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Article

Enablers of private sector engagement for sustainable development in Vietnam

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Abstract: The research aims to examine the determinants influencing the business commitment toward sustainable goals in Vietnam. To employ a quantitative research approach, we surveyed 208 business leaders in Vietnam to assess their perceptions and actions regarding sustainable goals. We explored the impact of internal enterprise characteristics and external facilitating factors on different dimensions of sustainable goals by using logistic regression models. This paper's findings reveal that enterprise attributes, corporate leadership traits, and external factors significantly influence sustainable goal engagement. Notably, corporate leaders emerge as pivotal factors, particularly in their willingness to embrace risks and uncertainties. Moreover, this paper's analysis identifies external factors with limited efficacy in fostering sustainable business operations. These insights hold significant implications for governmental institutions in Vietnam, offering valuable guidance for updating and refining policies.

Keywords: private sector; sustainable development; Vietnam

1. Introduction

The global approval of the 2030 Agenda for Sustainable Development in September 2015 marks a pivotal step towards addressing the pressing challenges of environmental degradation and poverty on a worldwide scale. This agenda, while nonbinding, compels nations to delineate their domestic priorities and objectives in accordance with the Sustainable Development Goals (SDGs) (Allen et al., 2019). It provides a framework for cooperation between governments, businesses, and civil society in the pursuit of sustainable development (Hajer et al., 2015) and facilitates a smooth transition toward sustainability (D'Amato et al., 2019; Le Blanc, 2015). The implementation of the 17 SDGs necessitates significant alterations in societal and economic paradigms, heralding a new era of shared accountability on regional, national, and international scale (Bexell and Jönsson, 2017).

Sabbatino and Frey (2018) assert that while the 17 Sustainable Development Goals (SDGs) may not uniformly align with the private sector, they nonetheless pertain to all companies. Pineda-Escobar (2018) observes that private industry entities initially identify the specific SDGs relevant to their operations. However, Allen et al. (2019) identify impediments to SDG compliance, including a lack of efficient frameworks, awareness, and technological capability for integrated planning, attributable to the contemporary intricacy of the SDGs. Thorlakson et al. (2018)

highlight the private industry's predominant focus on labor rights and local regulatory compliance, emphasizing the urgent need for the inclusion of social and environmental concerns as key motivators for SDG achievement. Additionally, given the economy's pivotal role in sustainability, the private sector is inherently linked to the SDGs, as illustrated by the evolving efforts in Arab countries (Allen et al., 2019). Hence, there is a pressing need for comprehensive studies to elucidate the private sector's role in SDG implementation.

Multiple scholars have advocated the adoption of a holistic approach to the SDGs (Saner et al., 2019). Frey and Sabbatino (2018) assert that the SDGs structure was designed to be fully integrated into companies' operations, with all 17 SDGs being integral to their plans. However, due to the extensive and complex nature of the SDGs framework, prioritization is necessary to align implementation steps and indicators with national priorities. Thorlakson et al. (2018) surveyed 449 businesses worldwide to determine how the private sector may use sustainable practices to support particular SDGs, such as altering product formulations and utilizing recycled materials. Allen et al. (2019) conducted an extensive survey of 26 countries using evidence-based approaches, such as systems thinking, analysis, and modeling, to assess SDG implementation. They focused on primary planning stages, including the establishment of coordination mechanisms, stakeholder engagement, and customization of SDGs into national plans. Kumar et al. (2018) utilized interpretive structural modeling to investigate the complex interrelationships among the SDGs, arranging them in a hierarchy. Weitz et al. (2018) examined synergies among the SDGs in planning and policy, employing network analysis and systemic perspectives to develop means of synergies. These methodologies are expected to enhance understanding of SDG connections and facilitate implementation. However, further research is needed to address certain limitations in these approaches. For instance, Kumar et al. (2018) found that a significant proportion of SDG targets lack adequate explanation, suggesting the need for clarification and refinement. Furthermore, Merry (2019), echoing the sentiments of Elder and Olsen (2019), highlights the presence of numerous weak indicators that omit key environmental elements, hindering the adoption of an integrated approach to the SDGs. Weitz et al. (2018) conducted an analysis of the SDGs at the goal level, recognizing their specificity compared to broader goals. To streamline the complexity of SDG goals, Olsen and Elder (2019) and Allen et al. (2019) have highlighted the urgent need to provide useful tools that will help nations prioritize their goals. According to Scheyvens et al. (2016) and Saner et al. (2019), strategies from the business sector should be adjusted to better fit with the SDGs. Similarly, Hacking (2019) addresses the fundamental challenge of connecting the SDGs and managing trade-offs among them. Pedersen (2018) expresses concern about how difficult it is for most private sectors to define their behavior and adjust plans and tactics to meet SDG requirements. Although these primary sources are very helpful in understanding the significance of the private industry in SDG implementation, there is still a dearth of organized scholarly work on the topic. Pineda-Escobar (2019) demands more research on the private sector's function in relation to the SDGs. As a result, the goal of the current review article is to compile academic contributions to the crucial topic of incorporating the SDGs into private sector plans and strategies.

To promote communication between the private and public sectors, the UN Global Compact has been organizing yearly summits of the UN Private Sector Forum since 2008. Notably, this discussion board has increasingly emphasized the importance of supporting the SDGs, particularly through initiatives such as gender quotas, pilot projects, and investments in environmentally friendly infrastructure (Abshagen et al., 2018). Recognizing the pivotal role of the private industry in Agenda 2030, scholars have underscored its potential to drive progress toward reaching the SDGs (Hacking, 2019; Scheyvens et al., 2016), given its predominant role in the economy (Abe et al., 2019). Technology innovation, capital creation, and job creation are all accelerated by the private sector, thereby playing a fundamental role in addressing the economic, societal, and environmental challenges (Frey and Sabbatino, 2018). Academics draw attention to the different ways that the business sector may support the SDGs, such as by offering financial resources, technological know-how, experience, and knowledge (Buhmann et al., 2018). Additionally, businesses now see SDG implementation as a crucial part of their sustainability strategy and objectives (Pineda-Escobar, 2018).

The feasibility of growing private sectors in Vietnam, which significantly depend on natural resources (Awosusi et al., 2023; Dang et al., 2023; Ha et al., 2021), is investigated in this study. The study makes the following claims: (1) The business community may establish both backward and forward connections between resources and production, which could boost growth in economies with abundant resources; and (2) The private sector may provide resource-dependent nations like Vietnam with normal rates of return through linked investments or taxes. As a result, nations that rely heavily on natural resources may demonstrate stable fiscal policy through increased tax revenue and more secure revenues from the sale of SOEs during the privatization process. (3) The private sector development may also lessen the risk of economic instability and violence in nations that depend heavily on natural resources through improved resource management. Consequently, higher revenues, improved resource management efficiency, and economic growth will result from these values. Based on this paper's objectives, this paper seeks answers to the following questions: (1) What are the enablers of private sector engagement for sustainable development in Vietnam? and (2) What are the policy implications for promoting private sector engagement for sustainable development in Vietnam?

This study makes several empirical contributions. To determine the ideal level of privatization, an adaptive adjustment framework at the national level must first be employed. Second, in Vietnam, the factors that affect the ideal level of privatization are empirically identified. Third, it outlines an adjustment model that identifies the policy factors particular to a given country and time period that impact the rate of adjustment. Ultimately, it is determined that the data are appropriate for analyzing the overall state of the private sector and the factors that influence it in nations with abundant natural resources but substantial heterogeneity.

