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Assessing Environmental Protection Activities through Policy Indicators and Business Support Services in the Red River Delta Region

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Abstract

Policies and services supporting businesses in environmental protection are one of four component indexes of the green policy index, to assess the extent to which businesses can access and benefit from policies and business support programs aimed at green business and practices implemented by local governments. Through this component, we measure two aspects of businesses' access, one is with policies that encourage and support businesses to practice green business and two, consulting and training services to improve environmental performance (such as energy efficiency, waste management, use and/or production of renewable energy). Recognizing the importance of green growth, Vietnam has begun the transition to a more

sustainable economic growth model. Measuring the provincial green index in general and the service policy index to support businesses in environmental protection in particular is necessary in Vietnam. The article aims to evaluate the index of policies and services supporting businesses in environmental protection of provinces in the Red River Delta region in 2022, thereby examining the causes leading to different results between provinces, and learn about policies for provinces to achieve sustainable development goals through improving policy indicators and services to support businesses in environmental protection in the Red River Delta region.

Keywords: Provincial Green Index, Support Services, Businesses, Environmental Protection

1. Introduction

Vietnam is one of the leading countries in not investing in new thermal power plants but only developing plants in the old planning, and is at the forefront of developing wind power and solar power. Vietnam has welcomed the world's trend of green energy conversion. This is a mandatory requirement to meet international standards and move towards a future of sustainable development. Businesses, as the main energy producers and consumers in Vietnam, have an important role to play in this transition. Businesses can reduce emissions by adopting energy-saving measures, switching to renewable energy sources, and investing in low-carbon solutions and technologies. According to the plan of the Ministry of Natural Resources and Environment, by 2030, Vietnam will have to cut at least over 563 million tons of CO₂ gas. To achieve the proposed plan, businesses have proactively implemented technological solutions to reduce CO₂ emissions. Investing in green production is the direction that many businesses choose to build reputation in the export market and let their products penetrate deeper into export markets around the world. In addition to businesses' efforts in green production and environmental protection, policies from all levels of government in Vietnam are also needed. These are policies and services that support businesses in encouraging the use of energy saving, using renewable energy, reducing air pollution...

Therefore, the goal of this article is to evaluate the index of policies and services supporting businesses in environmental protection of provinces in the Red River Delta region in 2022, thereby examining the causes leading to different results between provinces, and exploring policies to help provinces achieve sustainable development goals through improving the Policy and business support services index in environmental protection.

2. Theoretical basis

The Provincial Green Index was created to supply data for local and federal policy makers to use when drafting legislation to reduce the damaging effects of environmental pollution and climate change on the environment while promoting corporate sustainability and production. For the aforementioned reason, the PGI Index is designed as a ranking index based on input

criteria, much like the PCI Index. These criteria are formed from a system of indicators measuring input policy factors (the measures of actions taken by provincial governments), which may be correlated with the climate and state of the environment, such as natural disasters, or with indicators of air or water quality, such as the sulfur dioxide (SO₂), nitrogen dioxide (NO₂), or fine dust index (PM 2.5).

In order to measure the effectiveness of environmental governance in provinces and cities and to establish a connection between environmental preservation and economic growth, the Provincial Green Index consists of four component indices, each consisting of 44 indicators. The PGI index methodology follows the same procedures as the Infrastructure and PCI indexes; this is why the research team refers to it as the "three-step process." The process of gathering information for calculating indicators involves gathering data from two primary sources: "hard" information gathered from published official sources and "soft" information gathered via the annual PCI survey for domestic and foreign direct investment businesses. After standardizing the indicators, the research team constructed component indices that were theoretically related to one another to represent significant facets of environmental governance. Developing component indices entails putting techniques into place to modify the value of each assessment indicator on a 10-point scale. The process of allocating weights to each component index in accordance with their degree of significance in connection to significant outcome/performance variables results in the overall PGI Index.

Policies and services to support businesses in environmental protection are one of four components of the provincial green index. This component index accounts for 25% of the total proportion of the PGI index. This component index evaluates the policies and support services applied by the provincial government to promote businesses with behaviors and decisions that create positive environmental impacts beyond minimum environmental standards according to Vietnamese laws or international standards. For instance, the lack of capacity building services for businesses to engage in green production and investment activities can be addressed by local governments offering business support services such as consulting on licensing procedures for investment projects with environmental protection elements, training services, technical training, and worker ability to enable businesses to implement investment projects with environmental protection factors.

Component index 4 measures two aspects of businesses' access, one is with policies to encourage and support businesses to practice green business and two, consulting and training services to improve environmental performance (such as energy efficiency, waste management, use and/or production of renewable energy). Policies and services to support businesses in environmental protection include the following criteria: Policies to encourage and support economical and efficient use of energy; Policies to encourage and support clean energy/renewable energy; Policies to encourage and support air pollution reduction; Policies to encourage and support the reduction of water and wastewater pollution; Policies to encourage and support plastic waste reduction; Policies to encourage and support waste recycling; Policies to encourage and support increased resilience to natural disasters; Policies to encourage and support reforestation; The provincial government provides

consulting services to improve environmental performance; The provincial government provides training services to improve environmental performance.

