

Restructuring of Agriculture in the Northwest Region of Vietnam — Situations and Solutions

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Abstract: The Northwest is considered to be the poorest economic region in the country. The economic structure is backward, with agriculture being the main production sector, accounting for high proportion and slow transition. Its industry and services have not developed, besides, the proportion is still small and there has been no exploitation of strengths for economic development. For the Northwest region to exploit the potentials for the strong development of industry and services, and economic transition towards industrialization and modernization, there must be breakthrough solutions such as: industrial development planning, reasonable service, attention to infrastructure development investment, material, and technical facilities, the attraction of domestic and foreign investment, open policies, investment in building several key industries, promoting the province's advantages; In addition, there is a need to develop strong service industries, especially tourism. Having appropriate solutions to transform the economic structure of the region, the Northwest will develop a stronger economy.

Key words: economic restructuring, solutions, potentials, ventilation

1. Introduction

Economic restructuring is a concern of many countries around the world. The restructuring of the agricultural economy is to exploit potentials, strengths and rational use of natural resources. For underdeveloped economic regions, the issue of restructuring the agricultural economy is a matter of special concern, especially in the current market economy period. In the Northwest of Vietnam, the economy is underdeveloped, the economic structure is backward and slow-moving. Researching to find solutions to economic restructuring, exploiting strengths to develop the economy for the region is an important and necessary issue. This article will study economic restructuring and propose solutions to economic restructuring for this region.

2. Data and Research Methods

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2.1 Research Data

The study of economic restructuring involves theoretical and practical issues. The research data is mainly from expert documents, data from the Statistical Yearbook of Vietnam, the Statistical Yearbook of the provinces in the region, provincial economic development reports and results of field trips.

2.2 Research Methods

This article uses the main research methods of synthesis, analysis and comparison. These methods are to analyze and properly assess the current situation of economic restructuring. Through the Statistical Yearbook of the country and the Northwest region, the author will calculate the ratio of agriculture - forestry - fishery, industry - construction and services, to find the change in the proportion of the above groups. From that change, the author analyzes the causes and proposes solutions to change more positively.

This article also uses the research results of field trips through professional exchanges with economic managers. The field trips were made by the author in all 4 provinces of the Northwest region. The author went to the provincial People's Committees to study the reports, ask for practical data from the authorities to get specific and accurate data. Through these direct meetings, the author also exchanged and explored thoughts, aspirations as well as consulted with the solutions proposed by the managers. The questions are often posed through meetings such as: “What has the local economy accomplished over the years?”, “What are the difficulties for local economic development?”, “What breakthrough solutions are needed to change the economic structure?”. The answers of the local authorities were also analyzed, finding commonalities, which coincide with those of the Northwest region. Based on the analysis, evaluation, and results of those field trips, there are grounds to propose solutions to economic restructuring in the region that are more suitable for reality.

3. Research Results and Discussion

3.1 Agricultural Restructuring in the Northwest Region of Vietnam

Economic restructuring is the change of economic structure from one state to another to suit the development environment. In essence, it is the structural adjustment on three aspects (industry, territory, economic sectors) to direct the development of the whole economy into socio-economic strategies that have been set for each specific period.

The Northwest consists of 4 provinces: Hoa Binh, Son La, Dien Bien and Lai Chau (5). The natural area of the region is 3,741.6 km², accounting for 11.3% of the country's area. The population in 2019 is 3,061.6 thousand, accounting for 3.18% of the country's population [9]. In recent years, the Northwestern economy has developed significantly. The economic structure has gradually shifted towards industrialization-modernization.

The economic sectors of this region are making remarkable progress. The economic structure has shifted, but it is still slow.

The structure of each economic sector has changed significantly. The agricultural sector moved in a general trend. The livestock sector increased significantly. Especially, non-slaughtered products tend to increase rapidly. Agricultural production initially takes advantage of the comparative advantages of each locality. Over the past decade, there has been a positive and drastic change in the structure of agricultural sectors and sub-sectors. Although in absolute terms, all three industries increased sharply, there was a shift in the proportion of industries. The proportion of cultivation has decreased sharply but still accounts for a high proportion, animal husbandry has had significant growth, creating a fairly stable source of raw materials for processing and consumer products. The forestry and fishery sectors are gradually increasing the proportion in the industry structure. The crop structure has changed markedly, responding better to changes in market demand and more adaptable to changes in climate change.

