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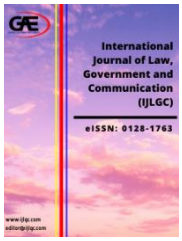

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SELECTED DEVELOPMENT THEORIES FOR THE IMPROVEMENT OF QUALITY OF LIFE OF THE COMMUNITY IN MALAYSIA IN THE ERA OF IR 4.0

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Abstract:

For centuries, literature has suggested that for an area to become useful to the community, its development should be planned well and strategised. In recent years, the industrial revolution 4.0 (IR 4.0) has taken over most developmental progress, in various aspects of life, such as education, economy, construction, health, banking and other areas. The issue now is whether the existing theories of development could accommodate the advancement of the technological era and industrialisation of the nation. For third world countries like Malaysia, such theories might be unfit to the local contexts, albeit the emergence of various technological advancements and industrialisation initiatives. Therefore, this paper examines the application of the development theories in Malaysia and how the implementation has improved the quality of life of the community in Malaysia in the era of IR4.0. Engaging in paper analysis of major references on theories of development and other related references, coupled with example governmental policies motivated by these theories in Malaysia, the study found that most of the developments in Malaysia apply several theories namely modernisation theory, sustainable development theory and basic needs approach. The study proposes further research be carried out in order to test these theories to the local contexts in the era of IR 4.0. Hopefully, this paper can become a contribution to the body of knowledge on development management and IR 4.0.

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Development Management, IR 4.0, Technological Advancement, Malaysian Context, Theoretical Framework

Introduction

When discussing development, one often wonders whether the implemented development meets the needs of the local community. This is because any development must consider the allocated budget, the needs of the community, and whether it fulfils the requirements of sustainable development. Therefore, to develop an area, it is essential for the government to conduct various appropriate assessments to ensure that the development carried out has a positive impact on the community. In essence, development should not only focus on economic growth but also on the well-being and quality of life of the people. It is crucial to balance the financial aspects with the social and environmental needs to achieve a truly sustainable and beneficial outcome for everyone involved. Therefore, based on Mohd. Karim & Sakdan (2019), the development process must be executed in a systematic manner to ensure that the community fully benefits from the positive impact from the development.

The positive effects of sustainable development can significantly enhance the quality of life for residents. Therefore, it is crucial to integrate both economic and social factors into community development. Sustainable community development is recognised as an effective approach to improving the community's quality of life. The processes of evolution, functionality and dissemination play a significant role in aligning community development with regional development (Mohd Karim & Mohamad, 2024). It is essential for the community to be actively involved in the government's development plans (Mohd. Karim & Sakdan, 2019). Typically, development in an area is guided by concepts and theories from developed countries. Additionally, it is essential to involve the community in the decision-making processes (Mohd Karim et al., 2019). To achieve regional transformation, the development must integrate research-based planning, management, and financing mechanisms (Ngah, 2012). Nations like Malaysia adopt development theories that are tailored to the economic and social needs of the local community.

In the context of technology utilisation driven by the industrial revolution, or more commonly known as the fourth industrial revolution (IR4.0), community development in economic and social aspects aligns with relevant theories developed by the first world, which underpins community development in Malaysia. Economically, the adoption of technology has led to improvements in quality of life, as evidenced by the increasing use of technology among the community. The integration of advanced technologies, such as automation and digitalisation, has enhanced productivity and efficiency across various sectors. This economic growth translates into better job opportunities, higher incomes and improved living standards for the community.

Furthermore, the readiness to embrace 5G technology in shaping lifestyles, reflecting technological advancements (Tasmin, Jea Yi & Abu Bakar (2023); Aravantinos et al. (2024)). The adoption of 5G technology represents a significant leap forward. It enables faster internet speeds, improved connectivity and supports the development of smart cities (Saxena & Singh,

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2020, Car et al., 2022). This technology impacts daily life by enhancing communication, entertainment and transportation systems. Further, the acceptance of technology advancement among citizens also based on the perceived performance, habit, and enjoyment in adopting AI technologies such as ChatGPT (Lavidas et al. (2024)).

In line with the use of technology that can enhance the sustainability of development, related development theories are also given attention. Theories such as modernisation theory, sustainable development theory and basic needs approach need to be considered. These theories form the foundation for planning, development, and evaluating the effectiveness of any development. The selected development theories were chosen for their relevance in explaining the structural and policy shifts essential for Malaysia's transition into the IR4.0 era. These frameworks offer a comprehensive perspective on the country's economic and technological transformation, considering both historical and contemporary factors. However, we recognize the need for a clearer justification and will strengthen the discussion by explicitly linking these theories to Malaysia's unique socio-economic and industrial landscape within IR4.0.

Therefore, this paper aims to connect development theories with the realities of IR4.0 in Malaysia, an area that remains insufficiently explored in existing research. While it builds upon well-established theoretical frameworks, it introduces a new perspective by addressing the unique challenges and opportunities within the local context. Therefore, any proposed revisions should consider how this study contributes to a deeper understanding of development in the IR4.0 era, not only from a theoretical lens but also in terms of its practical implications for Malaysia. This paper is divided into three sections, beginning with a review of literature of the key theories engaged in this study, which are modernisation theory, sustainable development theory and basic needs approach. The paper then proceeds to put in words about how the theories can improve the quality of life of the community through technology advancement in IR4.0. The final section is the conclusion about the study.

Literature Review

Modernisation theory

Modernisation Theory is a theory used to study the transition of development from the agricultural sector to the industrial sector. This theory is applied by many developing countries to ensure that a nation's progress can be achieved through the transition from the agricultural sector to the industrial sector. Modernisation theory is a sociological framework that seeks to explain the transition of societies from traditional to modern states, emphasising economic, social and political transformations (Goorha, 2017, Chaudhary, 2013). It emerged prominently in the mid-20th century, particularly during the 1950s and 1960s, as scholars aimed to identify the factors that hindered development in less affluent nations (Gwynne, 2009). Modernisation theory emphasises that as societies become more economically developed, they also become wealthier and more educated, leading to more democratic political institutions (Power, 2018).

