

## The Relationship Between BCG Model and the Future of Tourism Industries

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### ABSTRACT

This research aims to study the factors of tourism that utilize BCG (Bio-Circular Green Economy) as a foundation and to explore the factors that create a relationship between BCG and future tourist destinations. This research is a qualitative study conducted with a group of university professors specializing in tourism and business management who possess knowledge and experience in tourism and utilize BCG as a part of the tourist destination. There were a total of 10 participants. The data collection method for this research involved using interview questions prepared based on literature reviews and interviews. The focus was on factors related to cultural communication, sustainability, technology utilization, the use of the BCG model in business, agricultural industry development, marketing factors, the perceived value of BCG, and the benefits of BCG. The period starts from September 2023 to October 2023. The results indicate that all the above-mentioned factors impact the relationship between BCG and future tourist destinations.

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## 1. Introduction

### 1.1 Background and Rationale

In Thailand, the concept of a creative economy has garnered significant interest and support in the context of Industry 4.0 and has become an integral part of the country's development plans. There is continuous development in this regard, with key agencies responsible for promoting and driving the creative economy in the country. One such agency is the "Creative Economy Agency (CEA)," which plays a crucial role in supporting the concept of an innovative economy in Thailand. (Khomkrit Channarong & Bunsom Yodmalee, 2020)

The concept of the Creative Economy emphasizes generating value from creative ideas and cultural works. The significance of the creative economy is not limited to arts and creativity alone but also extends to industries that utilize innovative ideas and new concepts to create unique and value-added products and services. This concept highlights using creative thinking and value creation by using resources and knowledge in various fields, including arts, culture, communication, ideas, innovation, design, and developing new products and services. The creative economy prioritizes using creative thinking to generate income and develop unique resources. (Daoruang, 2023) This concept of the creative economy is not only

about producing goods and services but also encompasses the creation of social and cultural value. It emphasizes stimulating innovation and new ideas to create opportunities for entrepreneurs and creators with skills in various fields.

The CEA, or Creative Economy Agency, aims to provide opportunities to start new businesses and create spaces for generating new creative works under the concept of the creative economy. This agency collaborates with the public and private sectors to create an environment conducive to creative endeavours. Furthermore, it promotes opportunities for entrepreneurs and creators to develop their innovative ideas and contribute to the growth and prosperity of their businesses. (Jinawat & Preyawanit, 2022). Support for a creative economy in Thailand has been consistently promoted through appropriate financial support and resources. Various projects and programs have been developed to encourage and support businesses and creative groups. These include art and cultural exhibitions, event and art festival support, skill and knowledge development through various training programs, and creating communities that support creative thinking. Furthermore, the creative economy in Thailand not only generates income and opportunities for entrepreneurs and creators but also enhances a culture of collaboration and values. There is support for learning and creativity across all ages and different societies, as well as the use of technology in communication to disseminate and promote creative ideas. (Suvannin & Nunthong, 2023). These ideas could create benefits for the country and sustainable opportunities for creative communities in Thailand.

In 2022, Thailand played a significant role as the host of the APEC (Asia-Pacific Economic Cooperation) summit, a forum for economic cooperation in the Asia-Pacific region. The theme of the previous summit was "Open. Connect. Balance." This theme demonstrated Thailand's commitment to promoting collaboration and economic balance in Asia-Pacific (Wisuta Chanakarn et al., 2023). It was also a call for cooperation from countries in the Asia-Pacific region to promote economic development and economic cooperation within the region. The summit presented proactive guidelines and strategies to strengthen the economy after the COVID-19 pandemic. In addition, the summit aimed to strengthen and sustain the economy in the Asia-Pacific region by focusing on open trade and investment, international connectivity, and creating beneficial relations for all parties. It also supported the exchange of high-level policy plans of each country to increase opportunities for sustainable trade and investment in the future.

