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THRIVING IN THE SWEET SPOT: EXPLORING THE DOUGHNUT ECONOMY MODEL OF MALAYSIA, THE PHILIPPINES, AND VIET NAM THROUGH THE SUWI ANALYSIS (2010-2019)

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ABSTRACT

Objective: The objective of this research is to evaluate whether Malaysia, the Philippines, and Viet Nam are within the doughnut economy from 2010 to 2019 using the sustainability window approach and to compare their levels of development.

Theoretical Framework: This study is based on the Doughnut Economics Framework by Kate Raworth. This study explores literature that shows the relationship between economic well-being, social well-being, and environmental well-being.

Method: The methodology used in evaluating these countries' adherence to environmental and social well-being criteria is the Sustainable Window Analysis by quantifying the maximum and minimum economic development required for social and environmental sustainability by integrating socio-economic and environmental indicators to assess compliance with Doughnut Economics' social foundations and planetary boundaries.

Results and Discussion: Results indicate that Malaysia achieved the sustainable window for all indicators except for healthy life and greenhouse gases. Viet Nam failed regarding healthy life, biodiversity, and clean energy. The Philippines failed in all environmental well-being indicators except for land use.

Research Implications: These findings apply to policy-making by targeting areas that could not meet the sustainable window. It also reveals the applicability of the Doughnut Model to developing countries in ASEAN.

Originality/Value: This study contributes to the literature by filling literature gaps by providing significant results to future researchers planning to conduct future research in line with sustainable development and Doughnut Economics of a particular country of their choice.

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PROSPERIDADE NO PONTO CERTO: UMA ANÁLISE DO MODELO ECONÔMICO DE ROSQUINHA NA MALÁSIA, NAS FILIPINAS E NO VIETNÃ ATRAVÉS DA ANÁLISE DE JANELA SUSTENTÁVEL (2010-2019)

RESUMO

Objetivo: Este estudo visa avaliar se a Malásia, as Filipinas e o Vietnã se enquadram no modelo econômico de rosquinha entre 2010 e 2019, utilizando a abordagem da janela de sustentabilidade para comparar seus níveis de desenvolvimento.

Referencial Teórico: Baseado no conceito de Economia de Rosquinha de Kate Raworth, esta pesquisa investiga a interdependência entre o bem-estar econômico, social e ambiental.

Método: Para aferir a conformidade desses países com os critérios de bem-estar ambiental e social, utilizou-se a Análise de Janela Sustentável. Esta abordagem quantifica o desenvolvimento econômico necessário para a sustentabilidade ambiental e social, integrando indicadores socioeconômicos e ambientais que verificam a aderência às bases sociais e aos limites planetários propostos pela Economia de Rosquinha.

Resultados e Discussão: A Malásia cumpriu a janela de sustentabilidade em todos os indicadores, exceto vida saudável e emissões de gases estufa. O Vietnã não atendeu aos critérios de vida saudável, biodiversidade e energia limpa. Nas Filipinas, todos os indicadores de bem-estar ambiental foram comprometidos, exceto no uso de terras.

Implicações da Pesquisa: Os resultados desta análise são fundamentais para o direcionamento de políticas públicas, especialmente nas áreas que não alcançaram a janela sustentável. Demonstram também a viabilidade do Modelo de Rosquinha para países em desenvolvimento do bloco ASEAN.

Originalidade/Valor: Este trabalho enriquece o campo de estudo ao preencher lacunas na literatura e fornecer insights valiosos para pesquisadores interessados em alinhar futuras pesquisas com os objetivos de desenvolvimento sustentável e a Economia de Rosquinha em um contexto nacional específico.

Palavras-chave: Economia de Rosquinha, Bem-Estar Ambiental, Bem-Estar Social, Desenvolvimento Sustentável, Análise de Janela Sustentável.

PROSPERANDO EN EL PUNTO IDEAL: EXPLORANDO EL MODELO DE ECONOMÍA DE LA ROSQUILLA EN MALASIA, FILIPINAS Y VIETNAM A TRAVÉS DEL ANÁLISIS SUWI (2010-2019)

RESUMEN

Objetivo: El objetivo de esta investigación es evaluar si Malasia, Filipinas y Vietnam están dentro de la economía de la rosquilla desde 2010 hasta 2019 utilizando el enfoque de la ventana de sostenibilidad y comparar sus niveles de desarrollo.

