

**MINISTRY OF EDUCATION
AND TRAINING**

**MINISTRY OF PLANNING
AND INVESTMENT**

VIETNAM INSTITUTE FOR DEVELOPMENT STRATEGIES

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**ECONOMIC DEVELOPMENT IN COASTAL AREAS
OF THANH HOA PROVINCE IN THE DIRECTION
OF MODERNITY**

Major: Economic Development

Code: 9310105

SUMMARY OF PhD THESIS

HANOI, 2022

This thesis is made at :

VIETNAM INSTITUTE FOR DEVELOPMENT STRATEGIES

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*The PhD thesis will be defended before the Thesis Judging
Council at Vietnam Institute of Development Strategies*

Date:

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PREAMBLE

1. Reasons for choosing the topic

In recent years, development towards modernity has been identified as a fast, effective and sustainable method of economic development. Many countries which have not aimed for being the world's leading industrialized countries have had high GDP per capita, such as New Zealand, the Netherlands, Denmark, Sweden, Switzerland, Singapore,... The common strategy of these countries is the modernization not only in their industrial sector but in all areas of the economy. As the case of China, since early 1978 when it was still one of the poorest countries in the world, the government has carried out economic reform policy, The Four Modernizations, which has had more broaden scope than "industrialization and modernization". As such, China has become the second largest economy in the world (only behind the US).

Vietnam is in the process of modernizing the economy, especially in the coastline regions of 28 provinces and cities bordering the sea. The coastal area has great potential to become the "locomotive" in the economic development plan of Vietnam. In the master development plan, the government has included marine development strategies, island system and coastal area development plan based on research projects at the national level and investigating marine resources as suitable models for economic and social development for coastal areas. Further, the master plan has made proposals specified for coastal areas in terms of economic zone and marine port development. However, the exploitation of the coastal areas of Vietnam has been under expectations beause of lacking breakthrough solutions to match potentials and expectations. Besides, many theoretical issues of modern coastal economic development have not been clarified and have been in need of further investigations.

Thanh Hoa is one of the cases which has been suffered from the mentioned issue. The coastal area of Thanh Hoa province (including 4 districts, 1 town and 1 city) has great potentials of becoming the “locomotive” in order to enable the integrated development of the whole province but has not been effectively promoted yet. On August 5, 2020, the Politburo of the 12th Central Committee of the Communist Party of Vietnam issued Resolution No. 58-NQ/TW with the goal of transforming Thanh Hoa into a new growth pole through breakthrough solutions. As such, Thanh Hoa together with Hanoi, Hai Phong and Quang Ninh can create the economic development quadrangle in the North of Vietnam. From the cases of Hai Phong and Quang Ninh, where coastal areas has been growing rapidly in recent years, it has been clear that in order to achieve the above goal, a breakthrough in economic development for Thanh Hoa province by modernizing its coastal area to become an "economic locomotive" has been an urgent need. However, up to now, there is not any research on economic development of the coastal areas of Thanh Hoa province towards modernization.

Therefore, with the aim of providing theoretical background about modernizing economic development in coastal areas to propose practical implications for Thanh Hoa province in terms of key tasks and solutions, the author has chosen to carry out the study "Economic development in coastal areas of Thanh Hoa province in the direction of modernity".

2. Research objectives and tasks

2.1. Research objectives

The study aims to carry out orientations and solutions for economic development in coastal areas of Thanh Hoa province towards modernity by 2030.

2.2. Main research tasks

- + Investigating basic theoretical issues of economic

development in coastal areas towards modernity (in the context of Vietnam).

+ Evaluating the current situation of economic development in the coastal area of Thanh Hoa province in the direction of modernization to clarify the achievements and limitations also causes of current issues in the economic development in coastal areas of Thanh Hoa.

+ Proposing orientations and solutions for economic development in coastal areas of Thanh Hoa province towards modernization by 2030.