During the APEC summit in the year 2022, Thailand presented the Bio-Circular-Green Economy (BCG) model. However, at a previous meeting, this model was considered a national agenda in Thailand in 2021 (Sinsing & Pooncharoen, 2023). Thailand's presentation at the summit indicated that the country was economically ready to introduce the BCG model to APEC members, showcasing its economic diversity and sustainability. The BCG model consists of three components. There are Bioeconomy (B), which emphasizes the sustainable use of biological resources; Circular economy (C), which focuses on recycling and reducing resource consumption; and Green Economy (G), which prioritizes environmental impact reduction and sustainable economic development. Thailand's presentation highlighted its commitment to these principles and underscored its potential for diverse and sustainable economic growth (Chaiphawang, 2022). The BCG model is a response to global environmental challenges and geographical transformations that are occurring worldwide. Thailand has demonstrated that economic development can be harmonized with resource management and waste reduction, making the economy environmentally friendly. This model emphasizes the importance of sustainable economic growth and overall environmental Conservation. Furthermore, Thailand's presentation of the BCG model at the APEC meeting underscored the significance of cooperation between the public and private sectors in creating a sustainable economy. Recognizing that environmental issues are pressing problems that require collective solutions, the BCG model serves as a framework for resource management and creates investment opportunities.

The creative economy has many interesting aspects, including using technology and communication to promote various creative works. Computer programs, online communication, and social media are essential for generating and disseminating creative ideas. They create opportunities for graphic designers, writers, actors, musicians, and creators with artistry and intriguing creative ideas (Chalermchit, 2020). Likewise, another aspect of the creative economy is supporting and promoting education and skill development in creative and artistic thinking. A creative economy involves investing in education and training for individuals interested in and prepared for this field. It helps create a space for economic growth in the creative sector. Additionally, there is a focus on creating suitable areas for establishing new cultural and innovation centres.

Agricultural technology, or AgTech, is crucial in addressing the agricultural industry's challenges today. It involves using technology to improve food production processes and resource management for increased efficiency and sustainability. The main goal is to create sustainability in agriculture and the food industry by maintaining and increasing production. There is an overview of AgTech. The use of technology in agriculture, AgTech, involves utilizing technology to enhance agricultural processes at every level, from crop

cultivation to animal husbandry. Technology can help reduce water and fertilizer usage in farming, making agricultural processes more efficient (Chomphoothong et al., 2022).

Furthermore, technology aids in reducing the use of chemicals in pest and disease control, resulting in safer food production for consumers. The use of data for agricultural analysis and decision-making is becoming increasingly important (Narayan & Pooripakdee, 2022). Those involved in agriculture can use technology to collect data from various gardens and farms and analyze this data to plan for the most efficient production and resource management. Moreover, technology plays a significant role in AgTech, particularly in automation, harvesting, and livestock care tasks. Automated machinery and systems reduce labour requirements and improve production efficiency. For example, automated tractors can plant crops systematically and monitor field conditions, increasing yields and time savings (Iamamporn et al., 2022).

Additionally, adopting new technologies in AgTech must be rapid, as technological changes occur swiftly. Critical technologies (Alongkorn Pariwutthipong, 2022), such as sensor technology, machine learning, and data processing, can facilitate rapid agricultural experimentation and improvement. AgTech is a critical field that harnesses technology to transform and advance agriculture, making it more sustainable, efficient, and adaptable to changing conditions.

Sustainable tourism is a form of tourism that emphasizes environmental preservation. The fundamental principle in this type of tourism is conducting activities that do not harm the local environment and society. Sustainable tourism often involves considering the environment at every stage of the journey. Travellers and tourism service providers often strive to reduce the generation of plastic waste and chemicals that could have an environmental impact (Suchitra Yangnak, 2023). Furthermore, sustainable tourism promotes the efficient use of energy and water resources and the choice of vehicles with lower emissions to reduce greenhouse gas emissions. Sustainable tourism should focus on generating income for local communities, using local materials, promoting local products, and contributing to the local economy (Rakharn et al., 2023).

Additionally, it can support the development of tourism infrastructure in various areas, creating job opportunities and fostering education and skill development within local communities. Sustainable tourism also emphasizes the preservation of local culture and traditions. Learning about local history and culture helps create awareness and understanding of the world from different perspectives. It also fosters respect and understanding between travellers and local communities.

Sustainable tourism is a tourism approach that focuses on preserving and conserving the environment and creating sustainable benefits for local communities. Sustainable tourism must align with sustainability principles regarding the environment, society, and the economy to promote long-term development and generate positive outcomes for tourists and local communities. Supporting and promoting this type of tourism can be achieved through collaborative efforts from all stakeholders in the tourism industry, aiming to create a sustainable and appealing world of tourism for future generations.