Agriculture plays an important role, making a major contribution to the regional economy. In the past 15 years, agricultural production has grown, the value of production has increased from VND 1,073 billion (in 2000) to VND 2,178.3 billion (in 2005) to VND 6,965.1 billion (in 2010) and 11,220.9 billion dongs (2014), in 2019 reached 16,347.7 billion VND [10].

Table 1 Northwestern economic structure in the period of 2010-2019.

(Unit: %)

| Year | Agricultural | Industry | Service |
|------|--------------|----------|---------|
| 2010 | 37.4 | 32.2 | 30.4 |
| 2011 | 38.4 | 25.8 | 35.8 |
| 2012 | 35.6 | 23.7 | 40.7 |
| 2013 | 34.1 | 24.9 | 41.0 |
| 2015 | 31.05 | 26.6 | 42.35 |
| 2019 | 30.1 | 27.2 | 42.7 |

Source: Calculated from Statistical Yearbook of Northwest provinces from 2010 to 2019

In the structure of agriculture, cultivation is still the main sector from 73.5% in 2005 to 2019 to 70.8%, livestock sector accounted for 26.5% in 2005 up to 29.20% in 2019. Agricultural services activities still account for a small proportion. This shows that service activities in agriculture are still ineffective.

The crop structure has changed significantly. Many large-scale concentrated commodity production areas have been established (rice, rubber, coffee, tea, etc.). In the past few years, food production in the Northwest has been developing rapidly. The output of grain food in 2009 reached 1,115 thousand tons compared to 631.4 thousand tons in 2000, in 2014 reached 1,646.4 thousand tons, in 2019 reached 1,675.9 thousand tons.

The feature of Northwestern food is a fairly balanced yield structure between rice and maize. In 2009, rice production reached 587 thousand tons and maize production reached 459 thousand tons. By 2014, rice output will reach 696.4 thousand tons and maize output will reach 950 thousand tons. In 2019, the area planted to maize decreases for fruit trees so the maize production decreases to 405,000 tons [10].

The Northwest has strengths in maize production, the area of the whole region in 2005 was 156.2 thousand hectares and the output reached 402.9 thousand tons. By 2014, the area of maize increased by 252.1 thousand hectares and the output reached 950 thousand tons.

Rice area of the whole year was expanded, but not large, in 2005 it was 152.8 thousand hectares, by 2014 reached 174.6 thousand hectares; Because of intensive investment, productivity increased day by day, in 1995, 24.8 stones/ha increased to 30 stone/ha in 2005, to 40.9 stone/ha in 2014, to 43 stone/ha in 2019, which bringing the whole year rice output from 324.6 thousand tons in 1995 to 542.8 thousand tons in 2005, to 2014 to 696.4 thousand tons, in 2019 to reach 706.7 thousand tons [10].

In addition to the rice area, various crops are also developed. Especially, the area of maize increased rapidly, from 105.6 thousand hectares in 2000 to 138.9

thousand hectares in 2005 and 2014 to 252.1 thousand hectares; with the yield of 21.8 stone/ha in 2000 increased to 29.7 stone/ha in 2005, in 2014 increased to 33.7 stone/ha. Cassava area increased from 36.8 thousand hectares in 2000 to 41.2 thousand hectares in 2005 and 2014 to 54.6 thousand hectares. In 2019, the area planted to maize has decreased, but replaced with fruit trees and perennial industrial crops [10].

Expanding maize and cassava cultivation area is a development trend that is not conducive to the Northwest environment. The topography of the Northwest is mainly hills and mountains. Currently, the development of cassava and maize is mainly on sloping land, leading to increasingly serious erosion and soil degradation. Facing this situation, to protect the environment and develop sustainably, the provinces have focused on developing fruit trees and perennial industrial trees to combat soil erosion and prevent floods, as well as to adapt to global climate change.

Soybean is grown throughout the region. The area increased from 15.7 thousand hectares in 2000 to 24.6 thousand hectares in 2005, by 2014 the area decreased to 10.3 thousand hectares, in 2019 it decreased to 9.1 hectares. Sugarcane is also suitable for the Northwest so in the period 2000 - 2014, the planted area and sugarcane production increased but were not stable. The area of sugarcane in the whole region in 2000 was 10.6 thousand hectares, reduced to 10 thousand hectares in 2005, by 2014 increased to 14.6 thousand hectares, in 2019 decreased to 13.7 hectares [10].