Marco Teórico: Este estudio se basa en el Marco de Economía de la Rosquilla de Kate Raworth. Se explora la literatura que muestra la relación entre el bienestar económico, el bienestar social y el bienestar ambiental.

Método: La metodología utilizada para evaluar la adherencia de estos países a los criterios de bienestar ambiental y social es el Análisis de la Ventana Sostenible, cuantificando el desarrollo económico máximo y mínimo requerido para la sostenibilidad social y ambiental, integrando indicadores socioeconómicos y ambientales para evaluar el cumplimiento de las bases sociales y los límites planetarios de la Economía de la Rosquilla.

Resultados y Discusión: Los resultados indican que Malasia logró la ventana sostenible para todos los indicadores excepto vida saludable y gases de efecto invernadero. Vietnam no cumplió en cuanto a vida saludable, biodiversidad y energía limpia. Filipinas falló en todos los indicadores de bienestar ambiental excepto en el uso del suelo.

Implicaciones de la investigación: Estos hallazgos son aplicables a la formulación de políticas al identificar áreas que no lograron cumplir con la ventana sostenible. También revelan la aplicabilidad del Modelo de la Rosquilla a los países en desarrollo de la ASEAN.

Originalidad/Valor: Este estudio contribuye a la literatura al llenar vacíos proporcionando resultados significativos para futuros investigadores que planeen llevar a cabo investigaciones en línea con el desarrollo sostenible y la Economía de la Rosquilla en un país específico de su elección.

Palabras clave: Economía de la Rosquilla, Bienestar Ambiental, Bienestar Social, Desarrollo Sostenible, Análisis de la Ventana Sostenible.

1 INTRODUCTION

Traditionally, Gross Domestic Product (GDP) has been regarded as the primary measure of a country's economic performance and progress (OECD, 2023). However, studies by Dědeček and Dudzich (2022), Mitu (2022), Ivković (2016), Raworth (2017), Gajdosova (2023), and Giannetti et al. (2015) have shown its limitations as a comprehensive measure of well-being and societal development and proposed alternative frameworks and indices. With this, Raworth's Doughnut Economics model envisions a just and safe space for humanity, balancing societal needs within planetary limits. These studies underscore the necessity of reevaluating the conventional reliance on GDP and adopting more holistic measures to align with contemporary notions of economic development, environmental sustainability, and societal welfare (Dědeček & Dudzich, 2022; Mitu, 2022; Ivković, 2016; Raworth, 2017; Gajdosova, 2023; Giannetti et al., 2015).

Transitioning to 21st-century economic models represents a significant shift in perspective, encompassing a multidimension approach to redefining economic progress and human well-being (Raworth, 2017). Central to this transition is reevaluating the conventional economic goal of Gross Domestic Product (GDP) growth in favor of a more comprehensive measure encapsulated in the Doughnut Economics framework, which emphasizes meeting the human rights of all individuals within planetary boundaries (Raworth, 2017; Giannetti, 2015). Moreover, it identifies the need for a broader understanding of economic systems, going beyond conventional frameworks such as the GDP and Circular Flow diagram to incorporate societal and environmental dimensions, as well as adopting systems thinking to understand the dynamism of economies as complex systems (Raworth, 2017). A paradigm shift also entails redefining human nature, shifting away from the simplistic rational economic man model, and acknowledging the interconnectedness of social, interdependent, and environmental aspects of human behavior (Raworth, 2017).

The objective of this research is to evaluate whether Malaysia, the Philippines, and Viet Nam are within the doughnut economy or within the boundaries of the sustainability framework from 2010 to 2019 using the sustainability window approach. This research will also determine whether Malaysia, the Philippines, and Viet Nam can achieve certain levels of economic development while remaining socially and environmentally sustainable. Lastly, this research seeks to compare the development levels of Malaysia, the Philippines, and Viet Nam and evaluate which of the three is closest to thriving in the sweet spot of the doughnut model or the

safe and just space of humanity. Thus, the central research question that the researchers seek to answer revolves around the quantitative application of the Doughnut Economics framework or within the boundaries of the sustainability framework in the three developing Southeast Asian countries, Malaysia, the Philippines, and Viet Nam using the sustainable window approach.