### *1.2 Research Objectives*

- 1) To study the factors that utilize BCG as a foundation in tourism.
- 2) To examine the factors that establish a future relationship between BCG and tourist destinations

## **2. Literature Review**

The research project proposes to design products and services for the local community of Thai traditional fabric weavers in Ratchaburi Province. The goal is to expand the range of interior decoration products using innovative fabric printing techniques and eco-friendly dyeing processes Rasa Suntharayuth (2022). It is found that the study aims to integrate technology and creative thinking into the design of textile products, to lead to development, broadening the target audience, and increasing production potential for research and development of environmentally friendly raw materials in line with the concept of eco-innovative textiles. This research study can also be extended to the design of services that will help promote improvement in management and enable product sales both domestically and internationally. Ratchaburi Province is known for its intricately crafted handwoven Thai textiles. Researchers aim to increase the popularity of Thai handwoven textiles, encouraging both Thai and international buyers to take an interest in local materials. The material involves a blend of innovative production methods and communication technologies, enabling local communities to expand their markets, reach diverse customer segments, and efficiently target new customer groups. Directing to the customer is achieved through the marketing mix of 4P and 7P and by organizing dyeing activities for the community, which are led directly by entrepreneurs. The product design, such as BioFabricated materials, employs technology to enhance product production, making it faster and more contemporary.

Research study to develop a roadmap for research and development in agriculture and biotechnology to support Thailand's strategy towards the future 4.0 era. It involves dimensions of research institutions and universities specializing in technology and innovation to bolster Thailand's agricultural industry Peerasut Bunkaewsuk (2021). It is found that global warming impacts the economy and people's behaviours regarding their lifestyles, agriculture, and industries. Additionally, the agricultural sector has decreased GDP due to unsuitable weather conditions in some areas. Consumers have had to change their consumption behaviours, such as reducing plastic use and opting for environmentally friendly energy sources.

Furthermore, agriculture has shifted from traditional methods to modern agriculture, incorporating technology and innovation to increase high-quality production and maximize resource efficiency. For instance, smart farming employs science and technology to enhance production while reducing resource usage. The use of technology in agriculture may bring about changes in the future, such as biotechnology and other agricultural technologies like vertical farming and indoor farming.

Local Heritage Exploration: Researching the local area's history, culture, and traditions Yutthana Praneet and the Faculty of Social Sciences Mahachulalongkornrajavidyalaya University (2020). It is found that the community tourism project in Nong Bua District, Nakhon Sawan Province, has policies and strategies for preserving the local culture and traditions to maintain and promote the cultural heritage that is unique to the community. Nong Bua District has a rich cultural heritage that dates back to ancient times and is widely recognized as a significant centre for Buddhism, agriculture, arts and crafts, and local wisdom. It has resulted in the district being influenced by various cultural communities, and the convergence of these cultural influences has created a unique and distinctive culture. In general, the culture of Nong Bua District involves a simple way of life, traditional medicines, and a robust religious belief system that will continue to be passed down to future generations. Overall, the culture of Nong Bua District is a rich blend of historical influences, language, customs, practices, and religious beliefs, creating an exciting way of life in this community.

Creating shared value through the BCG Economy Model of the Thai government Kessinee Rattanaphan and Piyapong Inthaisong (2023). It was found that creating shared value (CSV) is a concept that emphasizes the creation of value between business and society, not just profit for business alone but also generating sustainable benefits. Additionally, it aims to enhance the efficiency of the organization and the environment working together. In this context, BCG represents a new approach to developing an economy that addresses environmental concerns. It can lead to sustainable growth for the country. BCG involves developing a circular economy, meaning that resources must be created in new ways or reused.

Furthermore, it uses biotechnology and technology to reduce environmental harm and create sustainability in economic development. Applying the CSV concept to BCG is a suitable option because CSV focuses on creating sustainable business success by integrating business success and society. It aligns with the BCG concept, which aims to achieve business success while caring for and preserving the environment. Therefore, applying the CSV concept to BCG is a way to drive the country's economy towards sustainability and benefit society and the environment.