The development of privatization has become essential because it has a greater effect on society. That context has activated an exciting interest in the factors impacting Vietnamese privatization choices. As shown in previous research (Castles, 2002, 2006; Massey et al., 1993; Tóth and Kincses, 2011), some causes clarify the choice to start privatization, encompassing particular social, economic, political, as

well as geographic determinants. However, in Vietnam, no research has investigated the factors of private sector engagement for enabling sustainability.

To cover this gap, this is the first research study to take advantage of the people who determine the livelihoods of private sector engagement to enable sustainability in Vietnam. A rich, two-wave panel investigation of respondents in Vietnam focused on describing the private sector in Vietnam and using those histories to gain insight into Vietnam's private sectors. A conditional capability model is also employed to analyze the socio-economic and demographic characteristics of the respondents and their relevant issues of private sector engagement for enabling sustainability in Vietnam. This paper's data can assist policymakers and governments in better understanding those groups, enabling them to yield social policies and programs to help improve private sector engagement and enable sustainability.

This paper continues as follows. The next section reviews related research and the theoretical structure for the livelihood of return migrants in Vietnam. Then, this paper describes the methods used in the study, along with the data, and finally, presents the study's outcomes. Conclusions are shown in the last section.

2. Literature review

2.1. The private sector's role in meeting sustainability standards

Early in the twenty-first century, growing ecological challenges like increased ecological overshoot, accelerated climate change, and insufficient human demand fulfillment have contributed to the unsustainable depletion of natural resources (Bengtsson et al., 2018). Because of this, if social and environmental issues are not integrated with the financial component of sustainability in private sector activities, there is a potential for adverse effects on the environment and public health to worsen. In light of the private sector's pivotal position in economic investments (Sullivan et al., 2018), Agenda 2030 acknowledges it as a critical stakeholder, emphasizing its noteworthy contribution to the SDGs' achievement (Lalaguna and Dorodnykh, 2018). Although voluntary initiatives are necessary to implement the SDGs, there are still conflicts between mandatory and voluntary responsibilities due to controversial discussions about the functions of environmental concerns in the private sector and among nations (Bexell and Jönsson, 2017). As a result, the private industry ought to play a significant part in sustainability, addressing social and environmental issues in addition to economic progress (Sullivan et al., 2018). Furthermore, in order to be in line with the SDGs, the business sector must be large enough to alter its strategies and plans (Pedersen, 2018; Saner et al., 2019; Scheyvens et al., 2016). Business strategies should adopt a new, holistic approach that prioritizes social and environmental benefits in addition to financial ones (Baldassarre et al., 2017). In a similar vein, Lima et al. (2017) emphasize that increased public sector coordination and assistance are necessary to allow the private sector to commit greater resources to achieving the SDGs. Additionally, the technological and innovative capacity of the large-sized private sector is indispensable in supporting SDG implementation (Hajer et al., 2015). Impact assessments are highlighted as crucial tools for bolstering motivation to address challenges related to sustainability in the private sector (Topple et al., 2017). Roos et al. (2020) state that large-size firms carrying out environmental impact

assessments have many advantages, such as protecting biodiversity and ecosystems, promoting public participation and information access, reducing negative effects on the environment, and ensuring legal compliance and efficient enforcement. The large-sized private sector can accomplish sustainable development objectives because of these advantages.

Based on our discussions, we proposed the hypothesis:

H1: A larger-sized private firm is more likely to engage in a sustainable development target.

Since the private industry in developing countries is mostly to blame for environmental deterioration, there has been a greater focus on the negative effects of global industrial expansion on both the environment and human society (Ardakani and Soltanmohammadi, 2019). Environmental unsustainability and ecosystem abuse are the results of the accumulation of impacts from industrial expansion, driven by unsustainable patterns of production and consumption that prioritize economic advantages over environmental conservation (Kopnina, 2016). In contrast, the Sustainable Development Goals (SDGs) explicitly advocate for "sustainable industrialization" and the "sustainable use of land." The bulk of SDGs are environmental in nature, with the goal of halting pollution, climate change, and environmental deterioration while advancing resource recovery and waste management. Urgent policy actions from the government are required to address these challenging aspects of economic growth that have detrimental effects on human society and the environment in emerging countries (Basilio, 2017; Fleta-Asín et al., 2022; Fleta-Asín and Muñoz, 2021; Filho et al., 2018). According to the Colombian government (2018), over 70% of surface and groundwater is used by the mining and energy sectors, while over 50% of water from public canals is used by the food and manufacturing industries. This results in significant use of non-renewable energy, like natural gas, and has an impact on biodiversity through supply chains and business operations. Governments in developed countries have made progress in energy efficiency, recycling, and waste management, but they have not been able to isolate rising resources and energy consumption from economic growth, which is fueled by ongoing, excessive use of primary resources and non-renewable energy (Osborn et al., 2015). Regarding this, Xiao et al. (2017) highlight the important influence that international trade has on challenges related to sustainable development, namely those pertaining to food security, natural resource usage, and climate change in China. For example, the oil and gas industry, one of the biggest private sectors in the world and a crucial one, uses more than 57% of all fuel produced worldwide. It does, however, also have both beneficial and detrimental effects on a number of SDG-related concerns, aggravating problems including economic inequality, environmental degradation, climate change, and some health problems.

By aligning with the SDGs and using resources and energy efficiently, the commercial sector in developing countries can obtain a competitive edge (Bocken et al., 2014). The quality of life can be raised by implementing sustainability practices, such as recycling plans, resource conservation, energy conservation, safer working environments, cleaner production, eco-friendly product offerings, and ensuring society's health and safety are met (Soltanmohammadi and Ardakani, 2019). According to Malviya et al. (2018), emphasizing the growth of environmentally

friendly merchandise can reduce waste, maximize the use of raw materials, and encourage the manufacture of recyclable and environmentally friendly products, all of which are beneficial to the environment in developing economies. Through productive partnerships with the public and civil society, partnerships for the Goals (SDG 17) give the business sector a platform to play a role in development. By encouraging new partnerships across stakeholders, including science, policymakers, the corporate sector, and local communities, the SDGs facilitate the execution of sustainable growth initiatives in the public and private sectors (Filho et al., 2019). Fowler and Biekart (2017) argue that multi-stakeholder roles and institutional positions are crucial for successful SDG implementation, with the private sector assuming particular responsibility for multi-stakeholder partnerships and development (Georgeson and Maslin, 2018). To ensure proper SDG implementation in developing nations, the private sector must revise and enhance its aims and goals in compliance with the demands of Agenda 2030 (Basilio, 2017; Fleta-Asín et al., 2022). Moreover, governments and the private industry in these countries are increasingly embedding SDGs into assessment rules to facilitate decision-making processes (Abshagen et al., 2018). As private industry commitment to SDG implementation grows, governments are delegating more service responsibilities through privatization, particularly in sectors like water and energy facilities, healthcare, and transportation (Abshagen et al., 2018).

Based on our discussions, we propose the following hypothesis:

H2: the government's policies promoting sustainable development will increase the private sector's likelihood of a sustainable development engagement.

