded from 1991 to 2001. After that, a significant drop in education is recorded until 2005 and rise back again until 2010. After 2010, the trend continues to have a downward trend until 2016. The notable achievement encountered during the years was the academic performance of students in bachelor programs had improved with 17.5% of total graduates attaining CGPA scores of 3.49 and above in 2013 as compared to 13.6% in 2010. To add on, the total academic staff in public universities also increased in 2013 compared to 2010. Prior to the statement of the Economic Planning Unit (2015), such notable achievement remarks the previous government's effort in ensuring high access to quality education among its people. To continue, the trend rises back until recent 2019 and falls again in 2020.

#### **1.1.3 Healthcare Spending**

The Ministry of Health provides a wide range of services, including health promotion, illness prevention, and curative and rehabilitative care in clinics and hospitals. Public healthcare sectors in Malaysia are generally paid for by its's citizens through general taxation of income. As a consequence, it is a cheaper option for the people to choose from with the patients only needing to pay nominal fees in this heavily-subsidized public sector. Thus, it can be said that the citizens rely on the public sector with 65% of its population catering to the public healthcare system (Malaysia Healthcare Travel Council, 2020).



Figure 3 Government Expenditures on Healthcare from 1991-2020

#### **Source: Economic Planning Unit (EPU)**

Figure 3 indicates that the government spending on its healthcare fluctuated substantially in the years from 1991 to 2020. Starting from 1991, government spending on healthcare increased inwardly until 2001. Then, there was a slight drop in 2002 and a notable increase in 2003. After that, it fell back until another raise recorded at 2006. Government spending on healthcare was able to be maintained steadily upward until 2010 and it continues to fall until 2014 after that. Despite the fall in government spending on healthcare, there was an overall increase in the healthcare facilities and services recorded in 2014 compared to 2010 (Economic Planning Unit, 2015). Aside from that, Malaysia also achieved notable rankings on

its health system in 2013 and 2014 by being regarded as the most efficient health system. Later, government spending on healthcare continues to rise steadily thenceforth until 2020.

#### **1.2 Problem Statement**

In the current global market which is turbulent and volatile, the government should actively look for the initiative to sustain its economic value. In response to this, the notion of human capital must be embraced with its potential in creating indispensable value for economic performance. It is a fact a few can deny that human capital investment has been in the heart of Malaysia. This can be affirmed as the government has been putting a lot of effort to accelerate its human capital development presently and historically. This statement is also validated by TalentCrop (2020) stated that human capital development plays a vital role in Malaysia becoming a high-income country. This is because the Malaysian talent pool act as the most vital and sustainable source of talent, thus needing to be well optimized and leveraged to meet the evolving requirements of the economy. However, the World Bank (2019) pointed out the fact that Malaysia with its rank of 55<sup>th</sup> out of 157 countries still has room to improve its rank on its Human Capital Index. To fully realize Malaysia's human potential and fulfill the country's aspiration of achieving developed nation status, Malaysia will need to further advance its education, health, and nutrition as well as its social protection outcomes. Presently, Malaysia's near-term economic outlook will be more dependent on the government measures to sustain the private sector activity as followed by an increase of challenges in the external environment currently. To continue that, such incidence is caused by the outbreak of pandemic whereas it has disrupted the economic supply chain at an alarming rate. For instance, certain fiscal responses from the government have been implied to conquer the devastating effects caused by this pandemic to provide liquidity support for both individuals and businesses as well as to stimulate the economy during this critical moment. What is more, the government intends to look forward to maintaining an expansionary budget in its Budget (2022) by taking into account the aspirations to deliver an inclusive, sustainable, and balanced budget in 2022 (Ministry of Finance Malaysia, 2021). Most importantly, it is worth pointing out that the current budget continues to prioritize education as the most important segment of public expenditure with a total of RM52.6 billion allocated to the Ministry of Education Malaysia. On the other hand, the healthcare that stands second highest will be received a total budget of RM32.4 billion in the latest Budget of 2022.