Managing dairy farms for tourism towards driving the BCG economic strategy Narayan and Pooripakdee (2022). It is found that agritourism is a form of tourism that generates income for communities and individuals, especially farmers (landowners), who have the potential to develop an area into a revenue-generating tourist destination and can enhance tourism activities as well. Furthermore, agritourism is a way to revitalize agricultural resources and distribute economic and social benefits within the community, contributing to economic and community development. Agritourism is gaining popularity nowadays, but it needs a clear selling point and needs to be more well-known among the majority. Therefore, in developing agritourism, it is essential to emphasize creating and promoting the unique characteristics of communities in the country to become a distinctive competitive advantage against other countries. An example of agricultural development in Thailand is the need to consider the issues and obstacles that may arise for dairy farmers. Creating a model for dairy product processing and transforming dairy farms into tourist attractions could be a good option. This approach can help dairy farmers generate income and create sustainable development opportunities for local communities and the agricultural sector in Thailand.

The Bio-Circular Green Economy model in Thailand – A comparative review Edyvean et al. (2023). It is found that the success of implementing the Bio-Circular Green Economy (BCG) model in Thailand depends on several factors that must be considered. For the general public and the business sector to see the value and benefits of using this concept, extensive information dissemination is essential. These will open up opportunities for everyone involved to understand the importance and rationale for implementing BCG in Thailand. Additionally, suitable locations and a willingness to invest in BCG are crucial factors. Based on the BCG concept, development requires utilizing abundant agricultural resources and underutilized biological materials. Collaboration with farmers and other sectors may be necessary to make these resources beneficial

for developing natural and sustainable products and services. Awareness of these issues will facilitate practical cooperation between the private and public sectors in carrying out various projects and building strong relationships to support the success of the BCG model in the country.

Do Plant-Based Food Products Communicate Sustainability? A Case Study of Brand Meanings in Thailand and Their Relationship to Sustainable Diets Gains and Thi (2023). It is found that plant-based foods have a lower environmental impact compared to foods with animal-based ingredients, which require more resources such as water, energy, fertilizers, and land. Promoting awareness and encouraging people to switch from animal-based food products to plant-based ones can be highly effective. Some plant-based food brands have successfully reached consumers through branding and marketing strategies. These brands emphasize the use of organic and locally sourced ingredients. Consumers take pride in choosing environmentally friendly plant-based products, and brands that emphasize these aspects create a sense of trust. Building consumer understanding and awareness about the sustainability of plant-based foods and brands prioritizing these values will likely result in more sustainable choices. Production and marketing processes increasingly focused on sustainability, promoting the benefits of implementing the BCG model in the Thai food industry.

**Table 1.** The Variables Obtained from the BCG Analysis.

Researcher's name	Discovering influential variables				
	Variable 1	Variable 2	Variable 3	Variable 4	Variable 5
Rasa Suntharayuth (2022) Found	Eco-Friendly raw materials				
Peerasut Bunkaewsuk (2021)		Plastic reduction	Environmentally friendly energy		
Yutthana Praneet et al. (2020). Found				Traditional treatment	
Kessinee Rattanaphan & Piyaphong Inthaisong (2023). Found					Agritourism
Narayan and Pooripakdee (2022). Found					Agritourism
Edyvean et al. (2023) Found	Eco-Friendly raw materials				Agritourism
Gains and Thi (2023) Found	Eco-Friendly raw materials				

It is found that the literature review conducted by seven academic scholars emphasized various BCG-related variables. Variable 1, which is the use of environmentally friendly materials, was mentioned by 3 of the seven scholars, accounting for 42.86%. Variable 2, reducing plastic usage, was cited by 1 out of 7 scholars, or 14.29%. Variable 3, environmentally friendly energy sources, was mentioned by 1 out of 7 scholars, also at 14.29%. Variable 4, traditional preservation methods, was cited by 1 out of 7 scholars, again at 14.29%. Variable 5, agritourism and environmental aspects, was mentioned by 3 out of 7 scholars, making up 42.86%.

#### Anticipated Benefits:

- 1) Both the government and business owners will receive information to guide policy-making, advocacy, and the implementation of initiatives to promote and drive the dissemination of knowledge in the field of BCG to Thailand's tourist destinations.
- 2) To present information and analysis results on using BCG processes in tourism destinations to Thailand tourism operators, communities, and relevant stakeholders.
- 3) Various organizations in Thailand, including both public and private sectors, and researchers interested in the field will have the opportunity to utilize the knowledge or research findings from this study to develop further and expand existing knowledge areas for future research and development.

