

# AN EXPLORATION INTO THAILAND BUSINESS CONTRIBUTIONS TOWARD LIVABLE CITY

Pimramai HARACHAI<sup>1</sup>, Boonlue KACHENCHART<sup>2</sup>, Sooksan KANTABUTRA<sup>3</sup> and Harin SACHDEV<sup>2</sup>

1 Faculty of Environment and Resource Studies, Mahidol University, Nakhon Pathom, Thailand; hipimramai@gmail.com

2 Faculty of Environment and Resource Studies, Mahidol University, Nakhon Pathom, Thailand; boonlue.kac@mahidol.ac.th (B. K.); harin\_9@yahoo.com (H. S.)

3 Center for Research on Sustainable Leadership, College of Management, Mahidol University, Bangkok, Thailand; Sooksan.kantabutra@gmail.com

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## ABSTRACT

The emergence of the concept of sustainable business has a positive impact on the environment, society and good governance. This research aims to study the role and characteristics of sustainable businesses that support livable and sustainable cities, as well as the size of companies impacting their operations, based on publicly available information from various sources such as sustainability development reports, Form 56-1 (one report), annual reports, CSR reports, company websites from 2019 to 2021, and financial statements of companies listed on the Stock Exchange of Thailand in the Thailand Sustainability Investment in 2021, totaling 196 companies, categorized by industry groups. The findings indicate that companies support livable and sustainable cities through three dimensions: business models, environmental management systems, and CSR activities. The study includes the importance of environmental considerations at the organizational level: vision, mission, and values. It also finds that companies in the Resource group are the most supportive of sustainability and livability in 2021, aligning with their company size as identified through the research.

**Keywords:** Business, Sustainability, Livable City, Sustainable City, Sustainable Business

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## INTRODUCTION

Around 55% of the world's population resided in urban areas. Looking ahead to the year 2050, projections suggest a significant increase in the urban population, with an estimated 68% of the global population expected to be living in cities (UN, 2018).

One significant factor driving urbanization is economic growth, as pointed from the Gross Domestic Product (GDP) which approximately 80% generated in cities (Grübler & Fisk, 2013). Business sector is an important entity within the economic system. (WBCSD, 2014), which also serve as vital sources for tax revenue, supporting government management and infrastructure development in cities (AlMujadidi et al., 2019).

In the year 2015, the essential framework for global development was established, encompassing environmental sustainability, social inclusion, and economic development (Sachs, 2012). This framework followed the report "Our Common Future" from the World Commission on Environment and Development (WCED) meeting (Bruntland, 1987), consists of 17 goals. For example, Goal 11 focuses on sustainable urbanization and communities, while Goal 12 emphasizes promoting environmentally friendly production and consumption. Goal 17, which emphasizes the importance of fostering inclusion at all levels to achieve sustainable global development objectives, serves as a significant driving force (Aroonsrimorakot & Vajaradul, 2016).

The concept of various livable-sustainable city initiatives prioritizes environmental concerns, for quite some time. For instance, as mentioned in the book "Sustainable cities" by Haughton and Hunter since 1994, that there is a focus on designing cities and suburbs simultaneously through green spaces within urban areas. (Apawatcharut, 2002).

The company listed on the Stock Exchange of Thailand (SET) adapt their operations with the concept of driving sustainable and transparent business practices through the disclosure of sustainability-related information, reflecting a commitment to conducting business in a sustainable and transparent manner (Securities and Exchange Commission [SEC], 2022).

When considering the importance and interconnection in the urban context and the aforementioned business operations to mutually support sustainability. A key aspect of the research inquiry is to determine whether businesses, when operating sustainably, contribute to the promotion of livable cities, and how these contributions occur. Additionally, how does the size of a company impact the decision-making process to engage in activities that promote the environmental quality of the city?.

## LITURATURE REVIEW

### **Sustainable Development, Sustainable Development Goals, and Sustainable City**

Sustainable Development emphasizes the integration of economic, social, and environmental dimensions to ensure future generations' right to quality of life and a clean environment, equivalent to the current generation's standards (Bruntland, 1987). The United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, held five years later, resulted in Agenda 21 (Sangchai, 2018) has suggested that the only way to achieve long-term economic progress is through integration with environmental protection measures (Pollution Control Department, 2020).