2.2. SDGs and leader's corporate social responsibility (CSR)

The Sustainable Development Goals (SDGs) aim to catalyze a paradigm shift in accountability by implementing appropriate measures to address environmental challenges, particularly in developing nations (Caballero, 2019). Bexell and Jönsson (2017) and Lalaguna and Dorodnykh (2018) emphasize the private sector's crucial role in accelerating the achievement of SDGs within the 2030 Agenda through strengthening public-private partnerships, making environmentally conscious investments, and initiating Corporate Social Responsibility (CSR) programs. The SDGs and CSR goals pursued by the private firm's leader are highly aligned (Buhmann et al., 2019), and private sector companies' commitments by leaders to environmental, social, and economic sustainability depend heavily on their CSR initiatives (Kumi et al., 2020). Therefore, the corporate social responsibility (CSR) of leaders is essential to innovation, economic competitiveness, sustainability, and the effective execution of the SDGs. The primary focus is on how societies and nations can profit from corporate social responsibility (CSR) to address pressing issues related to sustainable development, including health, poverty, energy, education, and the environment (Wirba, 2023).

Thirteen of the seventeen SDGs integrate many environmental elements and place a strong emphasis on social inclusivity (Gupta and Vegelin, 2016). Concepts like the "Responsibility to Protect," corporate social responsibility, and the necessity of addressing climate change, waste management, and other urgent environmental

challenges are becoming more important to academics. Research indicates that environmental and corporate social responsibility programs, particularly in developing economies, not only promote sustainability but can also enhance a business's profitability (Taylor et al., 2018). Private firms' leaders in these countries undertake social and environmental initiatives and experience longer operational lifespans, higher growth rates, and reduced financial losses (Bansal and Ortiz-de-Mandojana, 2016). Sengupta and Pogge (2015) advocate for qualified actors with clearly defined roles and mandates to execute SDG-related tasks effectively. Additionally, Rosati and Faria (2019) observe that in countries with higher CSR certification rates, leaders are aware of their responsibilities, and their businesses are more inclined to report on SDGs and make substantial investments in employment protection and education. Corporate social responsibility (CSR) is considered a prerequisite for supporting the SDGs as it encourages businesses to address environmental and social concerns in their operations, thereby motivating them to identify critical areas for environmental improvements (Ordonez-Ponce, 2023). Deliberations on corporate social responsibility are sparked by the politically divisive regulation of private sector responsibilities through mandatory regulations (Kolk, 2016).

Consequently, corporate social responsibility (CSR) has found widespread adoption by businesses worldwide and has been incorporated into requirements for voluntary sustainability by their leaders, such as ISO 26000. Furthermore, CSR is thought to be a crucial part of public policy in the social and environmental domains that strive to accomplish the SDGs (Marx, 2019; Moratis, 2018). Moreover, Basta et al. (2018) found that social lifecycle assessment, corporate ecological responsibility (CER), and corporate social responsibility (CSR) are important metrics for assessing sustainability in developing nations. Additionally, in an effort to increase accountability in the corporate sector and improve transparency, there is a growing demand for CSR certification (Fleming et al., 2017). The willingness of leaders to implement environmental initiatives, like greenhouse gas reduction, is frequently highlighted in CSR reports (Palmer and Flanagan, 2016). Furthermore, Kumi et al. (2019) found that through CSR programs conducted by these leaders, which include the provision of social services, including job creation, health care, and education, the corporate sector helps promote the SDGs in developing nations.

In order to solve the difficulties of sustainable development, leaders must pledge to strengthen the global healthy environment, even though the SDGs are not legally obligatory. It is widely accepted that the leader's characteristics will determine the business's targets in pursuing sustainable development. Henderson and Loreau (2023) noted that attaining the SDGs would present a number of difficulties, such as a deficiency of strong leadership, cooperative alliances, funding, execution, and quantifiable metrics with efficient data gathering. Nonetheless, important programs like corporate social responsibility (CSR) and other ecological initiatives operate as a link between the private industry and the SDGs because they require more responsible, ethical, and sustainable company practices. Governments in developing economies should enact the necessary laws to coerce the private sector and enforce future improvements since there is now no enforcement mechanism in place. This will ensure widespread adoption (Fukuda-Parr, 2016). Regarding this, Soltanmohammadi and Ardakani (2019) emphasized the benefits of best environmental management practices

for corporate social responsibility (CSR), including managing carbon emissions, handling hazardous waste, and using energy efficiently. These actions are regarded as a type of legal compliance meant to lower manufacturing costs and environmental hazards.

These early endeavors indicate a growing trend of integrating sustainability aspects into business plans and strategies. Recognizing the equal importance of issues across the three dimensions of sustainable development is crucial, as SDGs must be implemented holistically rather than in a fragmented manner. Despite efforts being concentrated on integrating goals and targets, significant work remains to be done in this area.

Based on this paper's discussion, we posit the following hypotheses:

Hypothesis 3: Leaders with a high level of education and environmental protection awareness are more likely to encourage their businesses to engage in sustainable development goals.

3. Data and methodology

3.1. Theoretical structure and model details

3.1.1. Model of flexible adjustment

The dynamic modeling approach has become more popular over the past few decades, but its primary application has been at the firm level. The first attempt to examine capital structure using panel data and the dynamic, flexible adjustment model was accomplished by Banerjee et al. (2000). Heshmati (2001) concurrently endogenized the financial targets and adjustment factors, expanding and improving upon the earlier model.

The effective level of the private sector can be adjusted freely based on an estimate of the *PSD*'s ideal level and the pace at which it adjusts toward the goal or optimal level. The pace at which people adjust to reach the ideal level varies by time and nation. The variables that impact the ideal level of *PSD* cannot be predicted due to the unpredictable movement of the adjustment speed, but the model offers useful insights into how the private sector will behave in the future.

The estimation process for these dynamic, non-linearly parameterized private sector development models involves a set of equations:

$$PSD_{it} = (1 - \delta_{it})PSD_{it-1} + \delta_{it}PSD_{it}^{*} + \varepsilon_{it} \quad (1)$$

Research takes into account these kinds of models in various contexts. In spite of a solid theoretical foundation in the literature on capital structure, the rate of adjustment is limited to assuming that it remains the same for every unit, that is, $(1-\delta)PSD_{\mathrm{it}-1}$ (Bhattacharyya, 2012). However, this paper adjusts at different rates for different countries and times, and this variation is dependent on various determinant variables $(1-\delta_{it})PSD_{\mathrm{it}-1}$.

It is commonly acknowledged in the literature what the optimal decision rule is. Literature uses a lag to address change, but this lag is constant across all countries, meaning that each year has the same change across all countries, or d_{it} PSD^{*}_{it}. This is untrue because different countries behave differently, meaning that the ideal must change depending on the nation and the period.

3.1.2. Specification for the model

In order to determine the factors influencing how the private sector grows and how quickly it adapts in order to reach the desired or goal developmental stage, this investigation uses the robust, flexible adjustment model. The standard static model is first estimated via the ordinary least squares (OLS) method of estimation, which is presented as the next step to begin the econometric specification:

$$PSD_{it} = \sum_{j} \alpha_j X_{jit} + \varepsilon_{it} \tag{2}$$

where X is a vector of the *PSD* determinants, $\propto$ represents the intercept, and $\sum_j \alpha_j X_{jit}$ represents the deterministic component of the model.

Theoretically, the degree to which the private industry is developing in the country (i) at the time (t) should be the same as its optimal level.

$$PSD_{it} = PSD_{it}^{*} \tag{3}$$

where *PSD* represents the ideal state of private sector growth in an economy that depends on resources (i) at a given time (t), over time, it is believed to rely on several aspects of the nation that can be summarized as follows:

$$PSD_{it}^{*} = f(X_{it}, G_i, H_t) \tag{4}$$

where X_{it} is a vector representing the variation in time and the determinants of the intended *PSD*. Given country and time trends, G_i and H_t are vectors of observable and unobservable effects that vary depending on the time and country.