### 3. Method

This research was conducted using a qualitative methodology. This study had no objectives for statistical data analysis from a sample group. The researchers chose tools and research techniques for collecting qualitative data through interviews, analyzing content data based on the interview questions prepared, and synthesizing five variables: environmentally friendly materials, environmentally friendly energy, plastic reduction, natural Conservation, and agritourism. The primary respondents for the questionnaire were interviewed by a group of university professors specializing in tourism and business management who have knowledge and experience

in tourism using BCG as a factor in the tourism destination. The number of questionnaire respondents was ten people. (Morse, 1994) Collaborating to conduct a data synthesis table review of literature and variables related to this research, the data for collection in this study are (1) to study the factors of tourism that use BCG as a foundation, (2) to study the factors that create a relationship between BCG and future tourist destinations.

In this research, the interview sample population consists of university lecturers in tourism and business management who have knowledge and experience in tourism using BCG as one of the factors in tourist destinations. The primary data providers are university lecturers, totalling ten individuals. These individuals are from various universities professor, including four from Rajamangala University of Technology, Bangkok, two from Bangkok Thonburi University, one from SDH Institute, Singapore, one from EIU Paris, one from BELTEI International University, and one from Angkor University.

#### 4. Results and Discussion

##### 4.1 Results

Data from interviews through questioning:

1) Do you agree that factors in tourism that use the BCG (Bio-Circular-Green Economy) model, which signifies "sustainable development economics," are based on the literature review findings such as Eco-Friendly raw materials, plastic reduction, environmentally friendly energy, traditional treatment, and agritourism? If yes, why do you agree?

2) In addition to the literature review factors found, including eco-friendly raw materials, plastic reduction, environmentally friendly energy, traditional treatment, and agritourism, what additional factors do you think promote tourism in the BCG (Bio-Circular-Green Economy) model, which signifies "sustainable development economics," based on your findings?

The interviewees are university lecturers in tourism and business management who have knowledge and experience in tourism, using BCG as one of the factors in tourist destinations. There are ten individuals in total.

**Table 2:** Factors in Tourism Using BCG as a foundation based on concepts, theories, and related literature reviews, including eco-friendly raw materials, plastic reduction, environmentally friendly energy, traditional treatment, agritourism, and additional factors.

University Lecturers	Factors that recognize the value and benefits of BCG		Reason	Additional factors
	Agree	Disagree		
Lecturer Faculty of Business Administration, Rajamangala University of Technology Krungthep	/		There are supporting research.	Recyclability factor, recycling, or reuse.
Lecturer Faculty of Business Administration, Aviation Business Management, Rajamangala University of Technology Krungthep	/		Due to the cost-effective use of raw materials in production and the efficient utilization of resources, it is possible to reduce costs in business operations. Additionally, innovation development will lead to adding value to the products.	Resource recovery in tourism destinations / Conservation of resources affected by tourism.
Lecturer Faculty of Business Administration, Rajamangala University of Technology Krungthep	/		Because the current environmental conditions include air pollution issues, ecological technologies for remediation are necessary.	The bioeconomy should be expanded to incorporate biological resources into the business and service sectors.

Lecturer Faculty of Business Administration, Rajamangala University of Technology Krungthep	/	The researcher has conducted a literature review and has fully referenced the literature reviews.	Elevate agriculture to high quality, sustainable, efficient, high standards, and with high income by integrating technology and innovation. Raise agricultural production to high standards, covering aspects of quality, safety, and sustainable production systems to enable the agricultural sector to grow in a balanced and stable manner. Farmers will see increased income and balanced and sustainable utilization of agricultural resources.
Professor Asst., Faculty of Liberal Arts at Bangkok Thonburi University	/	BCG is considered the application of technology and innovation to tourism to increase sustainability. BCG can create community engagement and add value to tourism destinations. It optimizes tourism resources, leveraging the surroundings to generate economic value. It also involves community participation in developing the economy and collaborating with various sectors, including government agencies, private enterprises, local communities, and academics. The focus is on responsible tourism business operations, reducing social and environmental impacts, and sharing the benefits of improved quality of life for the people. When communities earn income from tourism, they tend to have a positive mindset, welcome tourists, change their attitudes, have a cooperative spirit, and care for and conserve their tourism	Additional activities should be added through creative tourism involving tourists and interacting with the local community by incorporating environmentally friendly raw materials, environmentally friendly energy, plastic reduction, natural Conservation, restoration, and agritourism. Creative tourism is considered a crucial tool in sustainable tourism development, emphasizing value creation based on Thai identity, lifestyle, local wisdom, art and culture, and historical heritage through tourism activities. Tourists will have a new and unique experience by actively participating with the community, exchanging knowledge, learning about local identities, and connecting with the community's feelings. Therefore, creative tourism will help strengthen the community and increase self- confidence among its members, making it a critical factor in creating genuinely sustainable tourism.