3. Research framework

The research framework has been designed as follows:

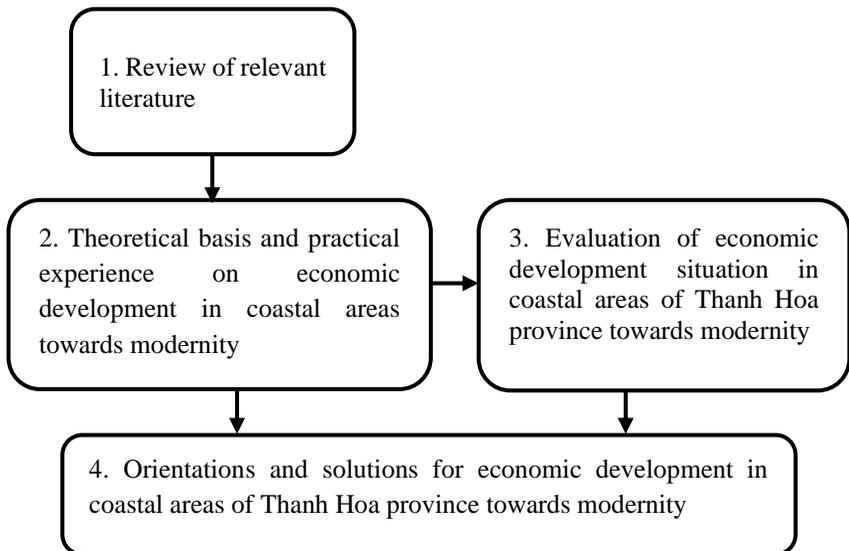


Figure 1: Research framework of the thesis

4. Research methodology and approaches

4.1. Research approach

The main approaches of the study include: (i) Systematic approach; (ii) From theory to practice; (iii) Macro-micro approach;

(iv) Interdisciplinary - interregional approach; (v) Resource-based approach; (vi) Cause - effect approach.

4.2. Research methodology

The study uses the following main methods: System analysis method; Statistical analysis methods associated with the use of maps, tables and graphs; Professional solution; Comparative method; Mathematical modelling method; Forecasting method; SWOT analysis; Field survey method.

5. Contributions of the study

5.1. Theoretical contributions: The study develops a research framework on economic development in coastal areas in the direction of modernity; explains the meanings of economic development in coastal areas in the direction of modernity (modernizing development activities in coastal areas; organizing economies by territories, urban areas in advanced and modern forms; modernizing management of economic development in coastal areas); identifies the factors affecting economic development in coastal areas in the direction of modernity (which affirmed the important role of governance, benefits for society, investors and the state); identifies criteria for assessing economic development in coastal areas toward modernity in the context of Vietnam.

5.2. Practical contributions: The study provides more scientific basis for government agencies in planning development policies in the short, medium and long term and proposing solutions to promote economic development toward modernity of coast-related industries, territories and urban areas in association with seaports and sea tourism. Proposing economic development orientations for key sectors and generating modern multi-disciplinary complexes that create high competitiveness in the context of the strong impact of the industrial revolution 4.0. In addition, the study also provides insights for investors, enterprises and local people to consider and decide on their development in the coastal areas of Thanh Hoa province.

CHAPTER 1

LITERATURE REVIEW ON MODERNIZING ECONOMIC DEVELOPMENT

1.1. Overview of development and modernization of the economy

Most of research topics only mentioned industrialization and modernization in general for the national economy, a few studies investigated the issue of modernization as an independent subject. All researches emphasized the role of modern technology to achieve the goal of modernizing economic development.

1.2. Overview of factors affecting modernizing economic development

The reviewed studies focused on examining the factors affecting industrialization and modernization in terms of direct impact factors such as state policies, the influence of capital resources, the impact of globalization, the role of FDI, the role of technical infrastructure and the role of human resources.

1.3. Overview of the assessment of modernizing economic development

Most of the authors combined the evaluation criteria for industrialization and modernization at the national level. The set of criteria proposed by the authors included various indicators. However, many of which were not directly related to industrialization and modernization while some important indicators such as labor productivity and technological level of economic sectors had not been mentioned yet.

1.4. Overview of regional development management

There have not been many studies on regional development management. Although the management of industrialization and modernization was considered in some studies, the studies only approached the issues at the fundamental level and general description but not practical implications in details such as the

inspection, supervision and implementation of the policies on development and modernization.

