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APPLYING THE PRINCIPLES OF DIFFUSION THEORY TO DRIVE INTERNATIONAL SDGS TOWARDS SUSTAINABLE DEVELOPMENT AT THE LOCALIZING IN THE FORM OF THE BCG MODEL

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Abstract

This research aims to study and investigate how to drive the achievement of specific Sustainable Development Goals (SDGs) through the localization of the BCG model in Thailand by applying the principles of diffusion theory. The literature review technique is a research methodology. The SDGs provide a framework for international development that encompasses economic, social, and environmental dimensions. Driving the SDGs requires cooperation from all sectors, including governments, the private sector, and communities. Governments must formulate policies and measures that support the SDGs. Considering its societal and environmental impact, the private sector should conduct business responsibly. At the community and local levels, active involvement is crucial in advancing SDGs that align with Community-Based Development. Creating meaningful employment is essential for reducing economic inequality and increasing social inclusion. Sustainable production and consumption practices will focus on producing goods and services that efficiently utilize natural resources and energy without harming the environment.

Keywords: SDGs, BCG, Diffusion Theory, Economic Inequality

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Introduction

In 2016, the United Nations (UN) established the Sustainable Development Goals (SDGs), comprising 17 objectives and advocated for their global adoption and implementation in every country, fostering awareness and action. The SDGs serve as a worldwide framework for comprehensive and sustainable development, emphasizing inclusive and sustainable progress in all aspects, including the economy, society, and the environment (Seangyai & Wisutthirattanakun, 2021).

In 2023, the UN prioritized the bio-circular green economy as a sustainable development framework. The UN envisions that this economic development model will help address poverty, inequality, and climate change issues. In the upcoming year (2024), the UN is preparing an agenda for the Summit of the Future, intending to achieve a better bio-circular green economy by 2030. The bio-circular green economy is an economy that relies on the sustainable utilization of biological resources (Aroonsrimorakot & Laiphrakpam, 2024). The UN believes this bio-circular green economy can help alleviate poverty, reduce inequality, create jobs, and combat climate change (World Future Council, 2023). Examples of the bio-circular green economy include sustainable agriculture, bioenergy production, and the development of products from biological materials. The circular economy focuses on reducing resource usage and waste, addressing issues of poverty, and mitigating climate change. Additionally, the green economy emphasizes sustainable economic development (Kanthamanon, 2022). Examples of the green economy include investments in clean energy, energy conservation, and greenhouse gas reduction (Churat & Laddamaneeroj, 2022; Kiatchanon, 2022).

The UN has set out the following guidelines for achieving the bio-economy, circular economy, and green economy (Thailand Science Research and Innovation, 2020):

- 1) Support investment in technology and innovation: These are essential for driving the bio-economy, circular economy, and green economy. The UN, therefore, needs to promote investment in these technologies and innovations.
- 2) Support international cooperation: The bio-economy, circular economy, and green economy are sustainable development approaches that require international cooperation. The UN, therefore, needs to build international cooperation to drive this development approach.
- 3) Raise public awareness: The public must know the benefits of the bio-economy, circular economy, and green economy. The UN therefore needs to raise public awareness about this development approach (Sirilertworakul, 2021; Sankla & Muangpan, 2022).

The bio-economy, circular economy, and green economy are sustainable development approaches that can help the world achieve the SDGs by 2030. The UN has prioritized this development approach and set guidelines for achieving it.

In September 2024, the 78th session of the United Nations General Assembly (UNGA) is scheduled to occur. The UN is preparing for this meeting and has identified the topic of the bio-economy, circular economy, and green economy (BCG) as critical issues. There is recognition of the importance of BCG as a way to address global challenges such as climate change, poverty, and inequality (United Nations Thailand, 2023). The BCG concept has been used to develop projects and educational activities to address these challenges. The BCG's expertise in analysis and creativity has helped to develop creative and practical solutions to global problems. The BCG concept has also received attention and cooperation from various organizations. It has worked with governments, businesses, and civil society to address global challenges concretely (United Nations, 2022; SDGmove, 2023).