		resources for sustainable tourism.	
Lecturer Faculty of Liberal Arts Hospitality and Tourism, Bangkok Thonburi University	/	I agree because it reduces the use of chemicals. Businesses or service providers should create incentives for environmental Conservation, such as coffee shops offering discounts when customers bring their cups.	Sustainability factors in the food and agricultural industry.
Lecturer Department of Hospitality and Tourism, SDH Institute, Singapore	/	Yes, I agree because we should promote the responsible use of -Natural resources. -The reduction of waste. -The protection of ecosystems. It is important to note that successfully implementing BCG requires efforts from businesses, governments, and everyone.	You should add energy efficiency and clean and renewable energy sources. These reduce energy costs, lower greenhouse gas emissions, and enhance energy security.
Lecturer Department of International Hospitality and Tourism Management, Sales & Marketing, EIU Paris	/	Yes, I agree with all the factors that you mentioned because starting to pay more attention to the world is essential in a situation where we are facing an urgent need for climate change and other environmental issues worldwide. There are some reasons why people are giving more importance to preserving and protecting the world.	One topic I suggested is sustainable agriculture support, using farming methods that do not harm the environment, and promoting organic farming and efficient use of agricultural resources.
Lecturer Department of International Relations, សាកលវិទ្យាល័យ ប៊ែលទី អន្តរជាតិ (BELTEI International University)	/	Yes, these benefits represent the holistic and connected nature of sustainable development and how it can lead to a more balanced and fairer world that meets the needs of current and future generations.	Please add some factors to reduce inequalities and improve social well-being.
Lecturer Department of Public Health, Angkor University	/	It is a great model for maintaining a healthy environment for the world. In practice, it cannot be applied from the grassroots to the top, which is not compulsory	Two more variables should be considered: 1) Education/training (related to knowledge) and 2) the Law/regulation of the country.



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and has not widely spread awareness to all people. The tourism field should use BCG to promote a healthy environment.

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From Table 2, all ten primary data providers agree with the BCG factors that would have an impact on the tourism destination, in the case of environmentally friendly raw materials, environmentally friendly energy use at the tourist site, plastic reduction, natural Conservation and restoration, and agritourism, with a consensus of 100%. Their reasoning is in line with the researcher's conclusion that it is time for everyone to help sustain the environment based on the principles of BCG. As for additional suggestions, they expand upon the principles of recycling by proposing that recycling should involve using clean energy, organic vegetable cultivation for tourism dining, and promoting agritourism as a significant variable in BCG. It also emphasizes the need to strengthen the communities in tourism areas to create sustainable BCG practices.

#### 4.2 Discussion

Using BCG (Bio Circular Green Economy) as a foundation is a worthwhile and sustainable development option. BCG uses valuable raw materials to create products and services with minimal environmental impact. Additionally, introducing BCG promotes adding value to the production process and can help reduce business costs. Utilizing valuable raw materials in production enables the creation of high-quality and sustainable products, aligning with environmental responsibility. This statement aligns with Gains & Thi (2023), who noted that emphasizing the use of organic and local ingredients in food production is a strength that makes consumers proud to choose environmentally friendly products.

Building an understanding of the sustainability of using vegetables in food production and entrepreneurs who prioritize this aspect will contribute to consumer support for sustainability in the food industry by reducing waste and unsustainable resource use. BCG also promotes sustainable development by focusing on directional raw materials and production methods that lead to minimal toxic emissions and processes with minimal environmental impact. It can create sustainable, high-quality products while reducing costs and fostering environmentally and resource-conscious development. This concept aligns with the ideas of Kesinee Rattanapan and Piyapong Ingtaison (2023), who stated that BCG is a new concept in economic growth aimed at addressing environmental issues while creating new businesses for long-term country development. Furthermore, BCG can serve as a strategy for circular economic development involving the reuse of materials, known as recycling. Additionally, it incorporates biotechnology and technology to reduce environmental risks and promote sustainable economic development for the country.