1.5. Overview of findings

From the findings of the study, there are important viewpoints as following:

a). Findings from literature:

- Many authors believe that industrialization must be the heart of modernization. However, there are few pioneering studies investigated modern development from the same perspective as this study. In general, several studies have emphasized the important role of modernization in the economic development of a country and a territory.

- Some authors have mentioned the factors affecting industrialization and modernization, specifically, they emphasized a number of important factors such as legal, development orientations, economic policies, human resources, natural conditions, globalization, and international integration.

- A few authors have identified important indicators of industrialization and modernization such as the proportion of high-tech products in the export processing industry, the contribution of manufacturing industries in the total value of industrial production, urbanization rate.... These are valuable findings that could be adopted in this study.

b) Research direction of this study

The study will deeply examine issues including: (1) The concept of economic development in coastal areas towards modernity; (2) Factors affecting economic development and management of economic development in coastal areas towards modernity; (3) Determining a system of indicators used to evaluate economic development in coastal areas towards modernity; (4) Evaluating the current situation and proposing orientations and solutions to promote economic development in coastal areas of Thanh Hoa province towards modernity in the coming years.

CHAPTER 2

THEORETICAL BASIS AND PRATICAL EXPERIENCE OF MODERNIZING ECONOMIC DEVELOPMENT IN COASTAL AREAS

2.1. Economic development of coastal areas towards modernity

Based on the scope of the study (the coastal area including districts, towns and cities bordering the sea), the study has clarified the connotation of coastal development towards modernity. The core of economic development in coastal areas towards modernity focuses on improvements in the quantity and quality of economic activities in coastal areas towards a more modern, efficient and sustainable direction. As such, it leads to the improvement of people's living standards, and enhancement of competitiveness in the context of the industrial revolution 4.0 and climate change. Specifically, the main concerns include: (1) Economic development activities are integrated towards modernity direction; specifically, all sectors of the economy such as agriculture, industry, services, education and training, health care, infrastructure, urban development, environmental protection, ... must be developed in a modern direction prioritized effectiveness and sustainability; (2) Forms of regional economies must be advanced and modern; (3) The management of coastal economic development is much more modern, in which digital public services are developed.

2.2. Factors affecting economic development in coastal areas towards modernity

The factors affecting the economic development of coastal areas in the direction of modernity will be differed at different stages of development, including: (1) The orientation of economic

development and the state management; (2) Profitability and benefits for the State, enterprises, investors and inhabitants; (3) Modern technology and technological capabilities; (4) Advanced regional manufacturing arrangement; (5) Market and globalization of investment, technology, production and consumption; (6) Geo-economic position, infrastructure, human resources, inhabitants' willingness and other factors. In which, factors (1) and (2) are identified crucial role.

2.3. Evaluation of economic development in coastal areas towards modernity

After the confirmation of evaluation goals, the author identifies a system of criteria for evaluating economic development in coastal areas in a modern direction as follows:

- (1) Proportion of high-tech sectors in GRDP;
- (2) Contribution of the high-tech sector to GRDP growth;
- (3) Social labor productivity;
- (4) GRDP per capita;
- (5) Economic openness;
- (6) The proportion of added value in total production value;
- (7) The coefficient of production concentration.

In order to analyze the core of modern development, the study focuses on the following indicators:

- (1) The proportion of investment in the high-tech sector in total social investment;
- (2) Economic structure by industry;
- (3) The quality of management and administration of the local government for the development of coastal areas in the direction of modernity.

2.4. Overview of practical experience on economic development in coastal areas towards modernity

From the practices of countries and localities in marine economic development presented above, it is possible to identify some important lessons for the modern development of Thanh Hoa's marine economy in the direction of modernity:

- First, the local government need to develop policies through the master development plan based on a long-term vision and confirmed research findings.

- Second, it is necessary to adhere to the comparative advantage of the region, instead of diversified investment.

- Third, economic development in coastal areas requires a lot of capital, therefore, policies need to strongly motivate strategic investors who have advantages in marine economic development, especially domestic and international large enterprises.

- Fourth, in the context of the fourth industrial revolution, the coastal area of Thanh Hoa province needs to quickly develop and implement digital solutions to accelerate the digital transformation of the region.