In 2015, the decision was made to adopt the Sustainable Development Goals (SDGs) as a framework for development from 2015 to 2030 (Sangchai, 2018). Among the 17 SDGs, one aims to "Make cities and human settlements inclusive, safe, resilient, and sustainable," aiming to improve urban dwellers' quality of life by enhancing urban environmental quality, ensuring access to green public spaces, clean water, and essential sanitation, promoting the use of clean energy, building resilience to disasters, managing pollution and waste effectively, and fostering responsible production and consumption patterns. Additionally, it supports fostering positive

economic, social, and environmental linkages in urban, peri-urban, and rural areas (Aroonsrimorakot & Vajradul, 2016; UN, 2024).

#### **Thailand business sector movement**

The sustainable development direction from the Earth Summit has significantly increased the proliferation of Corporate Social Responsibility (CSR) concepts. Thailand recognized the importance of development in this direction, blending with the philosophy of Sufficiency Economy which led to businesses achieving sustainable stability. This ensures that capital markets grow and remain sustainable in the long term (SEC, 2024).

CSR involves conducting business with consideration for stakeholders, the economy, society, and the environment, guided by ethics and morals. It entails conducting activities with honesty, integrity, transparency, and fairness, aiming to enhance competitiveness and contribute positively to the sustainability of businesses, stakeholders, the economy, society, and the environment. (Academic Collaboration Group for Business Management Standards, Teaching, and Research Development in Thailand, 2012)

Therefore, SEC has been promoting CSR in the Thai capital market since 2006 until the establishment of Thailand Sustainability Investment (THSI) in 2015 (SEC, 2024). THSI comprised of the listed companies that create long-term returns by valuing their responsibility to society (Social) and the environment (Environmental), and by managing their business with transparency, in line with corporate governance principles (Governance), then changed its name in 2023 to “SET ESG Ratings” in order to provide more comprehensive information to support investment decisions. (The Stock Exchange of Thailand [SET], 2024)

#### **Potential of businesses promoting livable-sustainable city**

The Urban Infrastructure Initiative report by the WBCSD highlights the potential of the business sector in promoting the sustainability of cities through infrastructure development. The initiative aims to increase business interest in urban sustainability by focusing on five key potentials: 1) Efficient problem-solving through ownership of technology and innovation, 2) Participation in collaborative problem-solving processes involving multiple stakeholders, 3) Access to funding sources, 4) Economic development through job creation, and 5) Organizational leadership qualities (WBCSD, 2014). This approach creates a win-win situation where cities benefit from efficient and practical solutions at a reasonable cost, while businesses gain access to new markets for innovative products and services that support the establishment of green urban economies.

Whiteman et al. (2011) proposed strategies for businesses to facilitate the transition of cities towards becoming low-carbon cities. They suggested fostering a collaborative mindset that integrates social-environmental perspectives with business, facilitated through efficient communication between city leaders and business executives committed to sustainability. This leads to internal organizational communication aimed at assessing the feasibility of business involvement and developing action plans. Such efforts require operational collaboration between businesses and cities, relying on flexible business development plans that allow for continuous learning and adaptation.

Some studies have delved into business models in urban settings such as urban mobility. For instance, frameworks have been proposed to develop sustainable innovation in urban mobility (de Souza et al., 2019) and smart city (Giourka et al., 2019). There have also been investigations into the relationship between businesses and cities on specific issues, such as parks initiatives (Le Tellier et al., 2019).

## MATERIALS AND METHODS

The first part of the article outlines and rationalizes the chosen research methodology. The second parts present the data collection methods for listed companies on SET, criteria for content analysis, while the subsequent part delves into the findings. In the discussions, the conclusions, limitations, and prospects for future research are presented.

### Target business population

The target population was businesses in SET in the group of THSI that participated since year 2015 until the year 2022 with following point of views:

1) The businesses within SET play a significant role in influencing the country's management. This influence extends beyond the high business value and encompasses a large number of shareholders with significant stakes in these businesses.

2) Businesses in the stock market are considered well-prepared to operate sustainably. This makes them exemplary models for smaller businesses aiming to adopt sustainable practices.

By conducting a census survey of the entire population of companies within the THIS group until the year 2021, a total of 196 companies were identified. The selection process focused on companies that have been consistently operating in Thailand and have stability. Subsequently, so 7 companies were excluded, resulting in a remaining 189 companies.