Modernisation theory is a well-known social theory that explains the development and transformation of society in developing countries. This theory has characteristics such as technological advancement, urbanisation, secularisation and democratic-oriented administrative institutions. Important figures such as Talcott Parsons and Walt Whitman Rostow contributed to the development of modernisation theory (Gilman, 2004).

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This theory is seen in line with the context of the IR4.0. This theory views that society needs to adapt to rapid technological change, the development of skills needed for a growing job market, social and cultural shifts, the use of digital technology and digital infrastructure. A study by Lee and Shin (2023) found that modernisation theory can help understand the use of AI technology in developing countries. Furthermore, an article by Schwab (2017), Shabur (2024) and Aravantinos et al. (2024) emphasises the importance of education and skills development in preparing communities to face the challenges and opportunities of IR4.0, especially in human capital development. Although this theory benefits economic growth and societal growth, it has also been criticised for being Western-oriented and not emphasising historical and cultural context. Chilcote (2020) explains that modernisation theory has been criticised for its linear view of development.

Modernisation theory explains that societies evolve from traditional economies to modern economies (Goorha, 2017, Chaudhary, 2013). Economic development is the core focus, driven by industrialisation, technological innovation, and capital investment, which collectively enhance productivity and growth (Ciarli & Di Maio, 2013). Urbanisation accompanies this change, with people migrating to cities for better opportunities, leading to the expansion of infrastructure and social transformation (Trask, 2022). Politically, modernisation fosters harmony and increased political participation with stable governance (Chanda et al., 2024) . Technological advancement forms the foundation of this change, emphasising continuous innovation, education, and global integration (Wang, et al., 2024). Culturally, societies move towards secularisation and individualism, adopting more rational worldviews (Ronald & Welzel, 2012). This modernisation process not only involves industry but also emphasises societal growth and economic development.

Sustainable Development Theory

Sustainable Development is a multidisciplinary concept that seeks to balance economic growth, social inclusion, and environmental protection. It is rooted in the idea that development should meet the needs of the present without compromising the ability of future generations to meet their own needs. This concept was popularised by the Brundtland Commission (1987) and has since evolved into a global framework for addressing complex challenges such as climate change, inequality, and resource depletion.

Based on the Brundtland Commission (1987), sustainable development is built on three interconnected pillars, which are environmental sustainability, economic sustainability and social sustainability. Environmental sustainability ensures that natural resources are used responsibly, ecosystems are protected and environmental degradation is minimised. Meanwhile, economic sustainability promotes economic growth that is inclusive, equitable and does not exploit finite resources. Social sustainability fosters social equity, justice, and well-being for all individuals and communities.

These pillars are often visualised as overlapping circles, emphasising their interdependence. Recent literature highlights the need for a systems-thinking approach to address the complexity of these interactions (Griggs et al., 2013; United Nations, 2015). Sustainable development has been institutionalised through global agreements and frameworks such as Agenda 2030 and the Sustainable Development Goals (SDGs). The agenda adopted by the United Nations in 2015, the 17 SDGs provide a comprehensive roadmap for achieving sustainable development by 2030. SDGs address issues such as poverty, inequality, climate change and biodiversity loss.

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Recent literature critiques the implementation of SDGs, highlighting challenges like trade-offs between goals and insufficient funding (Biermann et al., 2022). Another agenda is the Paris Agreement (2015) developed by United Nation Climate Change. In supporting the sustainability efforts by the people, certain nations even develop new curricula for embedding sustainability agenda in the context of higher education (Anuar, et. al, 2024).

The IR4.0, featuring technologies like the Internet of Things (IoT), Artificial Intelligence (AI) and blockchain offers powerful tools for advancing the SDGs. Recent studies highlight the transformative potential of these technologies in creating a sustainable future (Johnson & Lee, 2021, Martinez, & Thompson, 2021, Smith, & Brown, 2022, Gupta & Kumar, 2022, Wang & Zhang, 2023, Sánchez-García, et al., 2024). Beyond environmental benefits, IR4.0 technologies can also foster social progress by creating new economic opportunities, improving access to education and healthcare, and promoting inclusivity (Tülübaş et al., 2023). By balancing environmental performance with inclusive growth, IR4.0 paves the way for a more equitable and prosperous future. However, to fully realise this potential, it is crucial to address ethical implications, data privacy concerns and the digital divide to ensure that the benefits of IR4.0 are widely shared (Sánchez-García, et al., 2024).

Basic Needs Approach

There are several theories that describe the fundamentals of human needs, including the Human Needs Theory, Galtung's Theory, and Dube's Theory. The Human Needs Theory, often associated with Maslow's Hierarchy of Needs, categorises human needs into a pyramid structure, starting with basic physiological needs at the base and progressing to safety, love and belonging, esteem, and self-actualisation at the top (Maslow, 1943). Galtung's theory, proposed by peace researcher Johan Galtung, emphasises the importance of addressing structural violence and promoting positive peace by fulfilling needs such as physical survival, well-being, identity, and freedom (Galtung, 1969). Dube's theory takes a pragmatic approach, outlining six structures of human needs: survival, social, cultural and physical, welfare, adaptation, and progress needs. Dube asserts that meeting survival needs takes precedence over other needs (Hai-Jew, 2020). This holistic view of human development highlights the importance of meeting basic needs as a foundation for achieving higher levels of well-being and progress.

These needs, ranging from the most basic physiological requirements for survival like food, water, and shelter, to higher-level psychological and social needs, must be progressively satisfied. After physiological needs are met, individuals focus on safety and security, seeking personal, emotional, and financial stability. The desire for connection and belonging then emerges, driving the pursuit of meaningful relationships, intimacy, and a sense of community. Once these social needs are fulfilled, esteem needs become central, with individuals striving for self-esteem, respect from others, and a sense of accomplishment. Finally, at the pinnacle of the hierarchy lies self-actualisation, the innate drive to realise one's full potential through personal growth, creativity, and moral development. While Maslow's hierarchy provides a general framework, it's important to recognise that the order of these needs can be fluid, influenced by individual circumstances and cultural contexts, and that multiple needs can motivate behavior simultaneously. This approach has significantly impacted psychology, education and business by providing a valuable lens for understanding human motivation and behavior (Mohamad, et.al, 2023).