- Fifth, in the context of Vietnam, it is necessary to review relevant coastal economic development of other regions to have appropriate orientations and solutions to develop coastal areas of Thanh Hoa province.

CHAPTER 3
THE SITUATION OF ECONOMIC DEVELOPMENT IN THE
COASTAL AREAS OF THANH HOA PROVINCE TOWARDS
MODERNITY IN THE PERIOD OF 2011 - 2020

3.1. Evaluation of factors affecting economic development in coastal areas of Thanh Hoa province in the direction of modernity

The study generally assesses the main advantages and disadvantages for economic development in coastal areas of Thanh Hoa province by using SWOT model and evaluating the influencing factors presented in Chapter 2.

a). Advantages: The convenient location and synchronized transport infrastructure system facilitate Thanh Hoa in trading with provinces and cities throughout the country; having abundant human resources and a large regional consumption market; having lots of natural resources and tourism potentials compared to many other regions in Vietnam; large-scale and interconnected infrastructure is being upgraded and expanded; having Nghi Son Economic Zone and Sam Son coastal city which are in the process of relatively rapid development to form a number of important factors in promoting rapid and large-scale economic development.

b). Disadvantages: The base of the local economy is low compared to the national average one, the economy is not developed, the economic scale is under potential and the ability to accumulate investment from within the economy is weak; inhabitants in the coastal areas and islands have low living standards, living conditions are greatly affected by climate change (dry season, lack of water in the dry season, deep saline intrusion) and the rising sea level; the quality of labor is limited, there is the lack of highly skilled employees in the

manufacturing industries; the number of enterprises is large, but mainly small and micro enterprises of which competitiveness and corporate governance are weak; high-tech adoption and implementation are limited.

3.2. Status of economic development in coastal areas of Thanh Hoa province

3.2.1. Economic development

Because the economy of the coastal districts, towns and cities of Thanh Hoa province has a low starting point, the added value is still relatively low even though the GRDP growth rate is relatively fast, reaching nearly 12,1%/year; VAT in total production value is at an average level (nearly 40 - 45%). Annually, the average growth rate of sectors are different, specifically, approximately 12,6% in the industrial manufacturing sector, about 12,2% in the service sector, and nearly 2.8% in the agriculture sector. In the total GRDP of coastal areas increases from 2010 to 2019 (accounted for 24.031 billion VND, industrial manufacturing contributed nearly 58,8%, services contributed nearly 37,3%, agriculture contributed approximately 3,9%.

Table 3.5: Some economic indicators of coastal areas

Indicators	Unit	2010	2015	2019
1. GO, 2010 prices	Billion VND	33.196	48.118	83.991
2. GRDP, 2010 prices	Billion VND	13.345	21.605	37.376
<i>% of GO</i>	%	40,2	44,9	44,5
3. Average growth rate of GRDP in 2010 - 2015 and 2015 - 2019	%	-	10,1	14,6

Source: Thanh Hoa Statistical Office.

3.2.2. Development status of a number of key industries and fields

a) Structure of industries and fields

From 20XX to 20XX, The economic structure of the coastal area of Thanh Hoa province has had positive changes, specifically, the proportion of agriculture has decreased from 22,4% to 10,5%; the proportion of industrial manufacturing increased from 46,4% to 54,4%; whereas the contribution of high-tech sectors to the GRDP of coastal Thanh Hoa is still limited. Although the proportion of high-tech sectors has increased, the growth rate tends to slow down. In general, digital transformation process of businesses and governments have been slow. The application of information technology, electronic systems and automation in the production and trading of goods and services has not been synchronized and is widely disseminated.