Moreover, to study the factors that will affect the relationship between BCG and future tourism, it was found that cultural communication, sustainability, technology utilization, the adoption of the BCG model in businesses, agricultural industry development, marketing factors, and awareness of the value and benefits of BCG will impact future tourism. This notion aligns with Narayan and Pooripakdee (2022), who mentioned that agricultural tourism is a significant source of income for communities, especially farmers who can develop areas into tourist destinations to generate revenue and enhance tourism activities. Agricultural tourism also revitalizes agricultural resources and creates income for communities by selling agricultural products, resulting in economic circulation. Therefore, the relationship between BCG and future tourism should be supported. Reducing plastic usage is a critical factor in environmental preservation and improving the quality of life. Plastics are the material that significantly impacts nature, animals, and the environment. Excessive plastic use leads to environmental problems such as waste accumulation pollution during production processes and contributes to marine pollution and harm to living organisms. Hence, choosing environmentally friendly products or packaging materials, such as biodegradable, paper-based packaging, separating plastic waste for recycling, and avoiding plastic bags by using cloth bags or baskets for shopping, should be encouraged.

This logic aligns with the ideas of Orachorn Kraichak et al. (2023), who suggested that change in daily life behaviours to improve environmental preservation and quality of life in the future should start with reducing plastic usage. It helps maintain the environment in the long run, creating an environment and quality of life for future generations in Thailand. Lastly, one of the most crucial factors in the current situation is environmentally friendly energy usage. Using energy derived from natural sources is a significant strategy in environmental Conservation. Solar energy, for example, is an excellent example of environmentally friendly energy since it does not require fuel or emits greenhouse gases during production. It can be used to generate electricity and provide daily convenience.

Additionally, wind and hydropower are valuable sources of electricity production with minimal environmental impact. Reducing the use of fossil fuels in various energy production processes helps reduce greenhouse gas emissions, the leading cause of global warming. Promoting using energy from natural sources in daily life is a long-term environmental conservation strategy. It contributes to the environment and quality of life for future generations in Thailand, aligning with the guidelines of Seesanong et al. (2023).

Supporting BCG (Bio Circular Green Economy) with future tourism is crucial for economic and environmental development. BCG is a concept that emphasizes the sustainable use of natural resources and the reduction of surplus and waste. This approach provides businesses with opportunities to participate in reducing harmful pollution. The tourism industry benefits from products and services that are valuable and environmentally friendly in the future. Future tourism destinations related to BCG principles will be vital as they create and manage ecologically friendly places. Sustainable tourism development reduces the impact on nature and supports economically efficient tourism. Lastly, businesses of future tourism related to BCG create opportunities to promote diversity, the beauty of nature, and local culture. Tourists will have valuable and memorable experiences. Therefore, supporting both BCG and future tourism is a policy that should be encouraged to promote sustainable growth in both society and Thailand's long-term economy.

### 5. Conclusion & Recommendation

Regarding policy, BCG (Bio Circular Green Economy) will focus on improving the infrastructure to support the bio-economy and promote a circular and green economy. It will involve developing transportation systems, public utilities, digital infrastructure, and public health. It aims to add value through agriculture, energy, healthcare, and tourism innovations. BCG seeks to enhance Thailand's global competitiveness by developing skills in the workforce, investing in education and research, making financial investments, and expanding markets. It fosters collaboration between the public and private sectors. In this process, BCG can support awareness and understanding of the economic model, emphasizing alignment and cooperation from all sectors to achieve sustainable and widespread economic growth within the country.

The application of BCG (Bio Circular Green Economy) focuses on promoting sustainable and widespread economic development in Thailand by leveraging the country's strengths in biological resources, innovative technologies, and public-private cooperation. It includes sustainable agriculture development, renewable energy, and cultural and health tourism. Implementing BCG across various industries requires collaboration from all sectors to enhance the competitiveness of Thai businesses and foster sustainable and widespread economic growth within the country. New research topics may lead to further research in other BCG-related industries.

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