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The approach has mentioned that one need must be satisfied before others can be addressed. Therefore, in the current world, the application of the basic needs approach has significant relation with technology advancement. The need to improve quality of life and raise living standards drives communities to adopt technology in line with the advancements of IR4.0 (Mohd Karim & Mohamad, 2024; Karakose et al., 2022). This approach uses technologies such as AI to assist in meeting daily needs, safety needs, love and belonging needs, esteem needs, and self-actualisation needs.

Drawing on modernization theory, sustainable development theory and the basic needs approach, there is significant potential to explore how these frameworks can guide the Malaysian government in enhancing the quality of life for its citizens. Traditional development theories often assume uniform access to resources and opportunities, which is not the case in the era of IR 4.0, where disparities in digital access and skills exacerbate inequality especialy among citizens with low-income and high-income (Van Dijk, 2020). The rapid adoption of automation, artificial intelligence and big data raises ethical questions about privacy, surveillance, and job displacement, which are not adequately addressed by conventional development frameworks (Floridi, 2020). Futher, many development theories prioritize economic growth without sufficient consideration of environmental degradation, a critical issue in the context of IR 4.0's resource-intensive technologies (Balsalobre-Lorente et al., 2021). While traditional development frameworks may no longer be fully suitable for Malaysia, advancements in technology offer an opportunity to adapt these approaches, ensuring that development initiatives are more effective and inclusive in benefiting the community.

Methodology

This study employs a secondary data approach, utilizing desk research to examine articles related to modernization theory, sustainable development theory and the basic needs approach. Past studies are systematically analyzed and critically reviewed to gain a deeper understanding of the theoretical concepts discussed and their relevance to contemporary development issues. Additionally, desk research is conducted to explore technological advancements in development management in Malaysia, focusing on the integration of Industry 4.0 technologies. Previous studies on the application of AI tools, IoT, and automation in development management are analyzed to identify trends, challenges, and opportunities. This comprehensive approach ensures a well-rounded perspective on how these theories align with Malaysia's evolving technological landscape and contributes to a more informed discussion on policy implications and practical implementations.

Improving Quality Of Life Through Implementation Of The Theories in the IR4.0 Era

Based on the development theories, these theories have significantly impacted societal life. Through theory-based practices, it has been observed that these theories are capable of transforming societies from traditional, backward and transformation lifestyles to more advanced and prosperous ones. Therefore, in the context of development, whether aligned with the IR4.0 or not, these theories play a crucial role in shaping societal life.

Modernisation Theory

Modernisation theory serves as the cornerstone of societal progress. From a life entirely dependent on agriculture, societies have undergone a transformation towards industrialisation to improve their standard of living. Technological advancements and economic growth are closely intertwined to ensure that all segments of society benefit positively from these changes. According to Rostow (1960), economic development through modernisation involves a

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transition from traditional societies to technology and industry-based societies. Technological advancements such as digital transformation and automation have significantly impacted industries, particularly in enhancing operational efficiency, product manufacturing, and service delivery. A summary of the application of this theory in improving the quality of life of the society in the IR4.0 era is produced in **Figure 1**.

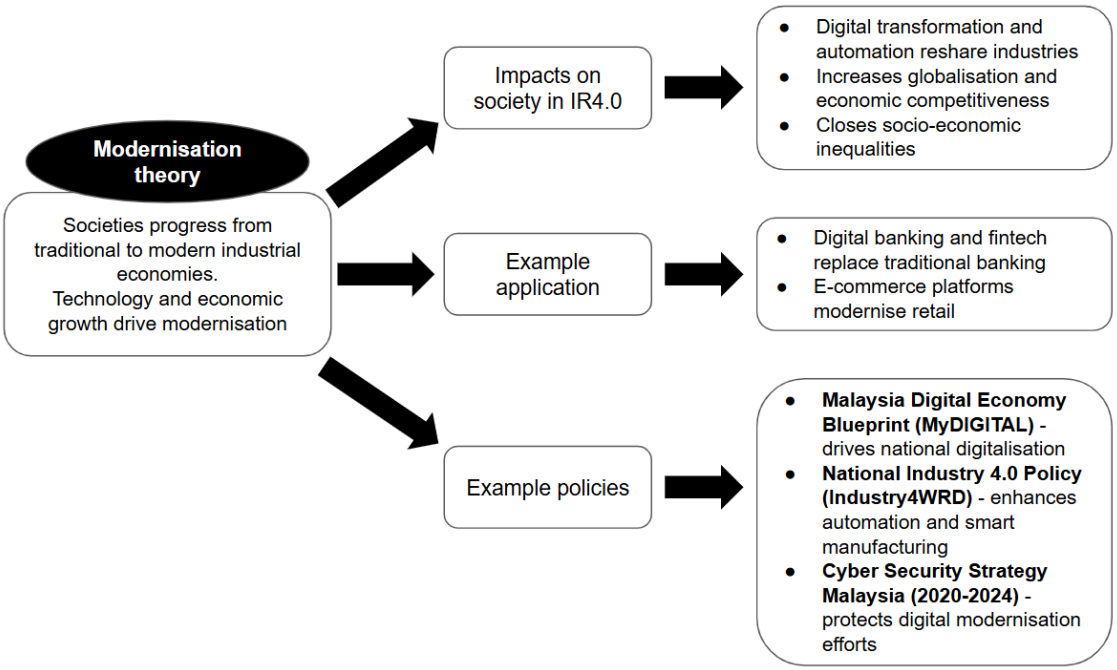

Figure 1: The Application of Modernisation Theory in Improving Quality of Life

Furthermore, modernisation theory has accelerated globalisation and intensified economic competition among industry players. This is not limited to the industrial sector alone but also encompasses the service sector. According to Castells (2010), globalisation and information technology have transformed economic and social structures, creating interconnected global networks. This theory has also contributed to reducing poverty and inequality within societies, whether in terms of gender, income, employment, education, or health (Mohd Karim & Mohamad, 2024). For instance, the implementation of digital banking and financial technology (fintech) has replaced traditional banking systems, providing broader financial access to the public.