Table 3.9: Economic restructuring coefficient of coastal areas

Period	$\cos \phi$	ϕ	Transfer speed (%)	Shift speed by (%)
<i>According to 3 major industrial manufacturing groups Industry - Agriculture - Service</i>				
2010 - 2015	0,990038	8,09	8,99	1,64
2015 - 2019	0,995275	5,57	6,19	1,41
2010 - 2019	0,975678	12,66	14,06	1,47
<i>By high-tech field</i>				
2010 - 2015	0,995012	5,73	6,36	1,24
2015 - 2019	0,996653	4,69	5,21	1,28
2010 - 2019	0,983527	10,41	11,57	1,25

Source: Author calculated according to Thanh Hoa Statistical Office

Analysis by Vector-method shows that the speed of economic restructuring in three major industry groups in coastal Thanh Hoa takes

place at an average speed and there is not any breakthrough; especially, in the period 2015 – 2019, the restructure tends to slow down. Meanwhile, the speed of transformation in the high-tech sector tends to increase, but it is limited and still lower than the speed of the 3 large industry groups. As such, it is difficult to create a breakthrough for rapid and modern development of coastal area.

b) Industrial sector

The industrial manufacturing sector in the coastal area of Thanh Hoa province has achieved positive results, especially in recent years. The average production value in the period 2010 - 2019 increased by 14,1%/year. However, the structure of manufacturing products is limited, there are no products with high technology content and great added value such as components and electronic equipment. Refining and petrochemical industry, cement, electricity, steel, seafood processing, garment and footwear are the main components but the added value is low. In addition to a number of large-scale petrochemicals, thermal power, and cement refining projects, with certain high technology content, most of the remaining production projects have only medium and advanced technologies.

c) Service sector

Tourism in the coastal areas of the province has not yet had a strong development compared to its potential. Tourism products are not rich and mainly in the summer months. Activities are mainly concentrated on famous beaches such as: Sam Son; Hai Tien (Hoang Hoa); Hai Hoa (Nghi Son). Maritime and logistics services in the coastal area of Thanh Hoa have just begun to develop, most of which are in the process of investment and construction. The technical infrastructure system serving the port and supporting the circulation and transportation of goods is still limited. Health, education, culture and communication services are generally underdeveloped.

d) Agriculture sector

Agricultural production value in the period 2015 - 2019 has improved but there is not a breakthrough, the average annual growth rate is nearly 3.4%. The agricultural structure has changed in the direction of reducing the proportion of crop production, increasing the proportion of livestock and agricultural services, but cultivation still accounts for a large proportion. A number of concentrated breeding and cultivation areas have been established, and models of fruit and vegetable growing in clean greenhouses have been built, but have not yet been replicated. In the agricultural structure, agricultural services have not really developed strongly, accounting for only 4-5%. Fisheries development is also not modern, farming is mainly extensive, fishing is mainly with small boats.

3.2.3. Status of technical infrastructure development

The technical infrastructure connection system is low-quality and can be more synchronous and modern. The coastal area of Thanh Hoa does not have a complete highway nor a common wastewater and garbage treatment facility. Nghi Son Port has not used automatic applications for operation and management.

- The road system within the coastal area has been established but of limited quality. It has a total length of 1,846 km, but has not yet met the transport demand.

- The seaport system has been developed, especially Nghi Son port with a capacity of 20 million tons in the first phase, then nearly 30-40 million tons in the next phase.

- Electricity and clean water supply systems are available, but there is a lack of wastewater and solid waste treatment systems, and climate change response facilities.

3.2.4. Situation of socio-economic territorial organization

Since 2017, Sam Son has been upgraded from a district to a city. Five years have passed with little improvement. Sam Son has not had imprinted architectural works not a planned urban space. Nghi Son Port and Nghi Son Economic Zone were built, but the development of urban areas, infrastructure and housing for employees has not been implemented synchronously. Other towns and commune centers do not have long-term planning and construction is still spontaneous. The countryside is unorganized because townpeople build their own housing. The formation of the urban system in the coastal area reveals many inadequacies.

Table 3.16: Territorial structure of coastal areas

Indicators	Unit	2010	2015	2019
- GRDP, 2010 prices	Billion VND	13.345	21.605	37.376
- Only the locomotive territory	Billion VND	5.191	11.796	25.976
<i>% of total GRDP</i>	%	38,9	54,6	69,5
+ Sam Son	Billion VND	1.735	3.716	7.288
<i>% of total</i>	%	13,0	17,2	19,5
+ Nghi Son EZ	Billion VND	2.429	6.157	15.137
<i>% of total</i>	%	18,2	28,5	40,5
+ Hai Tien and Hai Hoa	Billion VND	1.027	1.923	3.551
<i>% of total</i>	%	7,7	8,9	9,5

Source: Thanh Hoa Statistical Office.