3. Index of policies and services to support businesses in environmental protection in the Red River Delta provinces in 2022

The component scores "Policies and services to support businesses in environmental protection" in 11 provinces and cities in the Red River Delta region are shown in Fig 1. Thai Binh is considered to have the best policies and services to support businesses in environmental protection in the region with a score of 3.24. The national median score is 1.93, so in the Red River Delta region, there are up to 5 provinces and cities with this component score lower than the national median score, which are Bac Ninh, Ha Nam, Hanoi, Hung Yen, and Ninh Binh. Provinces with high scores for policies and business support services in environmental protection that are highly appreciated by surveyed businesses include Hai Duong, Hai Phong, Nam Dinh, Quang Ninh, Thai Binh, and Vinh Phuc.

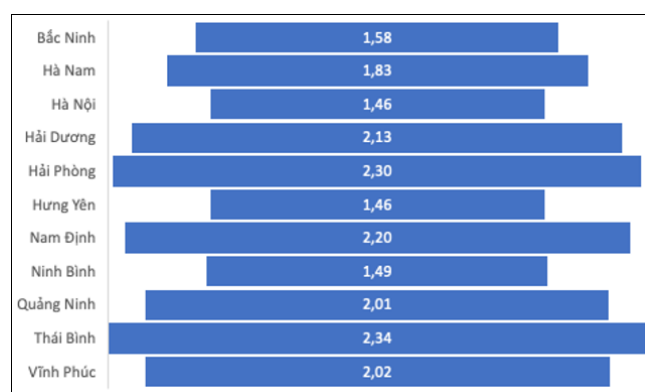


Fig 1: Index of policies and services to support businesses in environmental protection in 2022

Dimension 1 of the index "Policies and services to support businesses in environmental protection" focuses on businesses' perceptions of the availability and convenience of accessing policies to encourage and support businesses. This dimension uses the following indicators: The proportion of businesses that have benefited from local encouragement and support policies in the following contents: Economical and efficient use of energy; clean energy/renewable energy; reduce air pollution; reduce water and wastewater pollution; reduce plastic waste; recycle rubbish; increase resilience to natural disasters. The business's answer has options, corresponding to a scale of 0-4. Enterprises that have never benefited from any policy are assigned code 0. Among enterprises that have benefited from a policy, enterprises evaluate the procedure to receive support from the policy program as "completely unfavorable" is assigned code 1 and "completely favorable" is assigned code 4. With "Policy to encourage and support economical and efficient use of energy", the median index of the whole country is 1.00. In the Red River Delta region, provinces achieve scores greater than the median score, including Hai Phong (1.36), Thai Binh (1.44), Vinh Phuc (1.95), Nam Dinh (1.68). With "Policies to encourage and support clean energy/renewable energy", the median index of the whole country is 0.32. In the Red River Delta region, provinces with scores higher than the median score include

Hai Duong (0.43), Hai Phong (0.74), Vinh Phuc (0.36). With "Policy to encourage and support air pollution reduction", the median index of the whole country is 0.52. In the Red River Delta region, provinces with scores higher than the median score include Ha Nam (0.71), Hai Duong (0.84), Quang Ninh (0.67). With "Policies to encourage and support the reduction of water and wastewater pollution", the median index of the whole country is 0.44. In the Red River Delta region, provinces with scores higher than the median score include Ha Nam (0.59), Hai Duong (0.61), Hai Phong (1.07), Nam Dinh (0.60).

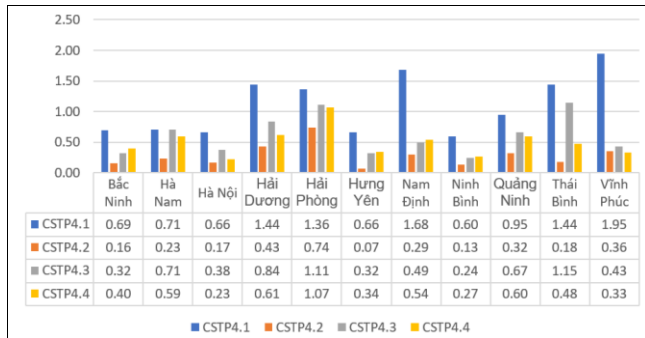


Fig 2: Scores of the first 4 indicators of dimension 1 of the index "Policies and services to support businesses in environmental protection"

With "Policy to encourage and support plastic waste reduction". With "Policy to encourage and support waste recycling", the median index of the whole country is 0.40. In the Red River Delta region, provinces with scores higher than the median score include Ha Nam (0.50), Hai Duong (0.61), Hai Phong (0.73), Quang Ninh (0.59). With "Policy to encourage and support increased resilience to natural disasters", the median index of the whole country is 0.17. In the Red River Delta region, provinces with scores higher than the median score include Hai Duong (0.34), Quang Ninh (0.27). With "Policy to encourage and support reforestation", the median index of the whole country is 0.16. In the Red River Delta region, provinces with scores higher than the median score include Hai Duong (0.22), Quang Ninh (0.33).