The *PSD*'s ideal level and observed level are equalized, meaning that the actual change in *PSD* from the previous period to the current one is exactly equal to the shift required to reach optimal levels at a time (t), that is:

$$PSD_{it} - PSD_{it-1} = PSD_{it}^{*} - PSD_{it-1} \tag{5}$$

Countries only make partial adjustments every period because doing so is expensive and takes time and resources. Equation (4) can be rewritten by adding the adjustment speed as follows:

$$PSD_{it} - PSD_{it-1} = \delta_{it}(PSD_{it}^{*} - PSD_{it-1}) \tag{6}$$

where it is the adjustment parameter that shows how much the two successive periods have changed. It is a strong assumption that the speed of adjustment in a conventional dynamic panel data structure is a constant (δ). This paper refrains from placing limitations by permitting a flexible pace of adjustment.

The following is a representation of the flexible adjustment parameter: (a) δ_{it} = 0 indicates no adjustment; (b) δ_{it} = 1 indicates complete adjustment to the optimal level within a single period; (c) δ_{it} < 1 indicates partial adjustment when the newly observed *PSD* falls below the optimal value; and (d) $\delta_{it} > 1$ indicates excessive private sector adjustment. This could happen during, after, or quickly after privatization if politicians have a stake in the state of the economy. The state of the economy demands an explanation of the extent and rate of privatization.

The level of adjustment per time frame, or the speed of adjustment d_{it}, has an impact on how the private sector grows. Therefore, δ_{it} depends on a few fundamental policy factors that influence the growth of the private industry.

$$\delta_{it} = L(Z_{it}, Z_i, Z_t) \tag{7}$$

in which Z_{it} is the vector of the factors that influence adjustments between nations. Vectors of observable variables and unobservable effects are represented by Z_i and Z_t. The specification can be used to determine the rate of adjustment:

$$\delta_{it} = \beta_o + \sum k\beta_{1k} Z_{kit} \tag{8}$$

For the ideal level of PSD_{it}^*, the general functional relationships are expressed as follows:

$$PSD_{it}^* = \alpha_o + \sum_{j=1} \alpha_1 X_{jit} \tag{9}$$

The flexible, dynamic adjustment framework for the growth of the private sector can then be specified by rearranging Equation (5) to incorporate Equations (7) and (8) and adding a term for error. There may be disruptions in the decision to develop the private sector. The effects of time, nation, level of dependency, degree of privatization, and assets (oil and gas) are controlled during the modeling process.

The effects of simultaneity and endogeneity are taken into account by the dynamic model. Because of their interdependence, the variables that explain something are calculated as part of a system, and the endogenous variables are exogenesised using their predicted or lag values (Greene, 2012). Thus, the complete dynamic model can be written as follows:

$$PSD_{it} = (1 - \delta_{it}) PSD_{it-1} + \delta_{it} PSD_{it}^* + \varepsilon_{it} \tag{10}$$

Equation (10) and the associated Equations (8) and (9), together with their non-linear parameters, are used to estimate a dynamic private-sector growth model that has an adaptable rate of change.

3.2. Empirical model

Utilising the theoretical structured in the previous section of the study as a base for carrying out empirical analysis, the author builds an experimental model as follows:

$$Private_j = \beta_0 + \beta_1 Control_j + e_j \tag{11}$$

where $Private_j$ is the variable reflecting the engagement of the private sector on sustainable growth target *j*. In this article, $Private_j$ was measured by various variables, including the impact of the private industry's involvement in local community projects (Pri_LocEco_j); ensuring the protection of the rights and interests of local communities via the involvement of the private sector (Pri_LocBen_j); the contribution to local state budgets facilitated by the engagement of the private sector (Pri_LocNS_j); and the reduction of environmental pollution facilitated by the engagement of the private sector (Pri_Env_j). Specifically, utilizing the information in the survey, these dummy variables will take on a value of 1 if firms focus on developing sustainable activities and receive a value of 0 otherwise.

Regarding the explanatory variables, the author tried to encompass all the variables shown in the literature review. However, according to the survey outcomes, the author only keeps the suitable variables for the model. These explanatory variables are divided into six groups, encompassing (1) family characteristics; (2) infrastructure issues; (3) market issues; (4) policy issues; (5) cost issues; (6) institutional quality issues; (7) a leader's personal traits.

Related to group (1), the writers employ variables indicating information about age (Age_j); capital investment ($Large\_cap_j$); the number of employees ($Large\_siz_j$);

gender ($Male_j$); education (Edu_j); and leader's nationality ($Foreign_j$). These dummy variables will be assigned a value of 1 if the firm has been in operation for more than five years, the capital investment exceeds 200 billion VND, the number of employees is greater than 200, the leader holds a bachelor's degree or higher, and the leader's nationality is not Vietnamese.

Regarding group (2), the researcher uses variables indicating information about infrastructure issues, including transportation infrastructure (Inf_1_j); the energy system (Inf_2_j); the water system (Inf_3_j); the technology and information system (Inf_4_j); and the production concentration (Inf_5_j). These dummy variables will take on a value of 1 if the leader considers that these systems affect his/her business and take on a value of 0 otherwise.

In group (3), the author utilizes variables showing information regarding market issues, employing the current market size (Market1); the growth prospect (Market 2); the level of competition in the industry (Market 3); the level of stable economic growth (Market 4); the access to the target market (Market 5); and the level of fair competition (Market 6). These binary variables will be set to 1 if the leader believes that these market issues influence firms' decisions to some degree.

In group (4), the researcher utilizes variables showing information about policy issues, including incentive policies (Policy1); tax incentives (Policy2); the renting or buying procedure (Policy3); rent cut policies (Policy4); and the incentives for firms (Policy5). Those dummy variables will take on a value of 1 if the leader considers that these attractive and fair policies affect his/her business.

Regarding group (5), the researcher utilized variables showing information about cost issues, employing land rental prices and site clearance costs (Cost1); labor cost (Cost2); wastewater treatment cost (Cost3); utility prices (Cost4); shipping and logistics costs (Cost5); raw material costs (Cost6); and informal costs (Cost7). These dummy variables will take on a value of 1 if the leader believes that these high costs impact their business' decision-making process.

In group (6), the writer utilized variables showing information about institutional quality issues, including the legal system on investment and business (InstQ1); investment and business procedures (InstQ2); public services that support business operations (InstQ3); the attitude and transparency of authorities and civil servants (InstQ4); the capacity of creating favorable business environment (InstQ5); the frequency of dialogues between businesses and state agencies (InstQ6); and the benefit of business associations (InstQ7). These dummy variables will take on a value of 1 if the leader believes that those institutional quality issues can alter the firms' decisions.

In group (7), the authors use variables illustrating Vietnamese leaders' traits, such as the ability to accept and take risks (Trait_1); creativity (Trait_2); confidence and decisiveness (Trait_3); sensitivity and passion about business (Trait_4); the business capacity, knowledge and a learning spirit (Trait_5); the national spirit (Trait_6); the international economic integration spirit (Trait_7); the participation in the socio-political system (Trait_8); and other traits (Trait_9). These dummy variables will take on a value of 1 if the leader believes that those traits are possessed by the Vietnamese leader and take on a value of 0 otherwise.

Table 1. Summary of information on variables used in the model.