3.3. Assessment of economic development in coastal areas of Thanh Hoa province towards modernity

3.3.1. Main results and limitations

In general, the coastal area of Thanh Hoa province has developed in the direction of modernization; the economic growth rate of the coastal area is slightly higher than the provincial average (12.1% compared to 10.5%); GRDP/person, social labor productivity in recent years has been higher than the province's average, proving that the economic development of the coastal area is faster than that of other regions in the province.

Table 3.17: Summary of criteria for assessing the development of coastal areas in Thanh Hoa province towards modernity

Indicators	Unit	2010	2015	2019
1. Proportion of high-tech sectors in total GRDP (H ₁)	%	7,9	15,8	21,5
2. Contribution of high technology to GRDP growth (H ₂) (5-year and 4-year period)	%	-	28,6	29,3
3. Social labor productivity (H ₃)	Mil. VND	19,9	31,9	52,3
4. GRDP per capita (H ₄)	USD	620	1.330	2.350
5. Economic Openness (H ₅)	%	15,7	36,2	39,3
6. Proportion of added value in total production value (H ₆)	%	40,2	42,9	44,5
7. Industrial production concentration coefficient (H ₇)	time	1,28	1,17	1,15

Source: Author calculated according to Thanh Hoa Statistical Office

However, the results of modern economic development in the coastal area of Thanh Hoa have been underexpected and have not met the inherent potentials. While the petrochemical industry and a

proportion of electricity production, cement, transportation and cargo handling at Nghi Son port, part of banking, telecommunications, and tourism services applied high technology, the majority of sectors use medium and low technology. The results and effects brought about by modernization are not clear, demonstrated by the low impact on the socio-economic development. In general, the economic development indicators of the coastal area of Thanh Hoa province are estimated slightly higher than the average level of the province and the whole country, but much lower than that of developed countries.

3.3.2. Causes of the limitations

(1). State management in the coastal area of Thanh Hoa has many rooms for improvement: The authorities of the districts, towns and cities in the province have not met the economic management requirements of the coastal areas in the context of the industrial revolution 4.0; the implementation of e-government is slow. In recent years, PCI and PAPI of Thanh Hoa province are only in the average group of the country (ranked nearly 20-30/63 provinces and cities).

(2). Investment in economic development in coastal areas is limited: In general, the investment capital is insufficient compared to the development needs and the investment has not brought the desired effect. The region has sustained heavy investment in heavy industry, with low efficiency and average added value, while the investment in technology development is inadequate.

(3). The number of enterprises is not many, the number of enterprises engaged in science and technology activities is small: In the area, there is a lack of businesses with financial and technological abundance, so the participation in global economic integration reveals many limitations. At the same time, there are not many large and

strong enterprises acting as the driving force for economic development

(4). *The quality of human resources is still limited, the labour structure is not modern:* Labour quality is still low, only nearly 31% of trained employees have certificates; the majority of employees in the agricultural and service sectors have not been trained.

(5). *The field of science and technology develops slowly, without much innovation:* The level of science and technology is at an average level, with a large gap with developed countries. The technological level of enterprises in coastal areas is below average, the proportion of production lines with modern technology is low (only nearly 20%).

CHAPTER 4

ORIENTATIONS AND SOLUTIONS FOR ECONOMIC DEVELOPMENT IN COASTAL AREAS OF THANH HOA PROVINCE IN THE DIRECTION OF MODERNITY BY THE YEAR 2030

4.1. Strategy for economic growth in coastal areas of Thanh Hoa province in the direction of modernity

(1). Efficiency and sustainability become the highest criteria for economic development policies in coastal areas for the short, medium and long term.

(2). Implement advanced production methods and research from the present time; conduct concentrated investment to form a number of leading territories; using high technology and developing products that are environment-friendly; considered attracting investment from large economic groups of Vietnam as well as of foreign countries.

(3). Build strong digital capabilities, apply science and high technology to the development of economic sectors; strongly emphasize development of sectors and fields to ensure the quality of economic growth and transform the economic structure according to modern direction.