All companies were grouped using a random Quota sampling method. The businesses within the sustainable stock group were then categorized according to the criteria of the Industry Group index of SET, which classifies them into eight groups based on the type of business (follow with initials): Agriculture and Food Industry Group (AGRO), Consumer Products Group (CONSUMP), Industrials Group (INDUS), Financials Group (FINCIAL), Property and Construction Group (PROPCON), Resources (RESOURC), Services Group (SERVICE), and Technology Group (TECH). (SET, 2024)

### Basic concepts and terminology

#### 1) Scope of Urban Area Consideration

Urban areas are characterized as densely populated regions or territories with a concentration of both income-generating and non-income-generating activities. The population typically consists of individuals engaged in non-agricultural occupations, and there is an organized interaction with assigned roles within the environment (Sorokin and Zimmerman, 1929).

In this article, urban areas refer to regions where people reside, featuring public utilities and infrastructure designed to facilitate improved living conditions. These areas predominantly consist of human-created environments and do not include agricultural spaces.

#### 2) Urban Environment

The urban environment encompasses all elements, both tangible and intangible, within the city and community boundaries. It includes aspects that are perceptible and those that are not, originating from both human and natural sources (Khongouan, 2016). The environmental issues considered in this context include water, air, energy, waste, noise, green spaces, disaster resilience, biodiversity, infrastructure, and greenhouse gases.

#### 3) Book Value

"Book value" refers to the net value of a company's assets according to the most recent financial statements of the company issuing securities. Therefore, the book value is equal to the amount of money that shareholders would receive if the company decided to cease its operations, calculated by subtracting total liabilities from the total asset value. (Jaroensantipong, 2021) In this article, the researcher uses the book value as a component for analyzing the size of the company.

### Data collection

The selected data for consideration consisted of existing data records in report types from companies within THSI, to examine the quantitative aspects of how businesses contribute to enhancing livable cities. Data from public disclosures of corporations were gathered, including

Sustainability Reports, 56-1 One Reports, CSR Reports, Annual Reports, and official corporate websites. The data collection spanned multiple channels and sources, covering a retrospective period of three years from 2019 to 2021, aimed to provide comprehensive information on the operational activities of the companies studied.

The researcher began by examining the business description of the company, including the nature of its operations, its primary sources of revenue, geographical areas of operation, and its customer base. Then investigated the sustainability efforts of the company through "Driving business for sustainability" section that covering environmental and social aspects.

In addition, the researcher gathered financial data for the fiscal year 2021 from companies within the THSI. This information aimed to examine the relationship between the overall Book Value of each industry group and the concepts and practices supporting environmentally friendly activities.

### **Content Analysis**

The data review will be conducted using the Inductive Approach, focusing on the company's sustainability efforts as known as ESG (Environmental, Social, and Governance) particularly in the Environmental and Social areas.

The analysis will then consider the company's activities related to "urban," "community: schools, hospitals, temples, and municipalities" or "operations within urban areas." Additionally, Google Maps in satellite view mode will be utilized to examine areas where uncertainties exist regarding the company's operations. The areas that are considered urban zones include some parts of Samut Prakan province, such as the Bang Pu Industrial Estate, certain areas in Pathum Thani province, like the Khlong 2 and Laem Chabang Industrial Estate and parts of Nonthaburi province. Then the findings will be marked in Google sheet table for further analysis.

The researcher turned contribution channels to score, from Vision, Mission, Values, Business Model, Environmental Management System, and CSR, with each topic earning 1 point. CSR was further divided into 10 environmental aspects: air, biodiversity, carbon emissions monitoring, disaster management, energy, green spaces, infrastructure, noise, wastes, and water, each contributing 1 point. The total score for each company was 15 points.

### **Analysis of Collected Material (Data Visualization)**

The obtained data can be analyzed and visualized using Tableau, allowing for:

- 1) Ranking of companies in terms of their contribution to enhancing the environmental quality of the city within each industry group.
- 2) Comparing contributions in 10 environmental aspects from CSR activities of each industry group.
- 3) Comparing companies with different Book Value to assess the level of contribution on urban environmental quality when brought into comparison.

## **RESULTS**

### **THSI characteristics and classification**

Upon reviewing business documents, it is evident that businesses undertake activities to promote the environmental quality of urban areas in three main dimensions. These include incorporating environmental quality into the Business Model, implementing Environmental Management Systems, and engaging in Corporate Social Responsibility activities that focus on creating a sustainable and beneficial society.