This research will contribute to policymakers in using the findings of the study as evidence or critical points in addressing specific problems and policies targeting social foundations while being environmentally sustainable and promoting the overall economic well-being of society. This research will also expand the existing knowledge and show the effectiveness of using Doughnut Economics as a modern economic model of the 21st century in measuring economic development and its possible applicability to other countries in the Association of Southeast Asian Nations (ASEAN). Lastly, this research will provide significant results to future researchers planning to conduct future research in line with sustainable development and Doughnut Economics of a particular country of their choice.

2 THEORETICAL FRAMEWORK

This chapter will discuss the background of the Doughnut Economics Framework and its applicability to this study. This chapter also examines the relationships between Economic Well-Being and Environmental Well-Being, Economic Well-Being and Social Well-Being.

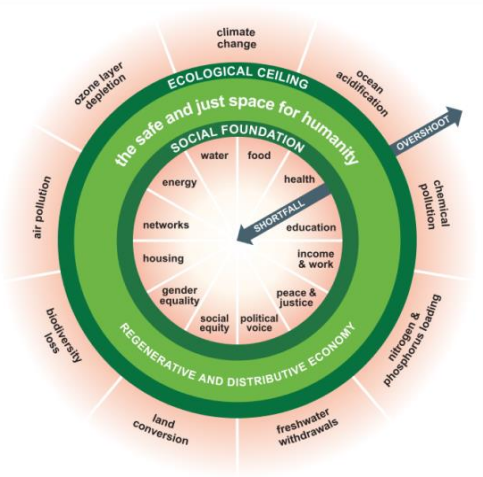
2.1 DOUGHNUT ECONOMICS

Kate Raworth's "Doughnut Economics" as seen in Figure 1, introduces a transformative framework that challenges the traditional reliance on GDP as the sole indicator of economic progress (Raworth, 2017). By integrating Earth-system science and global development goals like the UN Sustainable Development Goals (SDGs), Raworth advocates for an economic approach that incorporates social equity and environmental sustainability (Raworth, 2017). The Doughnut model comprises three key components: the Ecological Ceiling, the Social Foundation, and the Safe and Just Space for Humanity. The Ecological Ceiling sets limits on human activities to ensure environmental sustainability, covering aspects like greenhouse gas emissions and biodiversity loss. The Social Foundation outlines essential needs and rights for a dignified life, including access to food, water, healthcare, and education. The Safe and Just Space for Humanity represents the balance between these two, allowing societies to thrive

within ecological boundaries while ensuring well-being for all (Raworth, 2017). Studies applying the Doughnut Economics model include research by Castro et al. (2022) in the Philippines, Saunders and Luukkanen (2022) in Cuba, comparative analyses by Luukkanen et al. (2022) and Luukkanen et al. (2021) across ASEAN countries and Thailand, and Sayers and Trebeck (2015).

Figure 1

The doughnut of social and planetary boundaries.



Source: Adapted from *Doughnut Economics: Seven Ways to Think Like a 21st Century Economist* (p. 38), by K. Raworth (2017), Chelsea Green Publishing.

2.2 ECONOMIC WELL-BEING AND ENVIRONMENTAL WELL-BEING

According to Castro et al. (2022), environmental well-being comprises different dimensions such as biodiversity, land consumption, greenhouse gasses, unsafe sanitation, and clean energy. Within the environmental well-being variable is the concept of planetary boundaries, which is understanding the limitations of the natural resources people rely on for sustainable development (Raworth, 2017). Numerous studies have been conducted to test the relationship between these environmental well-being indicators and economic growth.The title of the table should be brief, clear and explanatory.

For biodiversity, studies emphasized the importance of integrated and adaptive approaches that prioritize biodiversity conservation while promoting long-term economic development (Otero et al., 2020; Rice, 2021; Castro et al. 2022; Luukkanen et al., 2021; Luukkanen et al., 2022).