The online purchase and sale of products and services have also altered consumption patterns among communities. According to McKinsey & Company (2021), global e-commerce growth has surged dramatically, particularly during the COVID-19 pandemic, highlighting the importance of digitalisation in daily life. The effectiveness of modernisation theory also supports national agendas such as the launch of the Malaysia Digital Economy Blueprint (MyDIGITAL) (2021), which aims to drive the country's digital transformation. Additionally, the National Industry 4.0 Policy (Industry4WRD) (2018) is seen as a government initiative to enhance automation and efficiency in the nation's manufacturing sector. In terms of cybersecurity, the Cyber Security Strategy Malaysia (2020-2024) (2020) has been introduced to protect society in the era of modernisation and digitalisation. According to the World Economic Forum (2022), cybersecurity is one of the critical aspects of ensuring a smooth digital transformation, especially in addressing increasingly complex cyber threats. Therefore,

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modernisation theory plays a vital role in ensuring that the changes brought about to improve the quality of life are aligned with current technological advancements (Mohd Karim & Mohamad, 2024).

Example application in terms of Malaysian government policies motivated by the modernisation theory for the improvement of quality of life of the society in the IR4.0 era is as produced in **Figure 2**.

Figure 2: Example Malaysian Government Policies Motivated By The Modernisation Theory

In summary, modernisation theory not only aids in improving societal living standards but also acts as a catalyst for more inclusive and sustainable economic and social development. With the support of government policies and the latest technological advancements, this theory remains relevant in shaping a better future for all.

Sustainable Development Theory

Based on Brundtland Commission (1987), the theory of sustainable development is a holistic framework that emphasises the importance of balancing environmental conservation, economic justice and social integrity to ensure long-term prosperity. It advocates for development that meets present needs without compromising the ability of future generations to meet theirs, a concept popularised by the Brundtland Commission (1987). As shown in **Figure 3**, central to this theory is the idea that sustainable development requires careful planning and the integration of advanced technologies, such as green technology and renewable energy, to minimise environmental impact while promoting economic growth and social well-being (Sachs, 2015). For instance, the adoption of solar and wind energy, energy-efficient infrastructure and smart city solutions can significantly reduce carbon emissions and enhance resource efficiency.

Additionally, the World Economic Forum (2023) highlighted that the ESG (Environmental, Social and Governance) framework has gained traction in the corporate world, encouraging businesses to prioritise environmental sustainability, social responsibility and ethical governance in their operations. This aligns with global initiatives like the United Nations SDGs, which provide a roadmap for achieving sustainability by 2030 (United Nation, 2015). Recent literature, such as the IPCC Sixth Assessment Report (2021), highlights the urgent need for climate action and the role of sustainable development in mitigating global warming. Similarly, studies on the circular economy, like those by Geissdoerfer et al. (2017), demonstrate how reducing waste and promoting resource efficiency can contribute to sustainability. Furthermore, research by Friede et al. (2015) shows a positive correlation between strong ESG practices and corporate financial performance, reinforcing the economic benefits of sustainable development. In essence, the theory of sustainable development underscores the

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interconnectedness of environmental, economic, and social factors, advocating for a balanced approach to development that ensures a thriving planet and society for future generations.

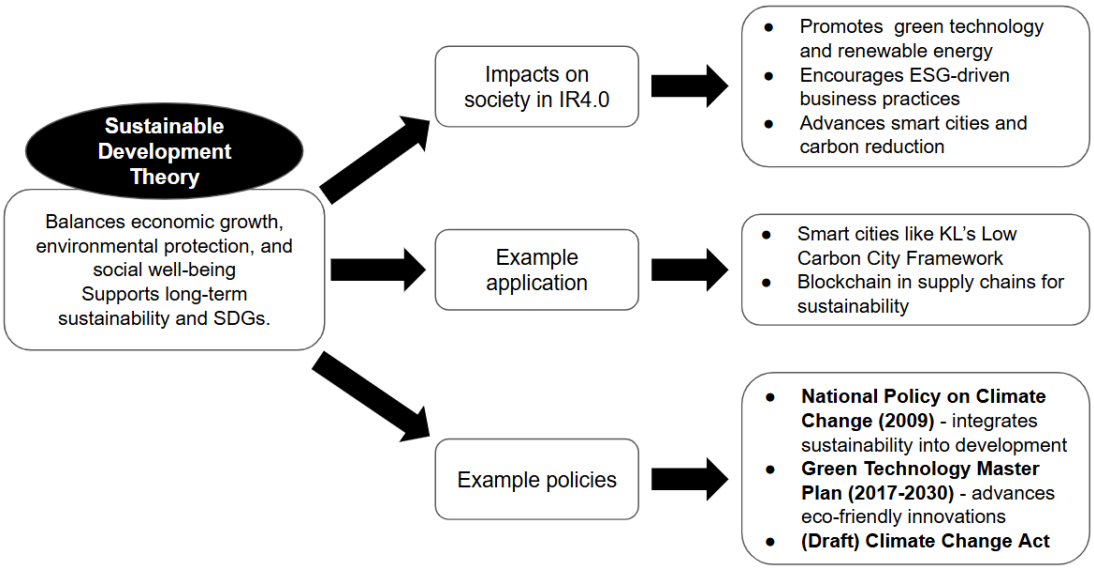

Figure 3: The Application of Sustainable Development Theory in Improving Quality of Life

In this context, the Malaysian government has drawn inspiration from the theory of sustainable development to integrate ESG principles into the country's development framework. To promote sustainability, the government introduced various initiatives some of which are shown in **Figure 4**, including the National Policy on Climate Change in 2019, followed by the Green Technology Master Plan (2017-2030) (2017), which aims to drive eco-friendly innovation and technological advancements. Additionally, the government is in the process of drafting the Climate Change Act (2024), further solidifying its commitment to sustainable development. These initiatives reflect the government's efforts to align with the global sustainable development agenda, ultimately aiming to improve the quality of life for its citizens.

Figure 4: Example Malaysian Government Policies Motivated By The Sustainable Development Theory

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In conclusion, through these technological advancements, Malaysia is not only fostering economic growth but also ensuring environmental sustainability and social well-being. This holistic approach aligns with the theory of sustainable development, demonstrating Malaysia's commitment to a balanced and inclusive future.