Dependent variable	Description of variables	count	mean	SD	min	max	VIF
Pri_Sus_j	A dummy that takes the value of 1 if firm j decides to engage in a private sector with a sustainable development target and receives 0 otherwise.	208	0.47	0.50	0.00	1.00	1.17
Pri_LocEco_j	A dummy that takes the value of 1 if firm j decides to engage in the private sector and contribute to a local community project and receives 0 otherwise.	208	0.65	0.48	0.00	1.00	1.21
Pri_LocBen_j	A dummy that takes the value of 1 if firm j decides to engage in the private sector and protect the rights and interests of local communities and receives 0 otherwise.	208	0.68	0.47	0.00	1.00	1.15
Pri_LocNS_j	A dummy that takes the value of 1 if firm j decides to engage in the private sector and contribute more to local state budgets and receives 0 otherwise.	208	0.64	0.48	0.00	1.00	1.33
Pri_Env_j	A dummy that takes the value of 1 if firm j decides to engage in the private sector and focus on green production to reduce environmental pollution and receives 0 otherwise.	208	0.74	0.44	0.00	1.00	1.34
Independent variables							
Family characteristics							
Age_j	It is a dummy variable that takes a value of 1 if firm j operates in the market for more than five years and receives 0 otherwise.	208	0.68	0.47	0.00	1.00	1.22
$Large\_cap_j$	It is a dummy variable that takes a value of 1 if the capital investment of firm j is larger than 200 billion VND and receives 0 otherwise.	208	0.55	0.50	0.00	1.00	1.67
$Large\_siz_j$	It is a dummy variable that takes a value of 1 if the number of employees of firm j is larger than 200 laborers and receives 0 otherwise.	208	0.35	0.48	0.00	1.00	1.91
$Male_j$	The dummy variable takes on a value of 1 if the leader's gender is male and receives 0 otherwise.	208	0.67	0.47	0.00	1.00	2.01
$Educ_j$	The dummy variable takes on a value of 1 if the leader has a bachelor's degree or higher and receives 0 otherwise.	208	0.93	0.26	0.00	1.00	1.21
$Foreign_j$	The dummy variable takes on a value of 1 if a leader's nationality is not Vietnamese and receives 0 otherwise.	208	0.26	0.44	0.00	1.00	1.33
External enablers: Infrastructure issues							
Inf_1_j	The dummy variable takes on a value of 1 if the leader considers that a complete and convenient transportation infrastructure affects his/her business and receives 0 otherwise.	208	0.63	0.48	0.00	1.00	1.41
Inf_2_j	The dummy variable takes on a value of 1 if the leader considers that an efficient and reliable energy system affects his/her business and receives 0 otherwise.	208	0.56	0.50	0.00	1.00	1.39
Inf_3_j	The dummy variable takes on a value of 1 if the leader considers that an efficient and reliable water system affects his/her business and receives 0 otherwise.	208	0.63	0.48	0.00	1.00	1.32
Inf_4_j	The dummy variable takes on a value of 1 if the leader considers that a complete and convenient technology and information system affect his/her business and receives 0 otherwise.	208	0.64	0.48	0.00	1.00	1.45
Inf_5_j	The dummy variable takes on a value of 1 if the leader considers that a high production concentration affects his/her business and receives 0 otherwise.	208	0.60	0.49	0.00	1.00	1.44

Table 1. (*Continued*).

Dependent variable	Description of variables	count	mean	SD	min	max	VIF
External enablers: Market issues							
$Market1$	The dummy variable takes on a value of 1 if the leader considers that a firm's satisfaction with the current market size influences its decisions and receives 0 otherwise.	208	0.51	0.50	0.00	1.00	1.33
$Market2$	The dummy variable takes on a value of 1 if the leader considers that the market, which has a good growth prospect, affects his/her business and receives 0 otherwise.	208	0.59	0.49	0.00	1.00	1.28
$Market3$	The dummy variable takes on a value of 1 if the leader considers that the low level of competition in the industry affects his/her business and receives 0 otherwise.	208	0.48	0.50	0.00	1.00	1.31
$Market4$		208	0.50	0.50	0.00	1.00	1.34
$Market5$	The dummy variable takes on a value of 1 if the leader considers that convenient and easy access to the target market affects his/her business and receives 0 otherwise.	208	0.56	0.50	0.00	1.00	1.36
$Market6$	The dummy variable takes on a value of 1 if the leader considers that fair competition affects his/her business and receives 0 otherwise.	208	0.59	0.49	0.00	1.00	1.29
External enablers: Policy issues							
$Policy1$	The dummy variable takes on a value of 1 if the leader considers that attractive incentive policies for investments affect his/her business and receives 0 otherwise.	208	0.58	0.49	0.00	1.00	1.81
$Policy2$	The dummy variable takes on a value of 1 if the leader considers that a tax cut or tax incentive affects his/her business and receives 0 otherwise.	208	0.62	0.49	0.00	1.00	1.72
$Policy3$	The dummy variable takes on a value of 1 if the leader considers that a fair/good procedure for renting or buying land affects his/her business and receives 0 otherwise.	208	0.66	0.48	0.00	1.00	1.89
$Policy4$	The dummy variable takes on a value of 1 if the leader considers that a rent cut affects his/her business and receives 0 otherwise.	208	0.59	0.49	0.00	1.00	1.87
$Policy5$	The dummy variable takes on a value of 1 if the leader considers that fair incentives for firms affect his/her business and receives 0 otherwise.	208	0.63	0.49	0.00	1.00	1.88
External enablers: Cost issues							
$Cost1$	The dummy variable takes on a value of 1 if the leader considers that high land rental prices and site clearance costs affect his/her business and receives 0 otherwise.	208	0.57	0.50	0.00	1.00	1.71
$Cost2$	The dummy variable takes on a value of 1 if the leader considers that a high labor cost affects his/her business and receives 0 otherwise.	208	0.55	0.50	0.00	1.00	1.71
$Cost3$	The dummy variable takes on a value of 1 if the leader considers that high wastewater treatment costs affect his/her business and receives 0 otherwise.	208	0.55	0.50	0.00	1.00	1.69
$Cost4$	The dummy variable takes on a value of 1 if the leader considers that high utility prices (electricity, water, communication) affect his/her business and receives 0 otherwise.	208	0.59	0.49	0.00	1.00	1.66
$Cost5$	The dummy variable takes on a value of 1 if the leader considers that high shipping and logistics costs affect his/her business and receives 0 otherwise.	208	0.58	0.49	0.00	1.00	1.63
$Cost6$	The dummy variable takes on a value of 1 if the leader considers that high raw material costs affect his/her business and receives 0 otherwise.	208	0.64	0.48	0.00	1.00	1.64
$Cost7$	The dummy variable takes on a value of 1 if the leader considers that the necessity to pay informal costs affects his/her business and receives 0 otherwise.	208	0.61	0.49	0.00	1.00	1.72

Table 1. (*Continued*).

Dependent variable	Description of variables	count	mean	SD	min	max	VIF
External enablers: Institutional quality issues							
$InstQ1$	The dummy variable takes on a value of 1 if the leader considers that a good operational, legal system on investment and business affects his/her firm and receives 0 otherwise.	208	0.61	0.49	0.00	1.00	1.91
$InstQ2$	The dummy variable takes on a value of 1 if the leader considers that a fast performance of investment and business procedures affects his/her firm and receives 0 otherwise.	208	0.64	0.48	0.00	1.00	1.92
$InstQ3$	The dummy variable takes on a value of 1 if the leader considers that numerous public services that support business operations affect his/her business and receives 0 otherwise.	208	0.61	0.49	0.00	1.00	1.88
$InstQ4$	The dummy variable takes on a value of 1 if the leader considers that authorities and civil servants, who have good attitudes, are enthusiastic, and are not bureaucratic, affect his/her business and receive 0 otherwise.	208	0.62	0.49	0.00	1.00	2.01
$InstQ5$	The dummy variable takes on a value of 1 if the leader considers that active local leaders, who create a favorable business environment for businesses, affect his/her firm and receive 0 otherwise.	208	0.51	0.50	0.00	1.00	2.22
$InstQ6$	The dummy variable takes on a value of 1 if the leader considers that the frequency of dialogue between businesses and state agencies affects his/her business and receives 0 otherwise.	208	0.58	0.49	0.00	1.00	2.11
$InstQ7$	The dummy variable takes on a value of 1 if the leader considers that business associations, which provide good support for private sector enterprises to develop, affect his/her business and receives 0 otherwise.	208	0.61	0.49	0.00	1.00	1.89

Source: Author's calculations.