In terms of land consumption, studies show the relationship between economic, institutional, and environmental factors in shaping land use dynamics and emphasized the importance of sustainable land management practices for balanced economic growth and environmental integrity (Bimonte & Stabile, 2016; Harewan et al., 2023; Castro et al. 2022).

For greenhouse gases, studies have found diverse relationships between economic growth and environmental outcomes, often challenging the conventional Environmental Kuznets Curve (EKC) hypothesis (Shahbaz et al; 2019; Palanca-Tan et al., 2016; De Robles et al., 2021; Ilham, 2018; Li & Haneklaus, 2022, Kar, 2022; Adu & Denkyirah, 2018; Mansson et al., 2018, Sun et al., 2020, Cederborg & Snobohm, 2016; Bekun et al., 2021). On the other hand, Maneejuk et al. (2020) identified limited support for the EKC in specific economic communities such as the EU, OECD, and G7, highlighting the need for alternative approaches to address environmental sustainability (Husnain et al., 2021).

For unsafe sanitation, Choi et al. (2015) supported the Environmental Kuznets Curve (EKC) hypothesis in South Korea by demonstrating that economic growth, along with changes in environmental policies, initially worsens but eventually improves water quality.

Lastly, for clean energy, studies highlighted the potential economic benefits of transitioning to renewable energy sources and the significant impact of renewable energy on economic development and also emphasized renewable energy's ability to promote economic prosperity while addressing environmental concerns (Rahman et al., 2023; Pao et al., 2014; Fotourehchi, 2017; Jia et al., 2023)

2.3 ECONOMIC WELL-BEING AND SOCIAL WELL-BEING

According to Castro et al. (2022), social well-being comprises different dimensions such as sufficient food, education, healthy life (life expectancy), gender equality, and employment. Within the social well-being variable is the concept of Social Foundations under the Doughnut Economics model by Raworth (2017). The Social Foundation, outlines the essential needs and rights that all individuals require to lead a dignified life, encompassing access to food, water, healthcare, education, and social equity (Raworth, 2017). Various studies and results found different relationships between the following social well-being indicators and economic growth.

For sufficient food, studies have shown the relationship between food security, long-term economic growth, and societal progress, thus emphasizing the need to resolve food

security issues to support long-term economic development (Manap & Ismail, 2019; Swietlik, 2018; Asumadu-Sarkodie & Owusu, 2016)

For education, the studies conducted by Marquez-Ramos and Mourelle (2019), Cabauatan et al. (2016), Nowak and Dahal (2016), Agasisti and Bertoletti (2022), Yalley et al. (2021), and Benos and Zotou (2014) affirmed the positive relationship between education and economic growth across various countries and regions, demonstrating the crucial role of education in shaping individual and societal economic well-being.

For healthy life, studies have concluded the significant impact of economic well-being on various health outcomes across different countries and regions, stressing the link between economic well-being and various health outcomes, emphasizing the necessity of a holistic approach that incorporates both economic and social factors to improve population health and well-being (Gillani et al., 2022; Miladinov, 2020; Saunders & Luukkanen, 2021; Niu et al., 2021; Lutz & Kebede, 2018)

For gender equality, studies have revealed that achieving gender equality is not only a moral obligation but also a strategic investment in promoting long-term development and prosperity (Sileem, 2020; Kumar, 2018; Makua et al., 2022)

Lastly, for employment, Maia and Menezes (2014) revealed that labor force participation in labor-intensive activities drove Brazil's economic growth with positive effects on wages and unemployment, while studies in Jordan and the Philippines validated Okun's law, though its applicability faced challenges in Egypt due to data reliability issues (Hjazeen et al., 2021; Al-kasasbeh, 2022; Pascual et al., 2020; Kamal, 2022). These studies offered insights into the relationship between employment and economic well-being, confirming Okun's Law in various contexts while also acknowledging challenges related to data accuracy in some regions.