The researcher considered operational activities that contribute to promoting environmental quality in urban areas, divided into various environmental aspects: water, air, energy, waste, noise, green spaces, disaster management, biodiversity, urban infrastructure, and monitoring carbon emission. In total, there were 10 environmental aspects within the urban area.

### 1) Business Model

Once examining the business description of the company, including the nature of its operations, its primary sources of revenue. It can be observed that there are 57 businesses that play a role in promoting urban environmental quality through direct products and services, within business-to-consumer transactions. Examples include using recycled materials in products or as packaging, which reduces the amount of waste going to landfills. Additionally, businesses provide water supply services in urban and community areas, improving access to clean water. There are also businesses that produce clean energy and distribute it to households (through government agencies), as well as those that use water and energy-saving products. Furthermore, some businesses can support sustainable operations, such as offering Green Loans.

### 2) Environmental Management System

When looked into the section "driving business for sustainability" in environmental aspect, leads to the discovery that 84 companies implement "environmental management systems" and monitor carbon emissions in urban areas. Some businesses are benefit from urbanization, such as retail businesses, leasing companies, or real estate developers for residential purposes, and some are operating within urban areas, such as industrial factories located within residential zones. These businesses can be assumed that they contributes to making the city more livable and sustainable.

### 3) Corporate Social Responsibility (CSR)

In the same section in social aspect is found 94 companies that run CSR practices regarding environmental issues that companies operate within urban or community areas. They consider participation in promoting the environmental quality of communities, such as creating public parks in urban areas, installing water supply systems in communities, and setting up collection boxes for proper disposal of unused products. Companies prioritize employee involvement as a key aspect, such as volunteering activities or employee participation in community-based environmental learning exchanges. In this case, the article does not consider companies that solely make donations of goods.

In addition to the visible aspects of business operations, the researchers also consider the conceptual level of conducting business, which includes the Vision (including Purpose) statements, Mission (or objectives) statements and Values (including Beliefs) statements.

4) Vision, Mission, and Values are three crucial components that are interrelated and indicative of the clarity of purpose a company holds (Boonyarataphan, 2017). Therefore, the researcher examined the company's philosophy that included the term "city", "cities", "urban", "urban environment" or "environment" to see if the company has a clear image for environmental stewardship or not. Therefore, the discovery was 33 companies with a vision statement, mission statement, and values related to the environment, followed by 76 companies and 16 companies, respectively.

In the year 2021 (B.E. 2564), there were a total of 872 companies registered on SET, including both the main market and the Market for Alternative Investment (MAI). Out of these, 196 companies belonged to the THSI that had participated at some point. These companies were categorized based on the following industry groups in Table 1.

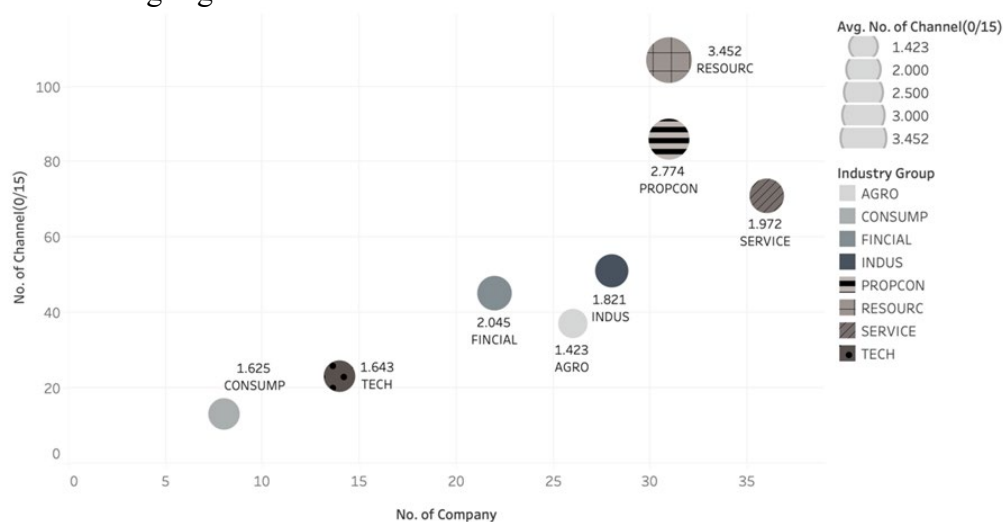
**Table 1** shows the number of companies on SET categorized by industry group.