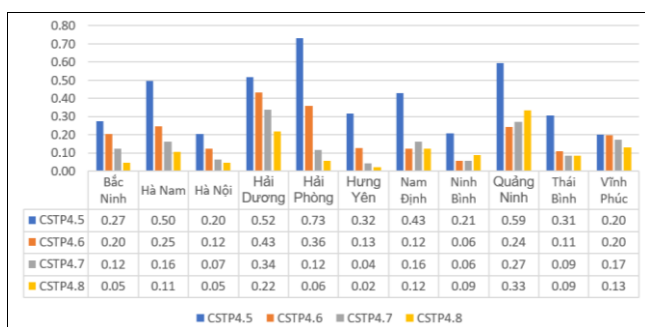


Fig 3: Scores of the following 4 components of dimension 1 of the index "Policies and services to support businesses in environmental protection"

Dimension 2 measures the availability of consulting and training services provided by local authorities to support firms' environmental performance. Specifically, the first indicator takes the proportion of businesses that have been provided with consulting services to improve environmental performance (coded as 1) and the business's assessment of

the quality of the service (coded as from 1 = Poor to 4 = Good). Similarly, with the second indicator, take the proportion of businesses that have been provided with training services to improve environmental performance and the business's assessment of the quality of the service.

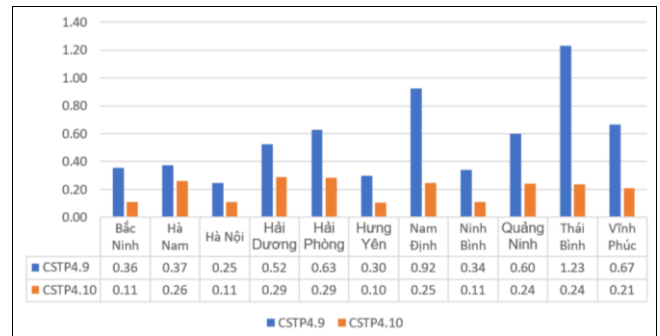


Fig 4: Score of dimension 2 of the index "Policies and services to support businesses in environmental protection"

With the indicator "Provincial authorities provide consulting services to improve environmental performance", the 2022 survey results show that provinces in the Red River Delta region have quite low scores. Compared with the national median score (0.54), most provinces in the Red River Delta have scores lower than the median score. Specifically, Bac Ninh (0.36), Ha Nam (0.37), Hanoi (0.25), Hung Yen (0.30), Ninh Binh (0.34). Thai Binh is the province with the highest score of 1.23.

With the indicator "Provincial authorities provide training services to improve environmental activities", the 2022 survey results show that provinces in the Red River Delta region have quite low scores. Compared with the national median score (0.25), most provinces in the Red River Delta have scores lower than the median score. Specifically, Bac Ninh (0.11), Hanoi (0.11), Hung Yen (0.10), Ninh Binh (0.11), Quang Ninh (0.24), Thai Binh (0.24), and Vinh Phuc (0.21). Hai Duong and Hai Phong are the provinces with the highest scores at 0.29.

4. Conclusion

The provincial green index is considered a useful policy tool, effectively assessing environmental protection issues. The provincial green index contributes to promoting the improvement of an environmentally friendly business and investment environment, ensuring sustainable development. Policies and services to support businesses in environmental protection are one of four components of the provincial green index in Vietnam. According to the 2022 survey results, it shows that the level of access of businesses to incentive and support programs for green practices is still quite limited in most provinces in the Red River Delta region. Many policies and services are accessible to businesses, but the procedures for businesses to benefit from support from the program are still not favorable. This is reflected in the scores of the indicators in dimension 1 of the policy component index and business support services in environmental protection in 11 provinces in the Red River Delta region. Similar to the survey results in dimension 1, for dimension 2, the survey results are also quite low. Many provincial governments in the Red River Delta region do not yet provide consulting and training services to improve environmental performance.

Thus, to improve the provincial green index in general, and the policy and service index to support businesses in environmental protection in particular, the governments of provinces and cities in the Red River Delta region need to have more policies and services to support businesses to improve local environmental performance. Governments in the provinces must regularly organize dialogues to remove difficulties for businesses; Support providing information related to the environmental field for businesses; Propagate, advocate and encourage businesses to apply science and technology to improve the effectiveness of environmental protection. It is necessary to promote the role of localities to promote and support businesses towards green transformation in production and business activities. The province strengthens leadership and direction of departments, branches, districts and cities to continue promoting propaganda and guidance on measures to protect the environment and respond to climate change for people and businesses. Strengthen the application of a number of technical tools to quantify greenhouse gas emissions targets, targets on greening production, greening lifestyles and promoting consumption, preserving natural capital and system services. Ecological. It is necessary to build and implement well mechanisms and policies to attract and effectively use resources for development investment, strengthen public-private cooperation, focusing on large domestic and international businesses and corporations economically and in the direction of green and sustainable development.

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