(4). Develop a connected region with other parts of Thanh Hoa province, as well as with other provinces, big cities and coastal areas in the North, and North Central region of Vietnam.

4.2. Orientations for economic development in coastal areas of Thanh Hoa province by the year 2030

4.2.1. General goals and orientations

From the requirements in Resolution 58-NQ/TW dated August 5, 2020 of the Politburo, refer to the adjusted report on the master plan on socio-economic development to 2020, with orientation to 2030, 5-year socio-economic development plan 2021 - 2025 of Thanh Hoa province and coastal districts, towns and cities, the author evaluates the ability to deploy solutions to modern development in coastal areas of Thanh Hoa province. Below are the general goals for economic development of coastal areas of Thanh Hoa by 2030:

- In the period of 2020 - 2030, strive for the GRDP growth rate to reach approximately 12.5 - 13.5%/year.

- GRDP/person will reach approximately 7.800 – 8.200 USD by 2030.

- By 2030, the export value will reach over USD 8.0 billion and the economic openness will reach approximately 80-90%.

- Total social development investment capital reaches over VND 500,000 billion in the period 2020 - 2030.

- Labour productivity increases by approximately 12-13%/year.

- By 2030, the high-tech sector will account for 40% of GRDP.

** General orientations:*

- Development of key fields: seaports and maritime economy, industry associated with ports, tourism and high-tech marine eco-agriculture; infrastructure system developed in a synchronous and modern direction, fully connected with the infrastructure system of Thanh Hoa.

- Build the coastal area into a leading territory with strong economic capacity. The coastal area has an economic growth rate of at least 1.3 times higher than the general economic growth rate of Thanh Hoa province.

- Coastal development management become the leading field of the economy. In coastal areas, most public services reach level 4.

4.2.2. Detailed orientations on economic development in coastal areas of Thanh Hoa province towards modernity

4.2.2.1. Development of industrial sector: Sustainable industrial development focus on the following fields: Refining and petrochemical industry; Steel industry and mechanical engineering; Mechatronics industry; Electrical industry; Building materials industry; Development of industrial complex - port services; Modern development of Nghi Son economic zone and industrial parks and industrial clusters in coastal areas.

4.2.2.2. Growth on service industries, especially tourism: Focus on tourism activities associated with the sea; development of transportation and logistics; promoting relevant fields such as commerce, education - training, healthcare, finance and banking, information and communication, etc., creating a foundation for tourism development. Promote the application of digital technology to enhance smart tourism such as: free WIFI coverage for coastal cities; building digitalized maps of tourist destination; improve digital capabilities of the state administration and management for tourism;...

4.2.2.3. Modern development of agriculture: Put efforts into increasing the value added of agricultural products while increase agricultural services to meet the demand for supplying materials, fertilizers, and consuming agricultural products. Develop sustainable aquaculture models, raised according to VietGAP and GlobalGAP standards. To build shipbuilding facilities for fishing with large capacity, equipped with modern technology and equipment, especially fishing equipment, storage and preservation to increase capacity, volume as well as quality of seafood caught offshore.

4.2.2.4. Development of technical infrastructure system: modernizing transport infrastructure, especially on the coordination at seaports connected with the transportation and circulation of goods, the formation of a logistics centre associated with the inland port (IDC); develop electricity and water supply network, telecommunications infrastructure, system of waste treatment works; modern environmental protection activities and disaster forecasting.

4.2.2.5. Development of coastal urban lines and coordination by territory: Expand the coastal urban chain including: Nghi Son - Sam Son - Hai Tien urban area in close connection with Thanh Hoa city, forming a mega-urban region. Organizing coordination by territory includes: (1) Planning the urban and rural residential areas with a long-term vision towards modernity; (2) Coordinating Nghi Son economic zone, industrial parks with the coastal urban system to create mutual links in the process of operation and development; (3) To form hi-tech agricultural zones and hi-tech aquaculture zones associated with ecotourism; (4) Coordinating the complex of seaports - port industry - logistics with free trade zones and high-class resorts.