Basic Needs Approach

The basic needs approach could be the most fundamental aspect of human life, as it relates to the basic needs of an individual in living his or her life. This approach focuses significantly on providing the essential needs, such as food, water, shelter, health, education and many other aspects. In the IR4.0 era, human needs have grown exponentially in terms of connectivity, social protection, as well as digitalisation. The more advanced the society in the IR4.0, the more basic needs are required for the society to live their lives. This theory aims greatly for poverty reduction, social welfare with the use of digitalisation as a means to achieve these aims (Maslow, 1943). All this conceptualisation of the application of the basic needs approach is encapsulated in **Figure 5**.

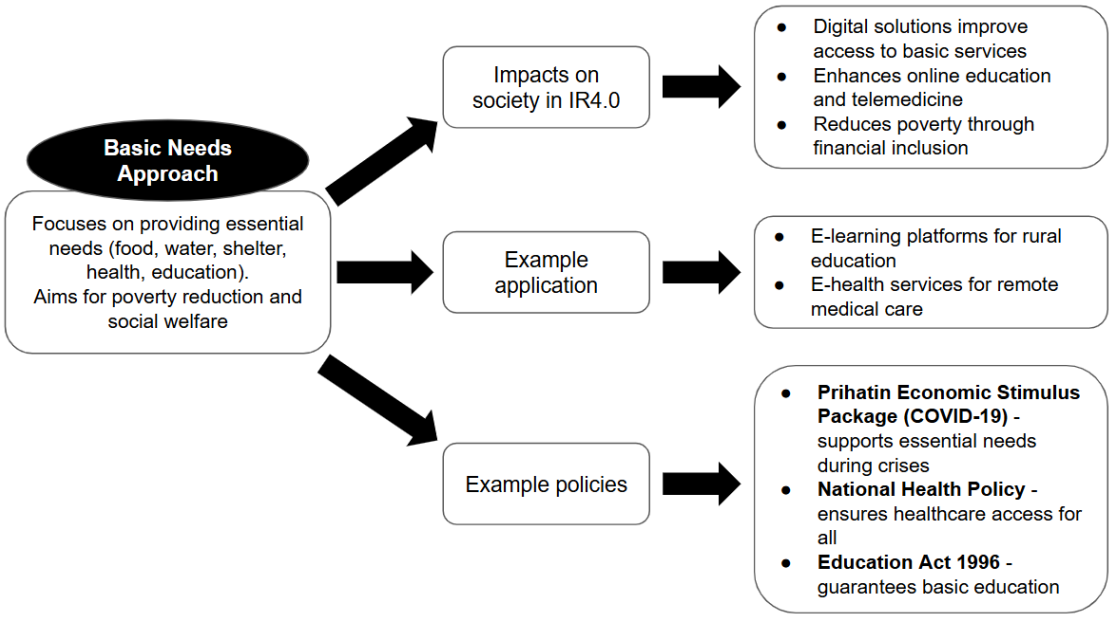

Figure 5: The Application of Basic Needs Approach in Improving Quality of Life

In the era of IR4.0, utilising technology to meet basic life needs has become essential for reducing poverty and enhancing living standards. Digital solutions enable people to access various digital-based services. Moreover, the rise in online learning and medical services positively impacts the quality of life.

Technologies have revolutionised access to services, particularly in education and healthcare. Online learning platforms provide educational opportunities to remote and underserved areas, bridging the educational gap and promoting lifelong learning. Similarly, telemedicine and e-health services have made healthcare more accessible, especially in rural regions, improving health outcomes and reducing disparities (Mamta Kale, 2023, Maddela, 2025).

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Financial inclusion through digital technologies, such as mobile banking and digital payment systems, plays a crucial role in alleviating poverty. These technologies provide unbanked populations with access to financial services, enabling them to save, invest, and manage their finances more effectively (Mohd Daud & Ahmad, 2023). This inclusion fosters economic growth and stability, contributing to poverty reduction.

The availability of high-speed broadband internet is pivotal in facilitating the adoption of advanced technologies. It supports the use of green technologies, such as smart grids and renewable energy systems, and smart technologies, including IoT and AI applications. These technologies enhance efficiency, reduce environmental impact, and promote sustainable practices.

Various government initiatives in support of the basic needs approach as shown in **Figure 6**, such as the Prihatin Economic Stimulus Package (COVID-19) (2020), have been instrumental in supporting people during crises. These initiatives align with the basic needs approach, ensuring that essential services are accessible to all. The National Policy for Quality in Health Care (NPQH) (2021) and the Education Act of 1996 - Act 550 (1996) further demonstrate the government's commitment to improving quality of life through enhanced access to healthcare and education.

Figure 6: Example Malaysian Government Policies Motivated By Basic Needs Approach

Recognising the importance of technology and industrialisation in improving the quality of life of the community, the government has embraced the basic needs approach as fundamental. This approach ensures the welfare of the community by addressing economic justice, socio-cultural integrity, education, health, safety and other vital aspects of life.

Integrating Development Theories to Improve Quality of Life Of The Community

The selection of modernization theory, sustainable development theory, and the basic needs approach is highly relevant in analyzing Malaysia's transition into the IR4.0 era. These frameworks collectively explain the economic, environmental and social dimensions of industrial transformation. Modernization theory suggests that economic development progresses through technological advancements, institutional reforms and structural shifts. This is reflected in Malaysia's IR4.0 strategy, particularly in the Industry4WRD policy, which aims to enhance automation, digitalization, and technological innovation to drive industrial competitiveness. The push for digital governance, investment in STEM education and the

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expansion of smart manufacturing capabilities highlight Malaysia's commitment to modernizing its economy to transition from a low-income to a high-income nation. Furthermore, this theory underscores the role of institutional support in facilitating industrial progress, which is evident in Malaysia's policy-driven approach to IR4.0, including government incentives for digital adoption and infrastructure development, such as 5G connectivity and AI-driven automation.

At the same time, sustainable development theory provides a crucial lens for evaluating Malaysia's approach to balancing industrial progress with environmental and social sustainability. The rapid technological transformation associated with IR4.0 necessitates policies that ensure long-term economic resilience without compromising environmental integrity or social equity. Malaysia's commitment to sustainability is reflected in its Twelfth Malaysia Plan and Shared Prosperity Vision 2030, both of which emphasize the integration of green technology, energy-efficient manufacturing, and circular economy practices within the industrial sector. The adoption of smart manufacturing and AI-driven resource management supports economic efficiency while reducing carbon emissions and environmental degradation. Moreover, this framework highlights the importance of inclusive development, which Malaysia has prioritized through initiatives that ensure SMEs, rural communities, and underserved populations can benefit from IR4.0 advancements, preventing a digital divide and reinforcing equitable growth.