Furthermore, the UN has provided examples of BCG initiatives to address global issues, such as developing clean energy solutions and alternative energy sources. These efforts include the development of energy storage systems and the establishment of intelligent grid networks to help countries reduce greenhouse gas emissions. Organizations have become more

environmentally conscious due to these initiatives (Meksathit & Laohavichien, 2023). In addition, the BCG is seen as a way to create jobs and reduce poverty. As businesses adopt more BCG practices, they develop social welfare systems and job training programs (Fontana & Siriwichai, 2022; Pimpa, 2023).

The UN believes that the BCG will be vital in addressing these challenges. It has supported the BCG concept to continue working to address these challenges (Pechpakdee, 2022). The involvement of BCG in addressing these challenges shows the BCG's commitment to making a positive change in the world today.

In addition, the UN believes that the BCG is a sustainable economic development approach that will help the world today achieve the SDGs by 2030 (United Nations Thailand, 2023). They are encouraging communities around the world to practice BCG.

Therefore, it is an interesting issue that the international sustainable development can be translated into local community development by the following methods.

1) Community participation: Local communities should participate in determining the BCG development guidelines to be in line with the context and needs of the community. The government and private sector should support communities in developing the BCG development plan and implementing the plan.

2) Building a network of cooperation: Local communities should build a network of cooperation with other communities in the country and abroad to exchange learning and share experiences in BCG development.

3) Promoting innovation: Local communities should promote innovations in BCG development to address the problems and obstacles that arise (Chiba & Katsuma, 2022; Pechpakdee, 2022).

The application of SDGs to BCG development at the local community level:

1) Rural local communities can develop a bioeconomy by planting medicinal plants to extract as medicine to treat diseases or develop community products from natural materials such as silk, cotton, and carved wood.

2) Urban local communities can develop a circular economy by recycling or upcycling waste into new products or developing public transportation to reduce the use of private cars (Photisawang, 2022).

3) Coastal local communities can develop a green economy by developing clean energy, such as solar and wind energy, or developing conservation tourism (Kaewsa et al., 2024).

Driving BCG development at the local community level requires the cooperation of all stakeholders, including government, private sector, and the public, to jointly create a sustainable community in terms of economy, society, and environment (Wongsakul et al., 2021)

SDGs Goals that Are Aligned with BCG for Sustainable Development

SDGs help sustainable development in several ways. They set clear goals and development pathways. SDGs set comprehensive, sustainable, and inclusive development goals. These goals guide countries to achieve sustainable development (Chaiya & Ahmad, 2021). Raising awareness and cooperation are essential to achieve sustainable development. SDGs raise awareness about the importance of sustainable development and encourage collaboration from all sectors, including the public, private, and civil society. They also promote innovation and technology (Phulkerd et al., 2022). SDGs promote the development and use of innovation and technology to address sustainable development challenges, including tracking and evaluating progress. SDGs have clear indicators to track and evaluate progress towards achieving the goals. The concept helps countries improve their performance and achieve their goals (Nualnoom, 2022).

SDGs are a framework of critical concepts for long-term sustainable development of the world. They were adopted by the UN in 2015 to demonstrate commitment and responsibility to the world and humanity (Yusof et al., 2022). SDGs are essential to gather multiple issues that impact society, the environment, and the economy to make development sustainable and not create more sand storms in the future. The SDGs approach to evaluating success in various areas by giving examples of important concepts that are aligned with BCG (Sekarangit & Wardhani, 2021; Kanthamanon, 2022; Bhandari et al., 2023).

Employment is essential for economic growth in all countries. Employment provides income for individuals, promotes long-term security, and benefits the economy in the long run (Sorakraikitikul & Nankervis, 2022). Creating employment helps build a stable society and increases the economic well-being of the population as a whole. Additionally, it can create opportunities for learning and developing the necessary skills for people working in various fields, which results in more capable and valuable workers in the labour market (Sornmanee, 2019; Theerakosonphong & Amornsiriphong, 2021; Kittikulphan, 2022).

Creating decent work is vital for reducing economic inequality and increasing the interconnectedness of all groups in society. Creating opportunities for low-income workers is an excellent way to reduce income inequality and create a society where everyone has equal rights and opportunities for income and social welfare (Yoelao et al., 2021). In addition, creating decent careers leads to investment in innovation and developing a sustainable economy, making the country's economy more robust and reducing conflict and economic crises (Bhandari et al., 2023).