3 METHODOLOGY

The researchers utilized the Sustainable Window Analysis of Luukkanen et al. (2021) as the method in order to quantify the doughnut economics framework by Raworth (2017) of each country. The Sustainable Window Analysis or SuWi is a comprehensive tool introduced by Luukkanen et al. (2015) which is utilized in evaluating the maximum and minimum economic development required, in order to be socially and environmentally sustainable (sustainability window). According to Luukkanen et al. (2021) the sustainability window

(SuWi) method provides quantitative information about the maximum economic development to avoid a negative effect in the environmental condition and the minimum economic development to achieve a positive social development. The researchers determined the maximum and minimum economic development required for the three countries namely: Malaysia, the Philippines, and Viet Nam, for them to assess whether the three countries met the criteria for social and environmental sustainability or the sustainability window.

The study uses a quantitative approach using secondary data sourced from the World Bank Database and the Sustainable Development Goal (SDG) indicators provided by the United Nations for Malaysia, the Philippines, and Vietnam. The data spans from 2010 to 2019 and includes various well-being indicators categorized under environmental, social, and economic well-being. The SuWi method simultaneously evaluates sustainable development across social, environmental, and economic dimensions by incorporating indicators based from previous literature such as CO2 emissions, GDP, and social well-being metrics. The indicators were based on Castro et al. (2022) and on the data availability of the economic, environmental, and social indicators of each country for the years 2010 to 2019. The researchers selected the 10-year time frame based on the studies of Castro et al. (2022), Luukkanen et al. (2021), Luukkanen et al. (2015), Saunders and Luukkanen (2022), and Luukkanen et al. (2022), wherein they have also used a 10-year and even less time frame.

The environmental well-being indicators are: Biodiversity measured as the average proportion of terrestrial key biodiversity areas (KBAs) covered by protected areas. Land Consumption measured as the proportion of land area covered by forest. Greenhouse Gasses measured CO2 emissions (kg per 2015 US$ of GDP). Unsafe Sanitation measured as the proportion of the population using a safely managed sanitation service. Clean Energy is measured as the proportion of population with primary reliance on clean fuels and technology.

The social well-being indicators are: Sufficient Food measured as the proportion of population suffering from hunger (undernourishment). Education measured as the total official flows received for scholarships (millions of constant 2021 United States dollars). Healthy Life measured as the mortality rate for children under 5 years of age (deaths per 1,000 live births). Gender Equality measured as the proportion of seats held by women in national parliaments. Employment measured as unemployment, total (% of total labor force).

The economic well-being indicator is Real GDP as per Lukkanen et al. (2021) and Castro et al. (2022) measured as GDP Constant 2015 US$.

The data for the sustainability window was computed using the formula by Luukkanen et al. (2015) shown in Equations 1 and 2. The base year of the study or the initial year of analysis will be 2010. In order to determine if the country is within the sustainable window for the indicators, the condition on Equation 3 must be met.

$$GDP_{max} = \frac{GDP_{t1}}{Env_{t1}} Env_{t0} \quad (1)$$

$$GDP_{min} = \frac{GDP_{t1}}{Soc_{t1}} Soc_{t0} \quad (2)$$

$$GDP_{min} \leq GDP_{t1} \leq GDP_{max} \quad (3)$$

where:

GDPmin is the minimum economic development required to meet the criterion;
GDPmax is the maximum economic development required to meet the criterion;
GDPt1 is the value of the Real GDP during the latest period in the study;
Envto is the value of the Environmental Indicator during the base year (2010);
Envt1 is the value of the Environmental Indicator during the latest period in the study;
Socto is the value of the Social Indicator during the base year (2010); and
Soct1 is the value of the Social Indicator during the latest period in the study.

The researchers selected Malaysia, the Philippines, and Viet Nam as the subjects of this study for two reasons. First, the three countries are part of the Association of Southeast Asian Nations (ASEAN). Second, during the period analyzed, the real GDP of the three countries are the closest to each other compared to other member countries of the ASEAN.

4 RESULTS AND DISCUSSIONS

This chapter shows the results and discussion of the SuWi analysis of the researchers to determine if the Malaysia, the Philippines, and Viet Nam are within the doughnut economy from 2010 to 2019.