As shown in **Table 1**, we supply information regarding each variable and its statistical description. Based on the surveyed and cleaned data, 208 businesses were encompassed in the last sample. **Table 2** displays the correlation matrix between the key variables in this study. Based on the average statistical index of the variables, it can be seen that all external variables have a positive meaning in sustainable development activities. The average values are above 0.5 (with the scale measured from 0 to 1), except for the variable Market 3, which has a value of approximately 0.5. This shows that the majority of businesses surveyed are interested in and taking action on sustainable development issues. The survey results also show that the standard deviation values of the survey variables fluctuate between 0.4 and 0.5 (with a binary scale). This is an acceptable difference, reflecting certain similarities in the current state of sustainable development at the surveyed enterprises. Because the dependent variables are all dummy variables, the researcher utilized the Logit model to evaluate the impact of those factors on the private sector engagement for sustainable development.

Table 2. Correlation coefficient matrix.

	Pri_Sus	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**	**age**	**large_cap**	**large_siz**	**male**	**educ**	**foreign**
Pri_Sus	1										
Pri_LocEco	0.687***	1									
Pri_LocBen	0.651***	0.731***	1								
Pri_LocNS	0.701***	0.367***	0.433***	1							
Pri_Env	0.559***	0.399***	0.366***	0.568***	1						
age	0.0529	0.0823	0.119	−0.0180	0.0142	1					
large_cap	−0.0912	−0.0718	−0.0678	0.0314	0.123	−0.0678	1				
large_siz	0.123	0.105	0.0907	0.119	0.131	0.177*	0.133	1			
male	0.317***	0.217**	0.214**	0.159*	0.188**	0.192**	−0.127	0.0619	1		
educ	0.114	0.0706	0.0465	0.142*	0.174*	−0.0331	0.195**	0.0856	−0.0780	1	
foreign	0.144*	−0.0301	−0.0142	0.0507	0.101	0.174*	−0.0352	0.376***	0.324***	−0.0469	1

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

4. Results

This paper reports the results of the benchmark model in **Table 3**. Columns 1–5 show the impact of factors influencing the private sector's participation in different aspects of sustainable development in Vietnam. In this analysis, this paper uses five dummy variables. These variables take the value of 1 under specific conditions: when enterprise aims for a common sustainable development goal (Pri_Sus), when private enterprise participates in contributing to local community projects (Pri_LocEco) when private enterprises protect the rights and common interests of local communities (Pri_LocBen) when enterprises contribute more to local state budgets (Pri_LocNs), and when enterprises focus on green production to reduce environmental pollution (Pri_Env). Research results show that demographic characteristics play a pivotal role in driving private businesses toward achieving sustainable development goals. Specifically, businesses with more than 200 employees have a positive impact on their commitment to participate in the Pri_LocEco goal. In contrast, the characteristics of

capital intensity and the number of years of business operation do not have a significant effect on promoting commitment to these goals. Notably, characteristics of business leaders such as gender and professional level show a positive trend towards sustainability goals, except for the nationality of leaders. At the 1% significance level, it is observed that businesses led by male directors exhibit a more positive impact on the ability to engage in all aspects of sustainability compared to those led by female directors, with coefficients ranging from 0.191 to 0.333. This implies that business-helmed male directors play a decisive role in implementing sustainable development within Vietnamese businesses. Highly specialized business leaders form the foundation for fostering participation in Pri_locNS, PriEnv, and the overall target of Pri_Sus. However, business leaders with foreign nationality exhibit a negative tendency towards participating in sustainability goals, specifically for the Pri_LocEco and Pri_LocBen goals.

Table 3. Determinants of private sector engagement for sustainable development in Vietnam: The benchmark model.

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
age	−0.031	0.035	0.076	−0.065	−0.030
	(0.073)	(0.071)	(0.070)	(0.073)	(0.065)
large_cap	−0.096	−0.077	−0.062	0.006	0.092
	(0.068)	(0.067)	(0.066)	(0.068)	(0.061)
large_siz	0.109	0.152**	0.120	0.120	0.083
	(0.076)	(0.075)	(0.074)	(0.076)	(0.069)
male	0.330***	0.257***	0.235***	0.191**	0.195***
	(0.075)	(0.073)	(0.072)	(0.075)	(0.067)
educ	0.285**	0.158	0.114	0.262**	0.274**
	(0.130)	(0.127)	(0.125)	(0.129)	(0.117)
foreign	0.014	−0.189**	−0.159*	−0.040	0.015
	(0.085)	(0.084)	(0.083)	(0.085)	(0.077)
Observations	208	208	208	208	208
R-squared	0.281	0.221	0.203	0.192	0.182

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

The results presented in **Table 4** show that, unlike the baseline model, internal firm characteristics appear to have little influence on engagement with sustainability goals. Specifically, enterprise traits only affect the decision to participate and prioritize green production for environmental pollution reduction. In particular, businesses with large capital, male business leaders, and highly professional leaders promote businesses to participate in green production for environmental pollution mitigation. In addition, the study finds that leaders' foreign nationality reduces the ability of firms to contribute to local community projects. Notably, infrastructure factors positively and significantly affect the sustainability goals of businesses. Specifically, business leaders assert that adequate and convenient transportation infrastructure not only affects their businesses but also promotes common sustainability goals (Pri_Sus), contributes more to the state budget (Pri_LocNS), and focuses on green production

(Pri_Env). Technology-level developed information systems (Inf_4) and high concentration of production with developed industrial parks and industrial clusters (Inf_5) positively affect all aspects of the sustainability goals of the business, except that the insignificant impact of Inf_4 on Pri_Env. This suggests that businesses that focus on the development of technology and information systems and have a high production concentration will push private enterprises towards sustainable goals. In addition, a well-functioning and stable water supply and drainage system affects businesses (Inf_3), indicating their promotion of the rights and interests of local communities. On the contrary, an efficient and reliable energy supply infrastructure negatively affects participation in the above aspect.

In **Table 5**, based on the basic model, the study adds variables belonging to the market issue group to explore further factors affecting the private sector's participation in sustainable development. The author utilizes variables showing information about market issues, employing the current market size (Market_1); the potential growth (Market_2); the level of competition in the industry (Market_3); the level of stable economic growth (Market_4); the access to the target market (Market_5); and the level of fair competition (Market_6). These dummy variables will be set to 1 if the leader believes that market issues influence their corporate decision-making. The results presented in **Table 5** are quite relative to the findings of the base model in **Table 3**. Considering the explanatory variables belonging to the group of market issues, only 3 out of 5 variables show a favourable and statistically significant influence on the participation in the sustainable development of private enterprises, including the current market size (Market_1); the level of stable economic growth (Market_4); and the level of fair competition (Market_6). Specifically, the leaders affirmed that the current market size (Market_1) is very suitable for private enterprises to participate in most aspects of sustainable development at the 10% significance level, with a system of numbers ranging from 0.139 to 0.386, except for the insignificant impact of Market_1 on Pri_Env. Furthermore, a stable level of economic growth (Market_4) not only affects the development of businesses but also promotes private enterprises to contribute to local community projects (Pri_LocEco) and protect the rights and common interests of the local community (Pri_LocBen). This implies that if the economy grows steadily, it will encourage private enterprises to aim for local sustainability. In addition, the healthier the competition between businesses, the more businesses will tend to contribute more to the state budget (Pri_LocNS) and focus on green production (Pri_Env).