Another critical SDG factor aligned with BCG is sustainable production and consumption. An important concept that positively impacts the environment and the world's sustainable development. This concept focuses on creating goods and services that systematically use natural resources and energy without damaging the environment (Tansuchat et al., 2022) and consuming goods and services efficiently to reduce pollution that affects the environment and human health.

Sustainable production has several vital methodologies. For example, using technology to create valuable and resource-efficient products, reducing waste in production processes, using energy efficiently to reduce greenhouse gas emissions, and creating products with a long lifespan (Chanchitpricha & Fischer, 2022). Additionally, supporting the use of recycled materials and preserving water and forest resources are essential to sustainable production (Sedtha et al., 2023).

Sustainable consumption focuses on using goods and services efficiently and reducing waste and pollution. Consumers can choose to use goods that are good for the environment, such as reducing plastic use or buying products certified by organizations supporting environmental friendliness. Reducing unnecessary consumption reduces waste and saves resources (Wiranto et al., 2022).

Sustainable production and consumption positively impact both the environment and the economy. People can develop and grow sustainably without damaging natural resources and the environment. People can create a sustainable world and improve the quality of human life by promoting sustainable development in the future (Nelles et al., 2022; Visetnoi & Nelles, 2023).

The last factor is climate change mitigation. It is a significant problem that affects all countries, all sectors, and all lives (Khajuria et al., 2022). Climate change mitigation is vital for protecting the environment, conserving natural resources, and building a sustainable future (Sukma & Leelasantitham, 2022). Reducing greenhouse gas emissions is the primary approach to climate change mitigation. This can be done by switching to renewable energy, improving energy efficiency, and reducing greenhouse gas emissions from the industrial and agricultural sectors.

Climate change has caused many impacts, including rising sea levels, droughts, floods, and severe storms. Adapting to the impacts of climate change is a crucial approach to reducing the potential damage, such as building coastal defenses, developing early warning systems, and planting crops resistant to changing weather conditions (Topothai et al., 2022; Waleewong & Yueayai, 2022). Building awareness and cooperation is essential to addressing climate change. It is necessary to raise awareness about the problem of climate change and the solutions to it in order to encourage participation from all sectors of society, including the public sector, the private sector, and civil society (Sonpuing et al., 2022; Sukma & Leelasantitham, 2022).

Practical Guidelines for Applying BCG in Local Communities

Practical guidelines for applying BCG in local communities in Thailand can be considered based on the three main components of BCG.

- 1) Bio-economy refers to the development of industries and products from biological resources. This can be applied to local communities in Thailand, such as developing processed products from agricultural raw materials, developing agricultural tourism, and developing products from herbs and traditional medicines (Aroonsrimorakot & Laiphrakpam, 2024).
- 2) Circular economy is an economic system that focuses on reducing resource use and increasing recycling. Examples for local communities in Thailand include developing sustainable waste management systems, developing products from waste materials, and developing ecotourism (Kaewsa et al., 2024).
- 3) Green economy is an economic system that considers the environmental impact of economic activity. Examples of local communities in Thailand are developing renewable energy and conservation tourism (Setjiraviroj, 2022).

Examples of Practical Guidelines for Applying BCG in Local Communities in Thailand to Emphasize BCG Tourism

- 1) Agricultural tourism by promoting local communities to develop agricultural tourism, such as educational, agricultural tourism, local cultural tourism, and local food tourism. It will help to promote the sustainable use of agricultural resources by local communities.
- 2) Developing ecotourism by promoting local communities to develop ecotourism, such as adventure tourism, nature study tourism, and health tourism. It will help promote local communities' conservation of natural resources and the environment.
- 3) Developing conservation tourism by promoting local communities to develop conservation tourism, such as historical, cultural, and religious tourism. It will help promote local communities' conservation of cultural heritage and history (Krasae-in et al., 2022; Dang & Wang, 2022; Irvine et al., 2023).

Supporting BCG tourism will help to promote sustainable tourism growth in Thailand and create added economic value for the country. It is by focusing on the development of tourism that considers the environment and society, in addition to economic development.

