SUSTAINABLE DEVELOPMENT IN ECONOMICS

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Preface

This book, "Sustainable Development in Economics," is a collection of research papers exploring economic and social sustainability in Malaysia and selected Asian countries.

This collection of papers provides insightful research on several dimensions of economic and social sustainability. The studies delve into the impact of economic policy uncertainty, fiscal adjustment, and intraindustry trade on macroeconomic indicators. This book also examine how ICT infrastructure and the digital economy affect economic growth and carbon emissions. Additionally, the papers explore the dynamics of employee compensation, the determinants of success for women microentrepreneurs, and the role of sustainable development in reducing income inequality through financial development. The collection also analyzes the determinants of type 2 diabetes mellitus based on gender, maternal and perinatal mortality determinants, and the impact of prices on cigarette demand. Overall, the research highlights the importance of evidence-based policymaking in promoting sustainable development.

The dedication of all the contributors in writing, revising, and reviewing the chapters has been truly inspiring. We are grateful for their unwavering commitment towards these chapters.

Shivee Ranjanee Kaliappan Wency Bui Kher Thinng Wan Norhidayah Mohamad Serdang, 2023

An Overview: Sustainable Development: Steering the Path to Better Tomorrow

Shivee Ranjanee Kaliappan, Wan Norhidayah W Mohamad, Wency Bui Kher Thinng

Over the past three decades, sustainable development has become the most important development goal that is given high priority in the domestic and international economic policy agendas (Daly, 2014). Numerous advances have been made in the discussions on sustainable development in the last 30 years. Basically, Sustainable Development Goals (SDGs) was introduced to transform the world economy. The goals require the formulation of appropriate policy measures to mitigate poverty and income inequalities, protection of earth and ensuring that all society enjoy a quality life with good health and wealth. Policy makers worldwide recognized that having a long-term perspective in sustainability is the defining feature of the future economic development. This includes environmental protection, ensuring healthy life and social inclusivity. To achieve sustainable development, it is crucial to synchronise and interconnect all these primary elements to increase the overall welfare of the individuals and societies (Pearce et al., 1994; Sofrankova et al., 2021).

Since sustainable development has become a popular catchword in current development dialogue, it is crucial to know how SDGs comes into existence. SDGs emerged at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012 as the replacement of the Millennium Development Goals (MDGs) because it failed to achieve the goals by the end of 2015 (Diouf, 2019). The SDGs serve as a global framework that consist of 17 goals and 169 targets that address scope of human life and the environment that cover an extensive array of issues, including poverty eradication, zero hunger, quality education, clean energy, climate action, sustainable cities, and responsible consumption (Kleespies and Dierkes, 2023). The SDGs give guidance for governments, firms, organizations, and individuals to work collectively towards achieving sustainable development. The outlined SDGs reflect the pressing need to address demanding global challenges and encourage a more sustainable and fair future. Generally, it is observed that significant progress has been achieved by advanced nations, nevertheless, many

The Effects of US Economic Policy Uncertainty on the Macroeconomics of Malaysia

Mohamad Khair Afham Muhamad Senan, Zhang Mengdi, Judhiana Abd Ghani

INTRODUCTION

The global financial crisis has sparked economists' interest in studying the effects of uncertainty more rigorously. A recent development by Baker et al. (2016) to quantify economic policy uncertainty based on newspaper text research has led to more research on this topic, which we use as the central variable of this study. Economic policy uncertainty is defined as the inability of economic agents to predict the outcomes of regulatory changes in taxes, monetary policies, and trade (Kostka and van Roye, 2017). Growing uncertainty about economic policy is expected to harm economic activity. Baker et al. (2016) show that economic policy uncertainty has a significant impact on the real economy of the US. One example of the mechanism is that if there is uncertainty about a specific trade policy of a certain sector, investors in that sector may delay their investment decisions until the uncertainty is resolved. This reduces output and eventually leads to economic recession if the scale is large.