4.1 MALAYSIA

Table 1

Computed GDP MIN and GDP MAX for the environmental and social indicators for Malaysia

	GDP MIN	**GDP T1**	**GDP MAX**
Biodiversity & Sufficient Food	0.002	0.04	0.38
Land Use & Education	-1.73	0.04	0.04
Greenhouse Gases & Healthy Life	0.05	0.04	0.02
Unsafe Sanitation & Gender Equality	0.03	0.04	0.04
Clean Energy & Employment	0.04	0.04	0.04

Table 1 shows the results of the computed SuWi analysis of Malaysia from 2010 to 2019. For the combined environmental and social well-being indicators of Biodiversity and Sufficient Food, Land Use and Education, and, Unsafe Sanitation and Gender Equality, respectively, Malaysia was able to satisfy the environmental well-being and social well-being criteria. This shows that Malaysia's level of economic development from 2010 to 2019 falls within the sustainable window, meeting the necessary conditions for GDPmin and GDPmax. The clean energy and employment indicators of Malaysia also fell within the sustainable window. However, its GDPmin, GDPmax, and GDPt1 all have the same value of 0.04. This means that Malaysia's level of economic development is already at its maximum point and that it must be maintained at this level since it is also its minimum point. Lastly, for the greenhouse gases and healthy life indicators, it fell outside the GDPmin and GDPmax indicating that Malaysia's level of economic development is outside the sustainable window for these indicators of environmental and social well-being.

4.2 PHILIPPINES

Table 2

Computed GDP MIN and GDP MAX for the environmental and social indicators for Philippines

	GDP MIN	**GDP T1**	**GDP MAX**
Biodiversity & Sufficient Food	0.06	0.06	0.04
Land Use & Education	-0.11	0.06	0.06
Greenhouse Gases & Healthy Life	0.07	0.06	0.0003
Unsafe Sanitation & Gender Equality	0.04	0.06	0.05
Clean Energy & Employment	0.06	0.06	0.05

Table 2 shows the results of the computed SuWi analysis of the Philippines from 2010 to 2019. For biodiversity and sufficient food, and clean energy and employment indicators for the Philippines, the GPDmin is higher than the GDPmax, which means that in order for the Philippines to be socially sustainable in terms of sufficient food and employment, it comes with the cost of exceeding the GDPmax for the biodiversity and clean energy indicators. Table 2 also shows the Philippines' level of economic development from 2010 to 2019 was able to satisfy the sustainability window criteria for Land Use and Education. For the social well-being indicator of gender equality, it is found to be socially sustainable but the environmental well-being indicator of unsafe sanitation fell outside the sustainable window or exceeded GDPmax. Lastly, Table 2 shows that greenhouse gases and healthy life fall below the GDPmin and exceeded GDPmax indicating that the Philippines' level of economic development is outside the sustainable window for these indicators for environmental and social well-being.

4.3 VIET NAM

Table 3

Computed GDP MIN and GDP MAX for the environmental and social indicators for Viet Nam

	GDP MIN	GDP T1	GDP MAX
Biodiversity & Sufficient Food	0.07	0.07	0.06
Land Use & Education	-3.56	0.07	0.07
Greenhouse Gases & Healthy Life	0.08	0.07	0.51
Unsafe Sanitation & Gender Equality	0.07	0.07	0.07
Clean Energy & Employment	0.07	0.07	0.04

Table 3 shows the results of the computed SuWi analysis of Viet Nam from 2010 to 2019. It shows that Viet Nam's level of economic development from 2010 to 2019 was able to satisfy the sustainability window criteria for Land Use and Education. The unsafe sanitation and gender equality indicator of Viet Nam also fell within the sustainable window. However, its GDPmin, GDPmax, and GDPt1 are at the same point, which means that Viet Nam's level of economic development is already at its maximum point and that it must be maintained at this level since it is also its minimum point. For biodiversity and sufficient food, and clean energy and employment indicators of Viet Nam, since the GPDmin is higher than the GDPmax, in order for Viet Nam to be socially sustainable in terms of sufficient food and employment, it comes with the cost of exceeding the GDPmax for the biodiversity and clean energy indicators. Lastly, the healthy life indicator fell below the minimum economic development needed to be socially sustainable. This means that Viet Nam can still improve its level of economic development without sacrificing its greenhouse gas emissions.