Table 4. External enablers of private sector engagement for sustainable development in Vietnam: Infrastructure quality issues.

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
age	−0.043	0.018	0.047	−0.065	−0.020
	(0.068)	(0.067)	(0.066)	(0.070)	(0.064)
large_cap	−0.089	−0.055	−0.034	0.014	0.109*
	(0.066)	(0.065)	(0.064)	(0.067)	(0.062)

Table 4. (*Continued*).

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
large_siz	−0.004	0.033	−0.001	0.040	0.010
	(0.074)	(0.074)	(0.072)	(0.076)	(0.070)
male	0.177**	0.119	0.105	0.070	0.120*
	(0.073)	(0.073)	(0.071)	(0.075)	(0.069)
educ	0.142	0.068	0.056	0.133	0.235**
	(0.124)	(0.123)	(0.120)	(0.127)	(0.117)
foreign	0.087	−0.144*	−0.130	0.023	0.034
	(0.081)	(0.080)	(0.079)	(0.083)	(0.077)
Inf_1	0.133*	0.115	0.032	0.172**	0.202***
	(0.078)	(0.077)	(0.075)	(0.080)	(0.074)
Inf_2	−0.051	−0.133	−0.189**	−0.009	−0.070
	(0.083)	(0.083)	(0.081)	(0.086)	(0.079)
Inf_3	0.020	0.121	0.249***	−0.128	−0.013
	(0.087)	(0.086)	(0.084)	(0.089)	(0.082)
Inf_4	0.254***	0.168*	0.146*	0.205**	−0.011
	(0.087)	(0.087)	(0.085)	(0.089)	(0.083)
Inf_5	0.175**	0.181**	0.163**	0.185**	0.168**
	(0.079)	(0.079)	(0.077)	(0.081)	(0.075)
Observations	208	208	208	208	208
R-squared	0.281	0.221	0.203	0.192	0.182

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5. External enablers of private sector engagement for sustainable development in Vietnam: Market issues.

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
age	−0.019	0.038	0.080	−0.040	−0.019
	(0.068)	(0.065)	(0.068)	(0.072)	(0.066)
large_cap	−0.036	−0.056	−0.018	0.039	0.108*
	(0.066)	(0.063)	(0.066)	(0.070)	(0.064)
large_siz	−0.032	0.032	0.001	0.048	0.030
	(0.074)	(0.071)	(0.074)	(0.079)	(0.072)
male	0.230***	0.153**	0.150**	0.170**	0.172**
	(0.070)	(0.067)	(0.070)	(0.074)	(0.068)
educ	0.171	0.067	0.040	0.186	0.212*
	(0.120)	(0.115)	(0.120)	(0.127)	(0.117)
foreign	0.046	−0.122	−0.116	−0.032	0.038
	(0.080)	(0.077)	(0.080)	(0.085)	(0.078)
Market_1	0.386***	0.284***	0.306***	0.139*	0.065
	(0.076)	(0.073)	(0.076)	(0.081)	(0.074)

Table 5. (*Continued*).

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
Market_2	−0.044	−0.055	−0.123	0.133	0.075
	(0.080)	(0.076)	(0.080)	(0.085)	(0.078)
Market_3	0.026	−0.125	−0.036	−0.058	−0.024
	(0.086)	(0.082)	(0.086)	(0.091)	(0.083)
Market_4	0.012	0.287***	0.165*	−0.079	−0.002
	(0.086)	(0.083)	(0.087)	(0.092)	(0.084)
Market_5	0.128	0.119	0.025	0.071	0.075
	(0.081)	(0.078)	(0.081)	(0.087)	(0.079)
Market_6	−0.013	0.028	0.044	0.171**	0.124*
	(0.072)	(0.069)	(0.072)	(0.077)	(0.070)
Observations	208	208	208	208	208
R-squared	0.281	0.221	0.203	0.192	0.182

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

The influence of government policy issues on private-sector participation in sustainable development is presented in **Table 6**. Research results show that government investment incentive policies have a positive impact on businesses' ability to commit to sustainable goals. Specifically, more attractive investment incentive policies push businesses towards common sustainability goals (Pri_Sus), contribute more to local budgets (Pri_LocNS), and motivate businesses to focus on the production of green exports to help reduce environmental pollution (Pri_Env) at a 5% significance level. Similarly, encouraging fair investment incentives for all businesses will have a positive impact on committing to common sustainable development goals, contributing to local community projects, and securing the local community's rights and interests (at a 1% significance level). In terms of tax-related policies (Policy2), there were no distinctions between the two groups in their private sector engagement in sustainable development.

Table 6. External enablers of private sector engagement for sustainable development in Vietnam: Government policy issues.

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
age	−0.025	0.007	0.041	−0.030	0.000
	(0.068)	(0.068)	(0.067)	(0.070)	(0.064)
large_cap	−0.046	−0.025	−0.004	0.030	0.107*
	(0.064)	(0.063)	(0.063)	(0.065)	(0.060)
large_siz	−0.025	0.022	−0.000	0.037	0.026
	(0.076)	(0.075)	(0.075)	(0.077)	(0.071)
male	0.220***	0.192***	0.181**	0.079	0.115*
	(0.073)	(0.073)	(0.072)	(0.074)	(0.069)

Table 6. (*Continued*).

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
educ	0.141	0.096	0.036	0.156	0.186
	(0.124)	(0.123)	(0.122)	(0.126)	(0.116)
foreign	0.090	−0.155*	−0.152*	0.036	0.084
	(0.082)	(0.081)	(0.081)	(0.083)	(0.077)
Policy_1	0.330***	0.070	0.118	0.257**	0.217**
	(0.104)	(0.103)	(0.102)	(0.105)	(0.097)
Policy_2	−0.030	−0.075	−0.014	0.088	0.034
	(0.114)	(0.113)	(0.112)	(0.116)	(0.107)
Policy_3	−0.114	−0.013	−0.213**	0.066	0.045
	(0.098)	(0.097)	(0.096)	(0.099)	(0.092)
Policy_4	−0.003	0.022	0.188**	−0.087	−0.135
	(0.089)	(0.089)	(0.088)	(0.091)	(0.084)
Policy_5	0.274***	0.381***	0.281***	0.069	0.097
	(0.085)	(0.084)	(0.084)	(0.086)	(0.080)
Observations	208	208	208	208	208
R-squared	0.281	0.221	0.203	0.192	0.182

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 7 depicts the influence of cost-related issues on private sector engagement for sustainable development in Vietnam. Overall, this paper can see that perceived cost issues played an important role in explaining the firms' participation in sustainable development. **Table 8** illustrates the impact of institutional quality issues on private sector involvement in sustainable development. To be more specific, leaders who considered that an operational, legal system for investment and business influence their company's decisions had 0.221 and 0.250 times chance higher than their counterparts in accomplishing sustainable development goals and contributing more to local state budgets at a 5% significance level, respectively.