Although most studies agrees that economic policy uncertainty negatively affects the real economy, there is another extension that could benefit from the subject matter, which is its impact on other small, open developing economies. Although several studies were undertaken to examine the international transmission of external instability shocks (such as Colombo, 2013; Cerda et al., 2017; and Stockhammar and Osterholm, 2017), literature that focuses on the spillover effects of EPU from advanced countries on small developing economies is still limited in numbers. For example, Luk et. al. (2020) examined the effects of US EPU on Hong Kong's economy and found a negative impact on real output growth. According to Trung (2019), trade and capital flows are the main sources of the instabilities in the output of other economies affected by the

Analysing the Disaggregated Responses of Conventional and Islamic Lending to Malaysia's Monetary Policy Shocks

Mohamad Khair Afham Muhamad Senan, Anitha Rosland, Judhiana Abd Ghani

INTRODUCTION

It is well proven from the literature that bank credit channel is a crucial part of the monetary transmission mechanism. Evidence for this channel is well established for banks that differ in asset size (Kashyap and Stein, 1995), and capitalization (Kishan and Opiela, 2000), among others. However, evidence regarding the effectiveness of this mechanism across different bank types (Islamic and conventional), sectors, and lending applications is still limited. Examining these different categories of financing channels is important as they may respond differently to monetary policy shocks. This study empirically compares bank credit channels in Malaysia's dual banking system where Islamic banks and conventional banks co-exist under the supervision of the Central Bank of Malaysia (BNM)'s regulation. Additionally, we will also consider the responses of different sectoral and different purposes of loans from these two types of banks in Malaysia.

Fiscal Adjustment: Federal Transfer Determinants and the Financial Impact on State Governments

Judhiana Abd Ghani, Nadiah Ruza, Zati Aqmar Zaharudin

INTRODUCTION

Fiscal adjustment, which includes both the adjustment of horizontal and vertical imbalances, plays a crucial role in the design of intergovernmental fiscal arrangements to accommodate the mismatch between revenue and expenditure. In the context of Malaysia's fiscal federalism, fiscal adjustment, however, was not intended to make up for the state's fiscal inadequacies brought on by such a function assignment (Bakar, 2004; Jalil, 2008; Abd Ghani, 2019; Abd Ghani et al., 2021). However, the absence of the spirit of federalism in the design of fiscal adjustment would cause intergovernmental conflicts and subsequently result in political instability. Therefore, evaluating the process employed to address the fiscal imbalance is imperative as one approach to assessing whether the federation is adopting a truly federal character. It has been learned that the fiscal most practical way to remedy imbalance is intergovernmental transfers or grants from the federal and state governments. Besides, the federal government may impose a sizable tax, but doing so will require a strong political commitment to the federalist ideal (Bakar, 2004; Abd Ghani, 2014; Abd Ghani et al., 2019).

Since Malaysia is known for having a highly centralised system of fiscal federalism, the federal government has the authority to place any restrictions on the thirteen states' receipt of grants. This allows the federal government to maintain control over the quantity and quality of state services as well as state development spending (Abd Ghani, 2014). More importantly, this method of fiscal adjustment may be used politically to reinforce the hegemony of the centre, even though it is crucial financially to achieving national economic goals. Previous studies on Malaysia's fiscal adjustment (e.g., Bakar 2004; Jalil, 2008; Abd Ghani, 2014; Abd Ghani, 2019) showed that the "have" states consistently received larger

Determinants of Automotive Intra-Industry Trade in Malaysia

William Chin, Nur Syazwani Mazlan, Lee Chin

INTRODUCTION

Since the 1970s, there has been strong evidence that intra-industry trade is increasing more quickly than inter-industry trade (Grubel and Lloyd, 1975). One product that is regularly associated with IIT between the two nations is cars. In the pre-globalization era of economic development, the automotive sector was referred to as the "industry of industries" due to its links and spillover effects on other manufacturing industries (Jenkins, 1995; Dicken, 2007). One element impacting the incidence of IIT is the distinct desires and living styles between the two nations. Malaysia has more than 40 years of automotive manufacturing experience. The automotive sector has been the main driver of the country's industrialization development since the foundation of Proton in 1982. Malaysia's experience in the automobile industry helps them dominate the Association of Southeast Asian Nations (ASEAN) market, particularly in the sale of passenger vehicles. Malaysia was the biggest producer of passenger automobiles in ASEAN until 2009, overtaking Thailand and Indonesia (AAF, 2022). Furthermore, the automobile industry contributed 3.2%, or RM 40 billion, to Malaysia's Gross domestic product (GDP) and employed approximately 730,000 people in a state-wide ecosystem (MAI, 2017; MATRADE, 2019)7 in 2016. In 2018, this industry continued to grow, contributing 4.2% to the country's GDP and providing a total of 64,837 new job opportunities (Malaysian Automotive Sector, 2019).