Complementing these perspectives, the basic needs approach emphasizes the necessity of ensuring that technological progress does not lead to social exclusion or increased inequality. As automation and AI disrupt traditional employment patterns, Malaysia has implemented various human capital development programs to ensure that the workforce is equipped with relevant skills for the digital economy. Technical and Vocational Education and Training (TVET), digital literacy programs and workforce reskilling initiatives are central to the government's strategy to enhance employability and social mobility. Additionally, recognizing the potential displacement of workers due to automation, Malaysia has expanded social welfare and job security measures, including social protection schemes for gig workers and financial assistance programs to support those affected by industrial shifts. These efforts align with the core principles of the basic needs approach by ensuring that economic transformation under IR4.0 does not compromise fundamental social well-being, thus fostering an inclusive industrial transition.

By integrating modernization theory, sustainable development theory and the basic needs approach, this study provides a comprehensive framework for understanding Malaysia's IR4.0 strategy. The modernization perspective explains the technological and institutional drivers of industrial change. Meanwhile the sustainable development theory highlights the necessity of balancing economic progress with environmental and social sustainability. The basic needs approach underscores the importance of inclusivity and human-centered development. Together, these theories offer a holistic understanding of Malaysia's industrial evolution, demonstrating that IR4.0 is not merely a technological shift but a multifaceted transformation shaped by economic, social, and policy considerations unique to the country's development trajectory.

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Conclusion

In the era of IR4.0, technology and industrialisation are inevitable. Life must continue as usual, but it is often confronted with both potentials and threats, which shape the people's quality of life. This paper investigates the application of the development theories in Malaysia and how far the theories have been implemented in Malaysia, particularly in facing the potentials and threats of IR4.0. Three main theories, namely modernisation theory, sustainable development theory and basic needs approach top the list of development theories that shape the quality of life of the people in Malaysia.

Take for example the modernisation theory, community development via modernisation entails a shift from traditional societies to those based on technology and industry. Technological improvements, including digital transformation and automation, have profoundly influenced sectors by improving operational efficiency, product manufacture, and service delivery. Another theory that plays a significant role in sharing the quality of life of the people is the sustainable development theory. It is a comprehensive framework that underscores the necessity of harmonising environmental preservation, economic equity, and social cohesion to guarantee enduring prosperity. It promotes development that satisfies current requirements without jeopardising the capacity of future generations to fulfil their own. And finally, the basic needs approach, that emphasises the provision of fundamental necessities, including food, water, housing, healthcare, education, and various other elements. In the IR4.0 era, human requirements have increased significantly regarding connectivity, social protection, and digitalisation. As society advances in the context of IR4.0, the fundamental needs for its inhabitants to sustain their existence become increasingly essential.

The development theories may have challenges and obstacles in practicing the theories in reality. Addressing this divide requires targeted investments in digital infrastructure and affordable access to technology. The automation of jobs in sectors such as manufacturing and retail poses significant challenges for Malaysia’s workforce. Policymakers must prioritize human capital development to ensure that the benefits of digital transformation are shared equitably. The ethical implications of digital transformation, particularly in the use of AI and big data, cannot be overlooked.

Accordingly, this paper advocates for additional research to evaluate these ideas in local contexts throughout the IR 4.0 era, characterised by the transformative impact of technologies such as AI, big data, and automation on development management. Comprehending their practical applications might assist in tackling difficulties and possibilities specific to certain places. This study seeks to enhance the understanding of development management and IR4.0 by connecting theoretical frameworks with practical applications. The results may assist policymakers, scholars, and industry experts in modifying tactics to the changing technological environment.

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References

Anuar, H. M., Wahab, H.A., Mohsin, M. F. M., Mohamad, A. M., & Ahmad, W. N. W. (2024). Recent Trends and A Future Direction of Malaysia's Climate Change Law Program. In *IOP Conference Series: Earth and Environmental Science (Vol. 1304, No. 1, p. 012004)*. IOP Publishing.

Aravantinos, S., Lavidas, K., Voulgari, I., Papadakis, S., Karalis, T., & Komis, V. (2024). Educational approaches with AI in primary school settings: A systematic review of the literature available in scopus. *Education Sciences*, 14(7), 744.

Balsalobre-Lorente, D., Driha, O. M., Bekun, F. V., & Adedoyin, F. F. (2021). The role of technology innovation in sustainable development: A review. *Technological Forecasting and Social Change*, 166, 120633. https://doi.org/10.1016/j.techfore.2021.120633

Biermann, F., Kanie, N., Kim, R. E., & Reiners, W. (2022). Scientific evidence on the political impact of the Sustainable Development Goals. *Nature Sustainability, 5(9),* 795-800. https://doi.org/10.1038/s41893-022-00847-1.

Brundtland Commission. (1987). *Report of the World commission on environment and development: Our Common Future.* https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf

Car, T., Stifanich, L. P. & Kovačić, N. (2022). The Role of 5G and IoT in Smart Cities. *Enterprise Research Innovation*. DOI: https://doi.org/10.54820/entrenova-2022-0032

Castells, M. (2010). *The Rise of the Network Society*. Wiley-Blackwell.

Chanda, C.T., Derick, M., Zohaib, H. Sain., & Chisebe, S. (2024). Good governance: A pillar to national development. *International Journal of Research Publication and Reviews 5(6)*, 6215-6223.

Chaudhary, A. (2013). Modernization impact: Theory, advantages and disadvantages. *International Journal for Research in Education, International Journal for Research in Education, 2 (2),* 34-38.

Chilcote, R. H. (2020). *Theories of development: An analysis of classic and contemporary approaches.* Routledge.