Ranking	Industry Group	Initials	SET and MAI	THSI	Percentage
1	Resources	Resource	80	31	38.75
2	Agro and Food Industry	Agro	76	26	34.21
3	Financials	Fincial	80	22	27.5
4	Technology	Tech	61	14	22.95
5	Industrials	Indus	133	28	21.05
6	Services	Service	179	36	20.11
7	Property and Construction	Propcon	206	31	15.05
8	Consumer Products	Consump	57	8	14.04

When comparing the number of THSI to the total number of companies in SET. The Resources sector rank first then followed by the Agro and Food Industry. However, though the Property and Construction sector has the highest number of companies in SET, it ranks 7th in THSI. By the way the sector that has lowest participation in THSI and the fewest number of companies in SET is the Consumer Products sector.

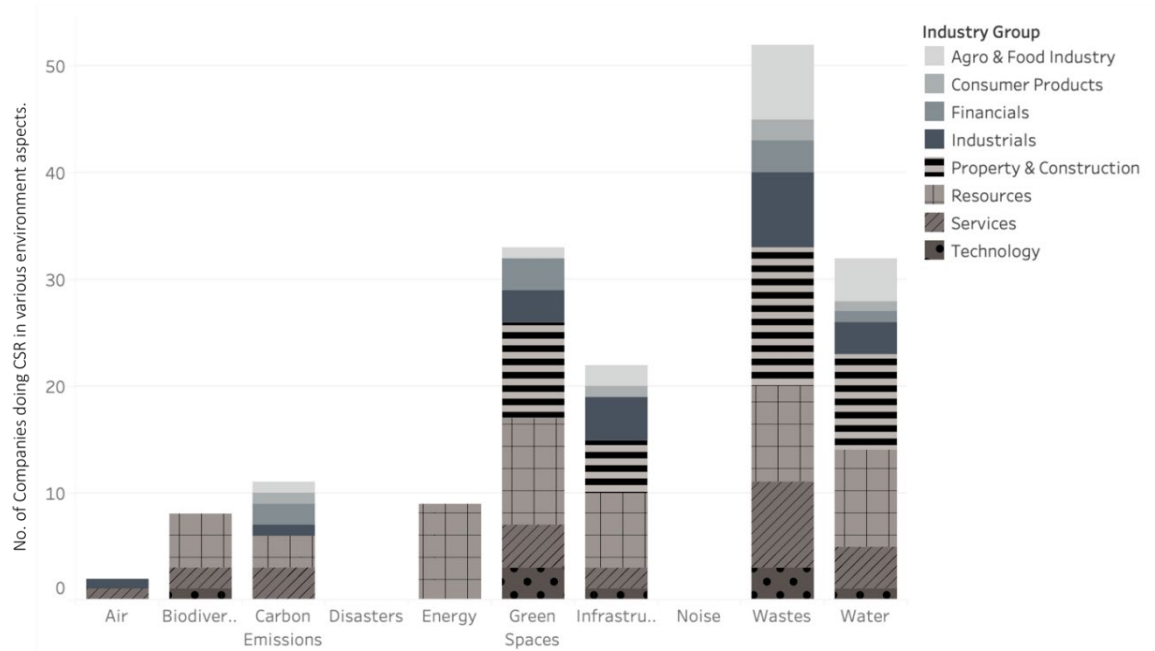
#### **Contribution to enhancing the environmental quality of the city within each industry group.**

It can be observed that the industry group with the highest number of companies participating in sustainable investment is the Services sector. However, the number of channels contributing to promoting environmental quality in the city does not directly correlate with the number of companies. The industry group with the highest number of channels promoting environmental quality in the city is the Resources group, followed by the Property and Construction group with following Figure 1.



**Figure 1** shows the relationship between the number of companies in each industry group and the channels that contribute to promoting overall urban environmental quality within the group. The size of the circles and the numbers under them represent average number of channels contributing to promoting environmental quality.

In terms of environmental aspects in figure 2, waste management ranked first in terms of interest for activities, followed by green spaces and water-related issues. However, none of the companies directly engage in activities to reduce noise pollution or prevent disasters in the community or urban areas. Looking at different industries, the SERVICE and RESOURCE groups have the most extensive distribution of activities promoting urban environmental quality, covering up to seven different aspects. On the other hand, although the PROPCON group has a significant number of activities, they are primarily focused on just four aspects.