Fortunately, Malaysia is the only ASEAN country with its own national automotive companies, Proton and Perodua, which account for half of the country's vehicle output. Furthermore, the existence of free

⁷ Malaysia Automotive Institute (MAI) now known as Malaysia Automotive, Robotics & IoT Institute (MARii)

Impact of ICT Infrastructure on Economic Growth: Evidence from China and the US

Shi Wenzhe, Normaz Wana Ismail, Zakaria Lacheheb

INTRODUCTION

The digital economy has emerged as a significant factor for propelling the growth of economies worldwide. Infrastructure has been found to lead to economic growth, which has been well documented as a key factor in attracting more foreign direct investment and the movement of people and businesses, thus sustaining economic growth. According to Ismail and Mayhideen (2015), the information and communications technology (ICT) sector is also regarded as physical infrastructure, comprising indicators of the use, availability, absorption, and government prioritization of ICT. In addition, the development of ICT through digitalization has a significant impact on economic growth in both developed and developing countries (Chuks and Godsway, 2021; DeStefano et al., 2017; Doucouliagos and Steel, 2018; Gideon et al., 2018; Kabaklarli and Atasoy, 2019; Niebel, 2017; Waverman et al., 2005). ICT infrastructure is a key component that helps support the functioning of the digital economy. It gives digital activities and innovation the required support and platform they need to thrive. From a broad perspective, ICT infrastructure includes broadband networks, communication facilities, data centres, cloud computing infrastructure, etc., which provide the necessary support and basic conditions for various fields of the digital economy (Ismail, 2021). Therefore, investment in ICT infrastructure is not an option but a requirement as a key driver of change in economic growth.

This study examines the role of ICT infrastructure in economic growth in China and the US, the two largest economies in the world, and the growth of their respective digital economies has garnered great attention. Recent years have seen fast growth in China's digital economy, which has made a substantial contribution to the country's overall economic expansion. As a result, China is currently just behind the US in terms of the global ranking of digital economies. According to Zhou (2022), the development of the Chinese mobile internet has promoted the rapid growth of the digital economy in China and is a solution for breaking

The Impact of the Digital Economy on Carbon Emission: Evidence from China's Provincial Panel Data

Kong Senquan, Wan Norhidayah W Mohamad

INTRODUCTION

Fossil fuel consumption over the past few decades has resulted in significant carbon emissions, which adversely affect climate change and pose a serious challenge to China's sustainable development (Irfan et al., 2021). China is projected to emit 11.9 billion metric tons of carbon dioxide by 2021, representing more than 33 percent of the global total. So, encouraging lower carbon emissions and speeding up the switch to lowcarbon growth has become a big problem for China. However, eliminating fossil fuels reduces climate change and enhances air quality. The development of "carbon neutral" plans across all parts of the world has begun to be implemented as a response to the worldwide push for a greener, lower-carbon economy, as countries worldwide have begun taking steps to achieve this. Nonetheless, China faces significant obstacles as one of the world's leading energy consumers (Xu et al., 2022). It is anticipated that China will reach its highest level of carbon dioxide emissions by the year 2030 and that the country will reach carbon neutrality by the year 2060. This will mean that less carbon dioxide will be released into the atmosphere (Cheng et al., 2021). If achieved, this target will profoundly affect China's efforts to reduce carbon emissions and be a game-changer for green economic development.