Table 7. External enablers of private sector engagement for sustainable development in Vietnam: Cost issues.

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
age	−0.036	0.032	0.072	−0.061	−0.049
	(0.066)	(0.065)	(0.063)	(0.064)	(0.057)
large_cap	−0.100	−0.096	−0.068	−0.014	0.083
	(0.062)	(0.062)	(0.060)	(0.061)	(0.055)
large_siz	0.064	0.104	0.077	0.101	0.030
	(0.069)	(0.069)	(0.066)	(0.068)	(0.061)
male	0.250***	0.165**	0.134**	0.137**	0.169***
	(0.069)	(0.069)	(0.066)	(0.068)	(0.061)
educ	0.092	−0.014	−0.053	0.041	0.038
	(0.122)	(0.120)	(0.116)	(0.118)	(0.107)

Table 7. (*Continued*).

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
foreign	−0.029	−0.214***	−0.179**	−0.100	−0.020
	(0.077)	(0.076)	(0.074)	(0.075)	(0.068)
Cost_1	−0.073	−0.162	−0.058	−0.221**	0.075
	(0.110)	(0.109)	(0.105)	(0.107)	(0.097)
Cost_2	0.198*	0.121	−0.026	0.402***	−0.097
	(0.108)	(0.106)	(0.103)	(0.105)	(0.094)
Cost_3	−0.006	0.064	0.003	−0.084	0.148**
	(0.081)	(0.080)	(0.077)	(0.078)	(0.071)
Cost_4	0.239**	0.328***	0.459***	0.117	0.118
	(0.094)	(0.093)	(0.090)	(0.092)	(0.083)
Cost_5	0.167*	0.159*	0.102	0.025	0.036
	(0.093)	(0.092)	(0.088)	(0.090)	(0.081)
Cost_6	0.013	−0.060	−0.025	0.130	0.227***
	(0.090)	(0.089)	(0.086)	(0.087)	(0.079)
Cost_7	0.027	0.023	−0.041	0.241***	0.070
	(0.079)	(0.078)	(0.075)	(0.077)	(0.069)
Observations	208	208	208	208	208
R-squared	0.331	0.281	0.305	0.312	0.334

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 8. External enablers of private sector engagement for sustainable development in Vietnam: Institutional quality issues.

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
age	−0.046	0.016	0.041	−0.055	−0.036
	(0.070)	(0.070)	(0.069)	(0.067)	(0.064)
large_cap	−0.046	−0.036	−0.014	0.049	0.092
	(0.066)	(0.066)	(0.065)	(0.063)	(0.060)
large_siz	−0.001	0.072	0.017	0.007	0.024
	(0.075)	(0.076)	(0.074)	(0.072)	(0.068)
male	0.288***	0.234***	0.214***	0.128*	0.160**
	(0.072)	(0.072)	(0.071)	(0.069)	(0.065)
educ	0.093	0.008	−0.049	0.042	0.192*
	(0.127)	(0.128)	(0.126)	(0.122)	(0.116)
foreign	0.023	−0.201**	−0.165**	−0.002	0.026
	(0.082)	(0.083)	(0.081)	(0.079)	(0.075)
InstQ_1	0.221**	0.071	0.135	0.250**	0.099
	(0.101)	(0.101)	(0.099)	(0.096)	(0.091)
InstQ_2	0.037	0.118	−0.091	−0.016	−0.085
	(0.106)	(0.107)	(0.104)	(0.101)	(0.096)

Table 8. (*Continued*).

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**Pri_Sus**	**Pri_LocEco**	**Pri_LocBen**	**Pri_LocNS**	**Pri_Env**
InstQ_3	0.035	0.066	0.179**	0.199**	−0.038
	(0.091)	(0.092)	(0.090)	(0.087)	(0.083)
InstQ_4	−0.014	−0.051	−0.102	−0.021	0.199**
	(0.094)	(0.095)	(0.093)	(0.090)	(0.086)
InstQ_6	0.113	0.129	0.191**	−0.043	−0.079
	(0.079)	(0.080)	(0.078)	(0.076)	(0.072)
InstQ_7	0.106	0.063	0.080	0.159*	0.218***
	(0.090)	(0.091)	(0.089)	(0.086)	(0.082)
Observations	208	208	208	208	208
R-squared	0.264	0.177	0.184	0.266	0.211

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

5. Conclusions

The research aims to examine the determinants influencing the business commitment toward sustainable goals in Vietnam. To employ a quantitative research approach, this paper conducted a survey of 208 business leaders in Vietnam to gauge their perceptions and actions regarding sustainable goals. The sustainable goals examined include a commitment to overall sustainable development (Pri_Sus), Contribution to local community projects (Pri_LocEco), protection of rights and common interests of the local community (Pri_LocBen), Increasing contribution to local budgets (Pri_LocNs), and prioritizing green production to reduce environmental pollution (Pri_Env). In addition to internal enterprise characteristics, this paper explores external facilitating factors, including Infrastructure Issues (Inf), Market Issues (Market), Policy Issues (Policy), Cost Issues (Cost), Institutional Quality Issues (Inst), and a leader's personal traits, and their influence on different dimensions of sustainable goals. This paper's findings reveal that enterprise attributes, corporate leaders, and external facilitating factors have significant roles. Notably, corporate leaders emerge as pivotal factors, as does their willingness to embrace risks and uncertainties. Moreover, this paper's analysis identifies certain external factors that exhibit limited efficacy in fostering sustainable business operations. These insights hold significant implications for governmental institutions in Vietnam, offering valuable guidance for updating and refining policies aimed at sustainable goals. By aligning policies with the identified influential factors, governmental institutions can incentivize businesses to prioritize environmental sustainability, thereby fostering a more robust commitment to sustainable practices within the private sector.

This paper's results hold significance for Vietnamese policymakers as they refine and revise regulations pertaining to the private sector. This allows them to fully comprehend the environmental, economic, and social advantages associated with the engagement of the private industry in fostering sustainable growth. By considering the different issues of the private sector's engagement in sustainable development, this paper's outcomes substantially impact the private industry's involvement and

underscore the significance of factors that substantially affect the private sector's participation in sustainable development, significantly influencing livelihoods. Consequently, policies will be better formulated to maximize benefits and improve people's well-being. Even with continuous improvements to the Vietnamese government's policies, there is still a deficiency in coordination. In general, most businesses in the private sector find it difficult to get government assistance to promote sustainable growth.

This paper's outcomes are crucial since they suggest novel government policies for individuals operating in the private sector before, during, and after deciding to pursue sustainability standards. The primary target of policy design is to assist in stimulating the welfare and benefit of the private sector's participation in sustainable development. Vietnam is characterized by natural resource dependence and environmental degradation. Hence, Vietnam faces many difficulties in encouraging firms to pursue the goal of sustainable development. They have a high risk of failing and losing in the market if there is no government support and encouragement. This paper recommends that private firms should not be arbitrarily chosen but must undergo careful choice and be trained with the significant skills to start on the path toward sustainable development.

The findings of this study could be interpreted in light of limitations. This paper only utilized the archival data accumulated for Vietnam with a limited number of observations. Although sustainable development is important in this country, it is vital to consider this issue in other developing countries as well. More research will follow with the incoming flow of more sophisticated and updated data. In particular, this paper would want to delve deeper into each component of the private sector to learn more about their impacts on sustainable development. Furthermore, future studies should incorporate channels and mechanisms through which the relationship between the private sector and the sustainable development goal becomes more pronounced.

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