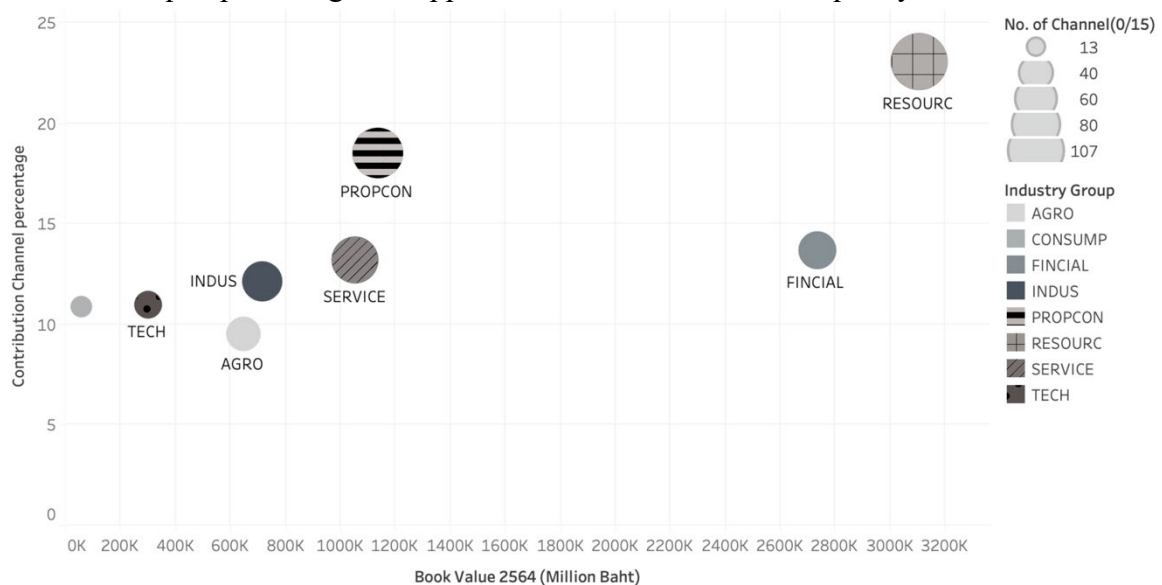


**Figure 2** shows the comparison of contributions in 10 environmental aspects from CSR activities of each industry group

### Comparison of companies with different Book Value to assess the level of contribution on urban environmental quality.

Overall, companies engage in activities to promote urban environmental quality in each industry group, with the majority not exceeding 25% in both conceptual and practical dimensions.

From the figure 3, the industry group with the highest number of channels for promoting urban environmental quality is the Resources group, which also has the highest Book Value. At the same time, the industry group with the fewest channels for promoting urban environmental quality is the Agro and Food Industry group, ranking fifth in Book Value. Meanwhile, the Consumer Products group, with accounting value less than the Technology group by over six times, has an equal percentage of support for urban environmental quality.



**Figure 3** shows comparison on percentage of contribution on urban environment and Book Value of each industry group.



## CONCLUSIONS & DISCUSSIONS

From the overall study results, it can be observed that the RESOURC group is the industry group that shows the highest awareness of sustainability and places the greatest importance on promoting environmental quality in the city. This may be related to the overall accounting value of the group, as it ranks highest even though it may not have the highest number of companies. The group with the second-highest percentage of urban livability promotion is the PROPCON group. This may be because it's an industry that drives urban development. However, what's interesting is that other industries operating within urban areas or benefiting from dense populations should prioritize urban livability promotion activities even more.

However, considering the potential of businesses as mentioned by the WBCSD (2014), leveraging their capabilities to the fullest may increase opportunities for profit generation while simultaneously promoting urban sustainability with the capacities each company possesses.

The aggregation of urban livability promotion efforts by companies in this article, the researchers have included all activities of all companies, ranging from small-scale initiatives to one-time efforts. However, from examining reports over the past three consecutive years, it's evident that company activities vary considerably. Only a minority of companies opt for CSR initiatives, and some invest a portion of their profits to promote urban environmental quality genuinely and consistently.

This leads to the following question: How does each industry group within THSI prioritize factors, drivers, and organizational cultures aligned with sustainable development trends and translate them into promoting urban environmental quality? This dissemination of ideas and practices to other companies, both within and outside THSI, can contribute to the expansion of sustainability from leading companies to communities, societies, and beyond.

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**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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