Ciarli, T. & Di Maio, M. (2013). Theoretical Arguments for Industrialisation-Driven Growth and Economic Development. *Science and Technology Policy Research (*SWPS 2013-06). http://dx.doi.org/10.2139/ssrn.2736806

Economic Planning Unit, Prime Minister's Department. (2021). *Malaysia Digital Economy Blueprint (MyDIGITAL).* Malaysia Digital Economy Corporation (MDEC).https://ekonomi.gov.my/sites/default/files/2021-02/malaysia-digital-economy-blueprint.pdf

Floridi, L. (2020). The ethics of artificial intelligence. Oxford University Press.

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment, 5(4)*, 210–233. https://doi.org/10.1080/20430795.2015.1118917

Galtung, J. (1969). Violence, peace, and peace research. *Journal of Peace Research, 6*(3), 167–191. https://doi.org/10.1177/002234336900600301

Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2017). The circular economy – A new sustainability paradigm?. *Journal of Cleaner Production*, 143, 757–768. https://doi.org/10.1016/j.jclepro.2016.12.048

Gilman, N. (2004). *Mandarins of the future: Modernization theory in Cold War America.*

International Journal of Law, Government and Communication
EISSN : 0128-1763
IJLGC
Volume 10 Issue 40 (June 2025) PP. 539-556
DOI 10.35631/IJLGC.1040038

Goorha, P. (2017). Modernization Theory. *Oxford Research Encyclopedia of International Studies.* Retrieved 1 Feb. 2025, from https://oxfordre.com/internationalstudies/view/10.1093/acrefore/9780190846626.001.0001/acrefore-9780190846626-e-266.

Griggs, D. J., Stafford-Smith, M., Gaffney, O., Rockström, J., Öhman, M. C., Shyamsundar, P., Steffen, W., Glaser, G., Kanie, N., & Noble, I. (2013). Sustainable development goals for people and the planet. *Nature, 495(7441)*, 305-307. https://doi.org/10.1038/495305a[1](https://research.monash.edu/en/publications/sustainable-development-goals-for-people-and-planet).

Gupta, S., & Kumar, R. (2022). Artificial intelligence and its role in driving sustainable innovation. *Technological Forecasting and Social Change, 180*, 121717. https://doi.org/10.1016/j.techfore.2022.121717

Gwynne, R. N. (2009). Modernization theory. *In A. Kobayashi (Ed.), International Encyclopedia of Human Geography (2nd ed., pp. 163–167).* Elsevier. https://doi.org/10.1016/B978-0-08-102295-5.10107-6

Hai-Jew, S. (2020). Exploring Social Imagery Depictions of the Meeting of Human Needs in the Global South: Through Maslow's Six-Layer "Hierarchy of Needs" Model. In F. Endong (Ed.), *Deconstructing Images of the Global South Through Media Representations and Communication* (pp. 87-109). IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-5225-9821-3.ch004

Intergovernmental Panel on Climate Change (IPCC). (2021). *Climate change 2021: The physical science basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.* Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/

Johnson, L., & Lee, K. (2021). Advancements in renewable energy technologies for a sustainable future. *Renewable and Sustainable Energy Reviews, 147*, 111230.https://doi.org/10.1016/j.rser.2021.111230

Karakose, T., Kocabas, I., Yirci, R., Papadakis, S., Ozdemir, T. Y., & Demirkol, M. (2022). The development and evolution of digital leadership: A bibliometric mapping approach-based study. *Sustainability*, 14(23), 16171.

Lavidas, K., Voulgari, I., Papadakis, S., Athanassopoulos, S., Anastasiou, A., Filippidi, A., & Karacapilidis, N. (2024). Determinants of humanities and social sciences students' intentions to use artificial intelligence applications for academic purposes. *Information*, 15(6), 314.

Lee, J., & Shin, J. (2023). The role of modernization theory in understanding artificial intelligence adoption in developing countries. *Telematics and Informatics, 78*, 101948. https://doi.org/10.1016/j.tele.2023.101948

Maddela, S. (2025). Healthcare Information Technology: Bridging the healthcare access gap in underserved communities. *International Journal of Science and Research Archive, 14(1)*, 323-329. DOI:10.30574/ijsra.2025.14.1.0051

Mamta Kale, V. C. Patil, A. N., Patil, A. & More, R. (2023). Telemedicine Revolution: Bridging Gaps in Access to Healthcare. *International Journal on Recent and Innovation Trends in Computing and Communication, 11(7),* 394–399. https://doi.org/10.17762/ijritcc.v11i7.9424

Martinez, C., & Thompson, E. (2021). The intersection of circular economy and digital technologies: A pathway to sustainability. *Resources, Conservation & Recycling, 170,* 105599. https://doi.org/10.1016/j.resconrec.2021.105599

International Journal of Law, Government and Communication
IJLGC
EISSN : 0128-1763
Volume 10 Issue 40 (June 2025) PP. 539-556
DOI 10.35631/IJLGC.1040038
Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396. https://doi.org/10.1037/h0054346

McKinsey & Company. (2021). T*he Future of E-Commerce: How the Pandemic Has Changed Global Shopping Habits.* https://rural.struttandparker.com/article/10-key-drivers-of-rural-change/

Ministry of Education. (1996). A*kta Pendidikan Malaysia 1996 - Akta 550*. https://www.ums.edu.my/ppuu/images/AKTA_PENDIDIKAN_1996_AKTA_550.pdf

Ministry of Energy, Green Technology and Water Malaysia (2017). *Green Technology Master Plan.* https://www.pmo.gov.my/wp-content/uploads/2019/07/Green-Technology-Master-Plan-Malaysia-2017-2030.pdf

Ministry of Finance (2020). *Prihatin Rakyat Economic Stimulus Package.* https://www.pmo.gov.my/wp-content/uploads/2020/04/Prihatin-Infographic.pdf

Ministry of Health. (2021). *National Policy for Quality in Health Care (NPQH).* https://library.nih.gov.my/e-doc/flipbook/npqh20222026/index.html

Ministry of International Trade and Industry. (2018). *National Industry 4.0 Policy (Industry4WRD)*. https://www.miti.gov.my/index.php/pages/view/4832

Ministry of Natural Resources and Environmental Sustainability (2024). *Climate Change Act (Draft)*.