The BCG Practices for the Private Sector

BCG is a concept that emphasizes sustainability in managing natural resources and developing organizations in the private sector. The BCG practices for the private sector are to support businesses in producing and consuming products and services that use natural resources sustainably and have the least possible impact on the environment.

BCG's reduction in the use of natural resources promotes the private sector to reduce the use of natural resources efficiently, using technologies and processes that reduce losses and use fewer resources, both in the production process and in the products and services offered to customers (Kaewsiya, 2023). BCG's support for the circular economy cycle continues the sustainable economic cycle by supporting the purchase, recycling, and return of old materials and products to the new production process, which reduces waste generation and saves

resources, which the private sector can help well in this part (Deo et al., 2023; Jitto & Nakbanpote, 2023).

BCG supports the private sector in joining with environmentally friendly and sustainable energy to create a valuable and sustainable business in the long term, helping to coordinate between business prosperity and efficient use of energy that is friendly to the environment and society (Edyvean et al., 2023).

Review

The implementation of the SDGs at the international level and the implementation of BCG by governments, businesses, and local communities must rely on the following diffusion theory approaches:

- 1) Awareness Creating: Awareness about the SDGs and BCG for all relevant stakeholders, including governments, businesses, and the public, is essential to ensure they are understood and adopted. Awareness can be created through communication and public relations channels, such as the media, social media, and training and seminar events.
- 2) Adoption: Once awareness has been created, ensuring that all stakeholders adopt the SDGs and BCG is essential. This means understanding the appropriateness and relevance of these approaches to the context of each country or region. Awareness can be achieved through collaboration and partnership to build understanding and cooperation in implementing the SDGs and BCG.
- 3) Implementing: Implementing the SDGs and BCG requires a clear set of goals and objectives and a plan for achieving them. This can be done by developing national policies and plans, allocating the necessary resources, and creating supportive mechanisms for implementation.
- 4) Monitoring and Evaluation: Monitoring and evaluation are essential to ensure that the implementation of the SDGs and BCG is on track and that progress is being made. These involve tracking progress against the agreed-upon goals and objectives, identifying challenges, and taking corrective action as needed (Yu et al., 2020).

The approaches from the diffusion of innovations theory outlined above will help ensure that the SDGs and BCG implementation are effective and achieve the goals set. In addition to these approaches, others can be used to strengthen the momentum for these initiatives, such as:

- 1) Motivating all relevant stakeholders to change their behavior and practices. This can be done by providing incentives, such as financial rewards or recognition, or by creating a sense of urgency or shared purpose.
- 2) Building networks between different stakeholders to facilitate learning and sharing of experiences. This can be done by organizing conferences, workshops, or other events.
- 3) Developing skills and knowledge for relevant personnel to enable them to perform their work effectively. This can be done through training, coaching, or other forms of capacity building (Oliveira-Duarte et al, 2021; Poocharoen & Boossabong, 2023).

However, the diffusion of innovations theory could be used as a practical principle in promoting sustainable development from the international level to local sustainable development in the form of BCG.

When talking about the diffusion of innovations, a theory is an approach that describes how an innovation spreads from its source to different groups of people in society. This theory was developed by Rogers & Cartano in 1962 and has been widely accepted as a practical theory for explaining the diffusion of innovations in many fields, such as agriculture, marketing, education, and technology. The diffusion of innovations theory divides innovation adopters into five groups based on their level of acceptance of the innovation, as follows (Namahoot, 2018; Setkij, 2020):

- 1) Innovators are the first group of people to adopt an innovation. They are typically well-informed and interested in new technologies.

- 2) Early Adopters are the next group of people to adopt an innovation. They are typically willing to try new things and are confident in the innovation.
- 3) The early majority is the largest group to adopt an innovation after the Early Adopters. They are typically looking for the best thing for themselves and their families.
- 4) The late majority are the next group of people to adopt an innovation. They are typically hesitant to adopt innovations.
- 5) Laggards are the last group of people to adopt an innovation. They are typically traditional and resistant to change.

The diffusion of theories from the global to the local level is vital in global economic and social development. This concept provides opportunities for the resources, tools, and information available globally to be used locally to create value and generate opportunities at the local level. This diffusion of theories leads to the systemic linking of the world and facilitates the widespread exchange of information and knowledge between countries and regions (Norsuwan et al., 2021; Artharn & Jaroenwisan, 2022).