4.4 COMPARATIVE ANALYSIS

Based on the SuWi Analysis, Malaysia has the most number of environmental well-being indicators that are within the sustainable window with 4 environmental well-being indicators. This is followed by Viet Nam with 3 indicators, and the Philippines has the least number with just 1 environmental well-being indicator within the sustainable window. Lastly, for the social foundation, all countries achieved 4 social well-being indicators that are within the sustainable window.

5 CONCLUSIONS

The objective of this study is to evaluate whether the three developing southeast asian countries of Malaysia, the Philippines, and Viet Nam are within the doughnut economy or within the boundaries of the sustainability framework from 2010 to 2019 on which the three developing Southeast Asian countries can achieve certain levels of economic development while remaining socially and environmentally sustainable. Another objective of this study is to compare the three countries on which among the three is the closest to thriving in the sweet spot of the doughnut model or the safe and just space of humanity. This study quantified the Doughnut Economics framework by Kate Raworth through the Sustainable Window (SuWi) Analysis by Jyrki Luukkanen. Based on the findings of the SuWi Analysis, it can be concluded that Malaysia and Viet Nam are within the doughnut, while the Philippines is outside the doughnut model.

For Malaysia, it has achieved all environmental well-being indicators except greenhouse gases indicating that its CO2 emissions are exceeding its sustainable limit. While for the social well-being indicators it was healthy life that failed to meet the sustainability window criterion, it indicates a weak sustainability for the mortality rate for children under 5-years of age.

For Viet Nam, only two indicators for environmental well-being were not met namely-clean energy and biodiversity. It shows that the average proportion of terrestrial key biodiversity areas covered by protected areas and the proportion of population with reliance on clean fuels and technology did not meet its sustainable window criteria. For its social well-being indicators, only the healthy life indicator was not met which also indicates a weak sustainability for the mortality rate for children under 5-years of age.

For the Philippines, it struggled to meet the desired sustainability window for its environmental well-being indicators. Only the land use indicator met the sustainable window criterion. On the other hand for its social well-being indicators, only the healthy life indicator was not met for the Philippines which also indicates a weak sustainability for the mortality rate for children under 5-years of age.

Lastly, all of the three countries struggle to meet its sustainability window criteria for greenhouses gases and healthy life. Among the three developing southeast asian countries, Malaysia is the closest to achieving the doughnut economy followed by Viet Nam. The findings in doughnut economy model of the Philippines suggest that the Philippines struggles to provide its social foundations without reaching its ecological limits.

The limitations of this study includes the lack of data from below 2010 at the United Nations' Sustainable Development Goals Database. Since the researchers studied three countries, it is crucial to acquire data for the economic, social, and environmental indicators that is complete and available for all three countries given the time period of the study which is from 2010 to 2019. Another limitation is that since the concept of Doughnut Economics and SuWi analysis is quite new, there is a lack of related literature on applying Doughnut Economics and SuWi analysis to certain countries. That is why the researchers opted to find related literature that analyzes the relationship between economic and environmental well-being, and economic and social well-being. Given all of this, it provides an opportunity for further studies specifically on Doughnut Economics and SuWi analysis since future researchers will have more access to data and studies regarding the topic.

For policymaking, the SuWi analysis complemented by the Doughnut Economy Framework can address specific problems and be able to target areas for policies for indicators of environmental and social well-being that a country fails to meet its sustainability criteria. With both of the SuWi Analysis and Doughnut Economy Framework, it can provide a ground for implementing sustainable development for developing countries, as well as countries in the ASEAN region.

Lastly, for future researchers, it is recommended to explore trying different variables or indicators that can also be tested for environmental and social well-being. Additionally, it is also recommended to use different methods in quantifying the doughnut economy model such as the Advanced Sustainability Analysis (ASA) which uses more indicators and provides a more comprehensive approach in analysis compared to the SuWi Analysis.

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