4.2.2.6. Modern development of state management of coastal areas: (1) *Enhancing* state management and state governance for coastal areas; (2) Decentralizing state management among the provincial government and the district and commune levels in the

direction of effectiveness and efficiency; (3) Building urban government and e-government; (4) Forming an electronic trading floor for tourism, industry, agriculture and fisheries commodities.

4.3. Evaluation of economic development prospects in coastal areas of Thanh Hoa province by the year 2030

After assessing the economic development basis presented in chapters 2 and 3, the authors have calculated the indicators of the economic development prospects of the coastal area in the current direction up to 2030. Accordingly, the efficiency of coastal development in Thanh Hoa province is relatively high and economic development in the direction of modernity has reached a significantly higher level, specifically:

(1). The proportion of high technology use accounts for approximately 38-42% of the total GRDP of coastal areas in 2030 (in value, nearly 6.6-7.6 times higher than in 2019).

(2). The contribution rate of sectors using high technology to economic growth of the coastal region will reach approximately 38% in the period of 2020 - 2025; reaching nearly 47 - 54% in the period of 2025 - 2030.

(3). Labour productivity in 2030: nearly 180 million VND, 2010 price, 3.5 times higher than 2019.

(4). GRDP/person is nearly 114 - 120 million VND, 2010 price; At current prices, it is expected to reach approximately 185 - 195 million VND, equivalent to nearly 7.850 – 8.300 USD.

(5). Economic openness of coastal areas: approximately 80-90% by 2030.

(6). The proportion of added value in total production value reached nearly 50% (up approximately 6 percentage points).

(7). The centralization coefficient has reached a fairly high level, in 2030 reaching approximately 1.96 (1.7 times higher than in 2019).

4.4. Solutions for economic development in coastal areas of Thanh Hoa province towards modernity by the year 2030

4.4.1. Solution 1: Improve the effectiveness and efficiency of state management and administrative reform over economic development in coastal areas. It is feasible to study, build a pilot and put into operation the coastal operating center system which is integrated with available data and applied the most advanced scientific and technological analysis to manage socio-economic activities in the locality.

4.4.2. Solution 2: Develop and attract strategic investors towards the modernization of the coastal area on the basis of development orientations and requirements for building a modern and synchronous infrastructure system.

4.4.3. Solution 3: Develop a team of strong enterprises, including many large enterprises. Focusing on supporting businesses to promote the application of science, technology and innovation, applying industrial revolution 4.0 achievements to improve productivity, quality and competitiveness of products and goods

4.4.4. Solution 4: Develop high-quality human resources, especially managers, entrepreneurs and highly qualified technical experts. Implement linkage between the province's training institutions with domestic and foreign training institutions to form a team of leading experts.

4.4.5. Solution 5: Improve the efficiency of science and technology applications for the Fourth Industrial Revolution. Focus on investing in concentrated software zones, information technology centres, research zones, technology incubation zones, etc., so that by 2025, they will be able to effectively apply high technologies in the key economic sectors of the coastal region.

CONCLUSION

(1). Economic development in coastal areas of Thanh Hoa province has a solid theoretical and practical basis. The author has clarified the content and nature of the topic, and pointed out 6 important factors affecting the economic growth in the area and identified 7 main indicators used to analyze and evaluate economic development in coastal areas towards modernity.

(2). In recent years, the coastal area of Thanh Hoa province has been gradually developing. However, the potentials, strengths and comparative advantages of the coastal area of Thanh Hoa province have not been effectively promoted, therefore the area maintains unmodern economic structure, disproportionate economic growth rate and average quality of development. The reasons include the incapability of state and local government, limited investment attraction, poor quality of enterprises, human resources, science and technology.

(3). By 2030, Thanh Hoa province's coastal areas aims to modernize industrial sector, tourism, agriculture, fisheries, and technical infrastructure systems; modernize urban areas, economic zones and tourist areas. The author has proposed 5 principal solutions to develop the coastal economy in a modern direction. If the coastal area successfully implemented the author's guide, the economic growth rate will reach about 13%/year in the whole period of 2020-2030, resulted in 96 - 97% of the proportion of economic structure will be non-agricultural industries and the proportion of high-tech sectors will account for about 40% of GRDP. The socio-economic situation of the coastal area of Thanh Hoa province will be significantly improved.

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