Mohamad, A. M., Kamaruddin, S., Hamin, Z., Rosli, W. R. W., Omar, M. F., & Saufi, N. N. M. (2023). Cloud-Based Augmented Reality As a Disruptive Technology for Higher Education. In *The 2023 International Conference on Disruptive Technologies (ICDT) (pp. 269-273)*. IEEE.

Mohd Daud & Ahmad. (2023). Financial inclusion, economic growth and the role of digital technology. *Finance Research Letters, 53*, 103602. https://doi.org/10.1016/j.frl.2022.103602

Mohd Karim, K. & Mohamad, A. M. (2024). Applicability of modernization theory in community development in Malaysia. In *The 7th International Research Conference on Multidisciplinary in Social Sciences and Technology (7th IRCMST 2024)*. 277-285.

Mohd Karim, K. & Sakdan. M. F. (2019). Peranan sektor awam dalam pembangunan pelancongan: Kajian di pulau pelancongan di Malaysia. *Journal Of Tourism, Hospitality And Environment Management* (JTHEM), 4(15). Retrieved from https://gaexcellence.com/jthem/article/view/1521

Mohd. Karim, K., Mohd Nizar, Z., Md Darit, S. & Sakdan, M.F. (2019). Impak Pembangunan Terhadap Masyarakat di Pantai Chenang, Pulau Langkawi. *Sains Humanika, 11(2-2)*, 65–72. https://sainshumanika.utm.my/index.php/sainshumanika/article/view/1657/856

National Cyber Security Agency. (2020). C*yber Security Strategy Malaysia (2020-2024)*. https://asset.mkn.gov.my/wp-content/uploads/2020/10/MalaysiaCyberSecurityStrategy2020-2024.pdf

Ngah, I. (2012). Rural transformation development. In *The International Conference on Social Sciences & Humanities UKM 2012 (ICOSH-UKM 2012),* 1–11. Retrieved from Academia.edu.

Power, M. (2018). Modernization theories of development. *The International Encyclopedia of Anthropology.* H. Callan (Ed.). https://doi.org/10.1002/9781118924396.wbiea1888

Prime Minister's Office of Malaysia Office. (2019). *National Policy on Climate Change*. https://www.pmo.gov.my/2019/07/national-policy-on-climate-change/

Rasiah, R., & Chandran, V. G. R. (2020). Malaysia's Leap into the Fourth Industrial Revolution: Policy Drivers and Challenges. *Journal of Southeast Asian Economies*, 37(2), 170–188.

International Journal of Law, Government and Communication
EISSN : 0128-1763
Volume 10 Issue 40 (June 2025) PP. 539-556
DOI 10.35631/IJLGC.1040038
Ronald, I. & Welzel, C. (2012). *Modernization, Cultural Change, and Democracy: The Human Development Sequence*. Cambridge University Press. https://doi.org/10.1017/CBO9780511790881

Rostow, W. W. (1960). *The Stages of Economic Growth: A Non-Communist Manifesto.* Cambridge University Press.

Sachs, J. D. (2015). *The age of sustainable development*. Columbia University Press.

Sánchez-García, E., Martínez-Falcó, J., Marco-Lajara, B., & Manresa-Marhuenda, E. (2024). Revolutionizing the circular economy through new technologies: A new era of sustainable progress. *Environmental Technology & Innovation, 33,* 103509. https://doi.org/10.1016/j.eti.2023.103509.

Saxena, A. & Singh, V. (2023). 5G-Enabled smart cities. *Turkish Journal of Computer and Mathematics Education, 11(2)*, 755-761.DOI:10.61841/turcomat.v11i2.14420

Schwab, K. (2017). *The fourth industrial revolution*. World Economic Forum.https://www.weforum.org/about/the-fourth-industrial-revolution-by-klaus-schwab/

Shabur, M. A. (2024). A comprehensive review on the impact of Industry 4.0 on the development of a sustainable environment. *Discover Sustainability 5(1).* DOI:10.1007/s43621-024-00290-7

Smith, J., & Brown, T. (2022). The role of emerging technologies in achieving sustainable development goals. *Journal of Cleaner Production, 315,* 128203. https://doi.org/10.1016/j.jclepro.2022.128203

Tasmin, R., Lim, J. Y., & Abu Bakar, S. (2023). Bridging the Gap Between User Acceptance and the 5G Technology Readiness . *Research in Management of Technology and Business, 4(1),* 822-834. https://publisher.uthm.edu.my/periodicals/index.php/rmtb/article/view/11617

Trask, B. S. (2022). Migration, Urbanization, and the Family Dimension. Department of Economic and Social Affairs (UNDESA). https://social.desa.un.org/sites/default/files/inline-files/Migration-Urbanization-and-the-Family-Dimension-by-Bahira-Trask_0.pdf

Tülübaş, T., Karakose, T., & Papadakis, S. (2023). A holistic investigation of the relationship between digital addiction and academic achievement among students. *European Journal of Investigation in Health, Psychology and Education*, 13(10), 2006-2034.

United Nation Climate Change. (2015). *Paris Agreement.* https://unfccc.int/process-and-meetings/the-paris-agreement

United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. https://digitallibrary.un.org/record/3923923

Van Dijk, J. A. G. M. (2020). The digital divide. Polity Press.

Wang, R., Qamruzzaman, M. & Karim, S. (2024). Unveiling the power of education, political stability and ICT in shaping technological innovation in BRI nations. *Heliyon, 10 (9),* 1-22. https://doi.org/10.1016/j.heliyon.2024.e30142

Wang, Y., & Zhang, X. (2023). Digital technologies as enablers of sustainable development: A systematic review. *Sustainability Science, 18(2)*, 345-360. https://doi.org/10.1007/s11625-022-01245-5

World Bank. (2022). *Malaysia Digital Economy Report: Harnessing Digital Technologies for Development*.

World Economic Forum. (2022). *Global Cybersecurity Outlook 2022.* https://www.weforum.org/publications/global-cybersecurity-outlook-2022/

International Journal of Law, Government and Communication
EISSN : 0128-1763
Volume 10 Issue 40 (June 2025) PP. 539-556
DOI 10.35631/IJLGC.1040038

World Economic Forum. (2023). *Is this a new dawn that will transform the impact of ESG?*. https://www.weforum.org/stories/2023/11/environment-social-governance-esg-impact/