Despite the amount of effort that the government had put to enhance its human capital development, our nation still facing shortages in labor markets in terms of lacking adequate communication skills. Labor market shortages can be particularly problematic especially for an emerging country like Malaysia whereas new technologies, digitalization, automatic, and other trends such as 4.0 result in a constantly evolving demand for a particular set of skills requirements (Human Resources Development Fund Malaysia, 2019). Such issues might lead to the consequences whereby the output productivity will be reduced as the skills available are unable to meet the market requirements. If such shortages persist, there will be a risk of longterm losses of competitiveness and business ability to innovate, thus hurting the economic performance generally. Ironically, the HRDF (2019) also pointed out the findings that the spending of the employers on training does not critically meet the current or future talent pool of the country as the employers expect that the employees already acquire all of the required skills before entering into the working environment. Plus, similar issues were also revealed by the Higher Education Statistics in 2018 whereas out of five graduates, one remained unemployed six months after their graduation. This has raised some significant questions about the quality of labor in the marketplace despite a lot of effort having been taken to enhance human capital development. Perhaps, this might expose the gaps and cracks in the Malaysian education system long hidden from sight since quality education plays a vital role to form a

good quality labor force that fulfills the current market requirements. In the Education Blueprint that covers the range from 2013 to 2025, Malaysia aims to be in the top three countries of International assessments such as the Program for International Student Assessment (PISA) and Mathematics and Science in the Trends in International Mathematics and Science Study (TIMSS) in 15 years. Such assessments measure the proficiencies of students in the aforementioned facets. Prior to the progress updated by the Malaysia Education Blueprint yearly report of 2020, we have been making a progress on achieving the distinction but have not made the top third countries. There is also an observed downward trend in 2019 for the TIMSS score. In terms of mathematical proficiency, Malaysia (64%) also far lagging behind the leading country, which is Vietnam (92%). Admittedly, the report also pointed out the fact achievement of set targets may have been slowed down by the pandemic and poses an alarming signal on the ability of the nation to achieve the aspiration set out by the Education Blueprint in 2025 as The Education Performance and Delivery Unit (PADU) as well reported that students have dropped out of school due to various challenges imposed by the pandemic such as financial issues and losing interest in schooling. Perhaps, the pandemic has shed a light on the need of reforming the nation's education structure along with the policy implies as the pandemic has changed many aspects of Malaysia's life, and people are still learning to adapt to new norms in their lives, thus directly changing the way knowledge is conducted and transmitted. Thus, the government needs to be alert to such changes and ensure that the policy implemented is reflecting the current needs and wants. These concerns are not without justification as several issues had been pointed out by Kamarudin et al. (2021) stating the fact that this pandemic has revealed our country still lacks technological infrastructures and internet access to carry out effective education services. Whether we like it or not, we cannot deny that utilization of technological advancement plays quite a role to enable the continuity of learning as with easy-to-access and maltitude information, it helps to enhance the exploration progress

13

for both students and teachers. Therefore, we can say that this pandemic also gives out a perfect time for the nation to consider reforming towards a more digitalized education system and focus on building teacher and student empowerment for better study outcomes. Perhaps, all of these relevant issues might as well reveal the question about the effectiveness of the government policy on its education system.

Apart from this, the changing of demographic profiles followed by the prevalence of infectious diseases and the increment in lifestyle-related illnesses pose a challenge to the health system in Malaysia. To explain further, these issues had led to a higher demand for quality healthcare thus leading to an uphill course for the nation to keep abreast with more robust and sustainable healthcare (Ministry of Health Malaysia, 2020). Moreover, there has as well static progress recorded in the health status such as the life expectancy, mortality rate, and infant rate. Such static improvement of the national health indicators has raised concerns about the effectiveness of the healthcare sector in the country. Also, Malaysia's citizens are found to have a high reliance on its public healthcare systems due to the affordable price it can provide. According to the Ministry of Health (2020), as Malaysia is moving towards an aging population by 2040 with 14.5% of its population would be more than 60 years old, such socio-demographic change is expected to put a greater demand on the healthcare resources to treat chronic diseases and often associated with multiple morbidities. Thus, it is of utmost importance for the government to keep abreast with the latest development in its healthcare system followed by the evolving and rapidly changing demand. Lacking specialists has also been an issue for the healthcare sector's capability to provide a quality and comprehensive service as most health professionals seek to join the private health system for their career advancement. The Minister of Health also stated that 948 doctors and 4,028 medical officers have left the public healthcare facilities from 2016 until the recent 2021 June. This has posed a greater challenge to the nation's capability in providing comprehensive treatment services for its patients and lead to the