The definition of the digital economy was made clear at the G20 Leaders' Hangzhou Summit in September 2016. It is a collection of economic activities that use data resources as a critical component of production, contemporary information networks as a vital conduit, and efficient use of information and communication technology as content. Furthermore, the digital economy plays a crucial role in improving productivity and streamlining the economy's structure (Dong et al., 2022). The digital economy has created significant changes in industry, everyday life, and government. As the digital economy grows, so does the

The Nexus Between HIV and Total Factor Productivity: Analyzing the Role of Health Expenditure in Low and Middle-income Countries

Aqilah Ahmad Hidzir, Suryati Ishak

INTRODUCTION

Recently, the primary health care (PHC) system has been re-developed towards maintaining essential services, enhancing equity, and supporting people with minimal coverage of essential services (Bitton et al., 2019). As of 2016, 193 countries had implemented the Sustainable Development Goals (SDGs) to achieve universal health coverage (UHC) as a principal goal for the global health community through 2030 (United Nations Development Programmes, UNDP, 2016). Additionally, the PHC system can also improve the population's health outcomes and reduce all-cause mortality (Kruk et al., 2010). Despite the global improvement of the PHC system particularly in low and middle-income countries (LMICs), its performance remains poor. Notably, both the PHC system and service delivery must achieve the SDGs. However, being fragmented, underfunded, and under-prioritized (Bitton et al., 2019), LMICs failed to provide high-quality, comprehensive, people-centered, and integrated care (Langlois et al., 2020). As a result, the people in LMICs are often left behind and do not benefit from health care, employment, education, or social protection (Rabbani et al., 2016).

One of the fundamental issues that lingers in many LMICs is health, which refers to the capability of people to develop their potential and the absence of illnesses during their lifetime. Most LMICs, such as the Central African Republic, Gabon, Nigeria, and Sierra Leone, have significant disease burdens of infectious diseases (ID) like tuberculosis, human immunodeficiency virus (HIV), and malaria. These infectious diseases share common features, such as acquiring long-term care and affecting the high-risk population (Remais et al., 2013). Nowadays, HIV continues to be a significant global public health issue (World Health Organization, WHO, 2019) whereby its widespread has been reported in many low and

The Dynamics of Employees Compensation in Malaysia: An Input-Output Analysis

Chakrin Utit, Muhammad Adib Jamal

INTRODUCTION

The decades of progressive growth witnessed the transformation of Malaysia from an agricultural toward an industrialised and further into servicing economy. Entrepreneurship, technology, investment, finance, and institutions are among the major factors facilitating the transformative process (Briones and Felipe, 2013; Hill and Gochoco-Bautista, 2013). Over the years, Malaysia's success stories are well reflected by its rapid economic development, with Malaysia enjoying positive gross domestic product (GDP) growth, ranging from 4.5% to 9.8% throughout 2015-2019 (DOSM, 2021). However, does the growth contribute to a larger economic pie for labour? Answering this question uncovers the evidence for the long-standing structural issue in Malaysia's economy, which is the sluggish income growth despite the rapid development experienced by the nation. Annual national accounts data between 2015-2019 indicates that the composition of compensation of employees (COE), which represents the share of labour income from the total size of GDP, has grown marginally during this period, resulting in COE shares hovering only between 35.0%-35.9%10.

Despite the increasing pattern, the COE composition in Malaysia is considerably low compared to other economies. For instance, the estimated COE shares for selected Asian countries, including Singapore, Taiwan and South Korea, are estimated between 40.1%-47.5% (in 2019), while China and Japan recorded 49.0% (in 2017) and 51.8% (in 2018),

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¹⁰ Interpreting the COE shares for 2019 suggests that the growth of RM100 billion in the size of the national GDP would contribute to RM35.9 billion in labour income, an increase of RM0.9 billion from 2015.

Does Financial Development Reduce Income Inequality? Evidence From Selected Asian Countries

Wang Yujue, Nur Syazwani Mazlan

INTRODUCTION

Many studies have been conducted on the relationship between financial development and income inequality using different models and perspectives, using different countries as samples. It is notable that the association between income inequality and financial development differs from one country to another. In addition, the issue of income inequality not only exists between developed and developing countries but also has a significant gap in income inequality in developing countries. This study focuses primarily on the effect of financial development on reducing income inequality in Asian countries. From the 1960s to the 1990s, the economic growth of many Asian countries, particularly Taiwan (China), Hong Kong (China), South Korea and Singapore, quickly outpaced the economic growth of countries elsewhere in the world. Following on the heels of these countries, in terms of economic growth, are countries such as China and Malaysia. At the bottom of the list are countries such as Bangladesh and Myanmar, whose economic growth can be described as sluggish.