One of the things that can significantly change the diffusion of theories from the global to the local level is the use of information and communication technology (ICT) and online communication. These technologies allow information and technologies available globally to be accessed and applied locally quickly. This should be done by creating accurate data and creating a balance between media and society at different times (Virojtrairatt, 2022; Lakul et al., 2023). Create opportunities for localities to develop new products and services and strengthen new industries and businesses, resulting in increased income and valuable jobs for local people (Nakapreecha et al., 2021).

In addition, the diffusion of theories also strengthens international and regional cooperation, resulting in opportunities to address complex challenges such as climate change, poverty reduction, and increased local resilience by receiving knowledge and technology from others and applying them to their situations (Theeramonpraneet, 2023).

The diffusion of theories from the global to the local level is essential in creating linkages between the international and local levels and enhancing opportunities for sustainable economic and social development at the local level. Information and communication technology is a critical tool in this process. It strengthens international and regional cooperation to address social and environmental problems at the global level to the local level (Chaiprasert, 2022).

Conclusion and Recommendation

The SDGs are a comprehensive and sustainable development framework with 17 goals, 169 targets, and 247 indicators set by the UN to achieve sustainable development in all economic, social, and environmental dimensions. Thailand has attached importance to the SDGs as a comprehensive and sustainable development framework, which is in line with the vision of "Thailand has security, prosperity, and sustainability as a developed country with development based on the philosophy of Sufficiency Economy" of the 20-Year National Strategy (2018-2037). The importance of the SDGs to Thailand is a development framework that promotes the participation of all sectors.

Thailand's efforts to achieve the SDGs begin with several key areas. The first is poverty eradication, which is Goal 1. The country has implemented economic and social development initiatives to improve the quality of life for its people. The second area is reducing hunger, which is Goal 2. Thailand has implemented programs to provide supplementary food for young children and pregnant women. The third area is good health and well-being, which is Goal 3. Thailand has focused on developing healthcare systems and promoting public health. The fourth area is quality education, which is Goal 4. Thailand has expanded educational opportunities and improved the quality of education. The fifth area is sustainable water

resource management, which is Goal 6. Thailand has implemented projects to conserve water resources and ensure sustainable water management. The 8th goal of Thailand is to promote valuable employment and economic growth, which involves investment promotion and the development of workforce skills, as well as reducing inequalities (the 10th goal). The 11th goal is to establish sustainable cities and communities by developing communities and cities sustainably. The 13th goal is to combat climate change by reducing greenhouse gas emissions and adapting to climate change.

Thailand has placed importance on the SDGs as a comprehensive and sustainable development framework, which aligns with the vision of the 20-Year National Strategy. Thailand's progress towards achieving the SDGs has been made to some extent, but there are still challenges to be faced. The way forward will focus on integrating the SDGs into the 13th National Economic and Social Development Plan to enhance the public, private, and civil society sectors' capacity and strengthen international cooperation.

SDGs and the BCG economic model are frameworks and development guidelines that focus on balanced and sustainable development in all aspects, including economic, social, and environmental. Implementing these two frameworks requires the cooperation of all sectors, including the public, private, and civil society sectors. The public sector plays an essential role in driving SDGs and BCGs. In the case of the private sector, it has a vital role in driving SDGs and BCG by conducting business that is responsible to society and the environment, such as using resources efficiently and sustainably. Reducing pollution, promoting human rights, and participating in community and local development are all critical roles for civil society in driving SDGs and BCG. Civil society can drive SDGs at the community and local level by promoting awareness of SDGs, participating in developing local action plans, and monitoring and evaluating implementation and integrating SDGs and BCG goals into the national economic and social development plan to ensure that national development is aligned with the goals of both frameworks. The development of innovations and technologies to improve production efficiency and reduce environmental impact, the development of human resources to enhance the capacity of workers and entrepreneurs, the building of a network of cooperation to exchange knowledge and experience, and the practical driving of SDGs and BCG together will help Thailand to achieve the Sustainable Development Goals concretely and create a better future for everyone.

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