This study separates Asian countries into the following three groups; the grouping of economic levels is based on the GDP per capita of Asian countries, which is the most commonly used way to measure a country's level of economic development. The average GDP per capita in 2021 for the selected Asian underdeveloped countries is US\$3010.5; for moderately developed countries in 2021 is US\$10098.25; and for the highly developed countries in 2021 is US\$49226.25. It is not difficult to see a large gap between the rich class and poor class in Asian countries under different levels of economic development. Although the pillar industries and policies vary from country to country, many previous studies have confirmed the role of financial development in fuelling income inequality.

Determinants of the Success of Women Micro-Entrepreneurs: A Case Study of Amanah Ikhtiar Malaysia Recipients

Noor Syafinas Muda

INTRODUCTION

The Malaysian government has made a concerted effort to empower the B40 group through entrepreneurship. Among these initiatives are efforts to empower disadvantaged women by offering financial support to increase the low-income group's competencies and capabilities in earning money through micro-entrepreneurship. Amanah Ikhtiar Malaysia is one such institution that has received considerable government support to empower underprivileged women through micro-enterprise (AIM). AIM is Malaysia's premier and largest Micro-Finance Institution (MFI), aimed at increasing underprivileged women's engagement in entrepreneurship (Haque et al., 2019). AIM's primary objective is to alleviate poverty among women through micro-enterprises by offering specially designed microcredit scheme for the underprivileged. This method provides business opportunities for disadvantaged women.

In light of Malaysia's present socioeconomic circumstances, AIM offers a microcredit scheme to those who earn less than RM3,855 per month or an income per capita of RM838 to become AIM members. AIM had 136 branches and 378,721 members as of 2018. It has also disbursed RM21,478,044,131 of the entire loan, with a payback percentage of 98.2 percent (Amanah Ikhtiar Malaysia, 2018). The amount of loan allocated by AIM to its members ranges from the smallest RM,1000 to the largest RM30,000 which includes various types of loan schemes. All new borrowers can only apply for the scheme's lowest tier. Borrowers who have a strong payback record and meet other requirements can apply for a second loan. AIM makes all loans without requiring collateral or a guarantor, and there are no fees.

However, the desire to empower disadvantaged micro-women entrepreneurs through microcredit creates a concerning image, as the failure rate among new SMEs in Malaysia remains quite high. Many new

Does Gender Difference Influence the Prevalence of Type 2 Diabetes Mellitus in Malaysia?

Tan Jia Er, Norashidah Mohamed Nor

INTRODUCTION

Diabetes is a medical condition characterised by the absence of insulin, which prevents the cells from absorbing glucose. The cause of diabetes can be attributed to either pancreatic damage (Type 1 Diabetes Mellitus) or the body's resistance to insulin (Type 2 Diabetes Mellitus). World Economic Forum predicted that NCDs alone will negatively impact the economy, especially in developing countries, where they will suffer an estimated 1-5% GDP reduction. The study sampled a total of 72 countries, including Malaysia. It concluded that the elevated mortality rate resulting from the increased presence of risk factors is directly linked to the country's inadequate management and treatment strategies. According to Afroz et al., (2019), out of the 1,253 diabetic participants sampled in Bangladesh, 35.5% had either macro or microvascular complications, and 27.9% had both. Based on multiple logistic and non-parametric regression analyses, it was found that these groups of diabetes patients incurred significantly higher average annual medical expenses, thereby imposing a considerable economic burden on Bangladesh.

Ciarambino et al., (2022) emphasised that the significance of gender disparity in research extends beyond biological variation and encompasses a range of factors such as sociocultural practises, behaviour, lifestyles, and environmental influences that differ between males and females. Based on previous studies, the findings implied that the vitality of health expenditure is a social determinant of T2DM. However, these studies were primarily conducted in Western countries such as the USA, UK, Sweden, and similar geographical locations, with minimal studies focusing on the Malaysian population. Apart from that the studies were also arguably outdated. Since the current Malaysian population recorded a spike in T2DM from past years, there is a significant gap in the latest studies on the affiliation between T2DM and health expenditure. Therefore, the present study

The Impact of Seasonal Influenza on Malaysia's Economy: A Quarterly Autoregressive Distributed Lag to Cointegration estimation

Akingba Idowu Opeoluwa Isreal, Hanny Zurina Hamzah, Norashidah Mohamed Nor, Niazlin Mohd Taib

INTRODUCTION

Disease outbreaks have influenced economic activity across demand and supply transmission channels based on the measures taken to contain the outbreaks (Laxminarayan and Malani, 2011; Madhav et al., 2017; Abiad et al., 2020). Thus, developing comprehensive global health care could defend against existing and undiscovered infectious and non-infectious disease risks and support the notion that contagious illnesses can be controlled, which has become increasingly important (Bloom and Canning, 2006; Holmes et al., 2017; Bloom and Cadarette, 2018; Bloom and Cadarette, 2019). Despite all these global advances in health care, the persistent influenza outbreak has significantly revealed our continued vulnerability to the threat of influenza virus disease burden and its economic consequences (Houser & Subbarao, 2015). Most significantly, recent findings ranked influenza as the most significant cause of loss of workplace productivity and the most significant effect on public health (Cassini et al., 2018; Van Wormer, 2017; Gianino et al., 2019; CDC, 2021; ECDC, 2021).

Although quantifying the effect of seasonal influenza is impossible, current estimates indicate that the seasonal influenzas k ills approximately one million people each year, with an annual attack rate of 5-10 percent for adults and 20-30 percent for children globally (Perera, 2017). Additionally, seasonal influenza creates a yearly increase in illness, hospitalization, and mortality (WHO, 2020). In Malaysia, seasonal influenza occurs throughout the year without distinct seasons. For example, Figure 13.1 supports (Chan et al., 2009; Saha et al., 2013; Sam et al., 2019) by demonstrating that the rate of increased influenza

The Maternal and Perinatal Mortality Determinants in China's Eastern and NonEastern Regions

Wu Yi, Wency Bui Kher Thinng

INTRODUCTION

Ensuring maternal and child health is crucial for the overall health of a population, with women and children being a priority group for healthcare. In 2016, the Chinese government introduced the "Healthy China 2030" plan, which included a key initiative called the "Initiative to Promote Maternal and Infant Health". In the same year, the "Second Child" policy was officially implemented, leading to increased demand for childbirth, a rise in the proportion of high-risk pregnant women, and limited supply capacity for maternal and child healthcare services (Shang and Xiao, 2021; Li and Ma, 2021; Liu et al., 2020). These factors have put increasing pressure on ensuring the safety of mothers and children.

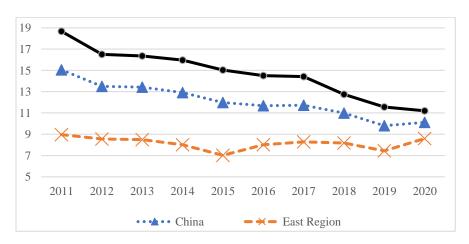


Figure 14.1 Maternal mortality rate (MMR) in China (2011-2021)

Source: China Health Statistics Yearbook (2021)

The Domestic and Neighbouring Countries' Retail Price Impacts on Cigarette Demand in Malaysia

Wency Bui Kher Thinng, Norshidah Mohamed Nor

INTRODUCTION

Smoking is the leading cause of preventable deaths, resulting in high rates of premature mortality and morbidity, leading to undesirable health impacts and economic burdens. In Malaysia, it is the third most significant risk factor for health impairment after physical inactivity and obesity (MOH, 2012). In 2014, smoking-related illnesses caused a significant number of hospitalizations and deaths in Malaysian public and private healthcare facilities. Reports show that around 25% of hospitalizations in public hospitals and 19% in private hospitals were attributed to these illnesses. Additionally, smoking-related illnesses accounted for almost 40% of deaths in both types of hospitals (MOH, 2015). Analysis conducted in Malaysia also uncovered the detrimental effects of smoking on individuals diagnosed with lung cancer (Sajid et al., 2017). The Malaysian government has taken significant steps to address the public health concerns caused by smoking. It has implemented various tobacco control policies to regulate smoking and also aims to reduce the number of smokers in the population. The government has set ambitious targets to decrease the smoking prevalence rate to 15% by 2025¹⁷ and less than 5%

¹⁷ In November 2012, the World Health Assembly established voluntary global targets for non-communicable diseases, including a specific target related to tobacco. The Malaysian Government has committed to this target by setting a goal of reducing smoking prevalence to 15% by 2025.