In recent years, cultivation has gradually reduced upland rice, developed wet rice, built up mountainous fields such as Muong Thanh, Bac Yen, Phu Yen, etc., and developed terraced fields. Therefore, the area of food crops and food production is increasing.

Regarding the structure of food crops, rice accounts for 60.1% of the region's food production, while 39% of the crops are mainly maize and cassava. The strength of the region is industrial crops and fruit trees such as tea, rubber, coffee, plum, peach, mango, longan, etc. In 2019, the region's tea area will be 9.25 thousand

hectares, accounting for 6.9% of the tea area in the country. Other short-term industrial crops are soybean (9.4 thousand ha in 2019) scattered distributed in all provinces in the region, cotton mainly in To Hieu farm (Son La), but small in scale [10].

In each province, there have been industrial production areas such as Luong Son-Hoa Binh and Son La tea areas; Moc Chau, Yen Chau, Mai Son, and Song Ma fruit tree areas (Son La); Mai Son-Son La maize and cotton areas, and so on. In the future, it is necessary to plan into each production area and build more processing plants with a larger capacity to fully exploit the region's comparative advantages.

Animal husbandry in the region has strongly shifted from household scale, full-use model to semi-industrial and industrial mode. Farm animal husbandry is gradually replacing the form of farming households to have conditions to apply biosecurity, disease control, and apply for scientific and technological advances.

In recent years, Northwestern Vietnam has interested in investing, developing fairly in quantity and quality, gradually moving towards promoting intensive investment, improving the quality of cattle and poultry herds and diversify livestock products. The positive transformation in animal husbandry is expressing through the application of promoting scientific and technological advances and production, programs of the biochemistry of the herd, leaning of pigs and poultry in the direction of the industry, etc., as well as the introduction of new breeds ("super meat", "super egg") into animal husbandry which has been developing, initially bringing about efficiency, contributing to the development of animal husbandry to become a commodity production industry.

The region has strengths in raising large cattle. In 2019, there were 464.8 thousand buffaloes and 323 thousand cows. Notably, the dairy herd is raised in Moc Chau (Son La) and increasingly promising, in 2019 the district's dairy herd has 11,718 cows, an increase of 62.1% compared to 2010. In 2019, the pig population was 1597 thousand, the flock of poultry was 18 million.

The growth rate of livestock production value of the region reaches more than 10% per year, higher than that of cultivation [10].

Currently, the Northwest has formed several seedlings associated with processing industry, creating a source of goods for export such as Luong Son tea; Moc Chau milk cow and fruit trees; Yen Chau fruit tree area; Mai Son maize and cotton region (Son La); Tam Duong tea area (Lai Chau), etc. Production of food and other fruit trees has increased significantly over the years.

The forestry industry in the region has shifted towards integrated forest business and socialization of forestry, creating jobs for 1200 laborers, contributing to hunger eradication and poverty reduction, and playing a major role in protection of ecological environment. The forest cover rate is constantly increasing.

Due to the policy innovation and thanks to the attention of international organizations, the movement of afforestation and greening of bare hills and mountains has flourished. The area of natural forest was initially protected, and the area of planted land and bare hills were also narrowed gradually.

In forestry, there are more and more models of forest gardens and hill gardens, linking the development of timber trees with industry, fruit trees, and animal husbandry; implementing the motto of taking short-term farming, multi-story farming, linking agriculture with industry, so the land use is increasingly effective.

Given the natural conditions of the Northwest region, forestry development is a strength. But in recent years, the forestry of the whole region has mainly relied on logging, forest clearing for shifting cultivation. Therefore, the forest is heavily destroyed, the area of newly planted and circumscribed was not significant compared to the deforestation area.

In recent years, when the government has advocated forest closure, socialization, land and forest allocation in association with sedentarization, settlement,

infrastructure construction and afforestation and rehabilitation programs such as: programs 327, 747,... with effective results, the forest land area is increasing. In 2000, the forested area was 1,354.1 thousand ha, in 2005 the forested area was 1,487.9 thousand ha, in 2013 the forested area increased to 1689.8 thousand ha. There have been many economic models of multi-farming households combined with effective agricultural land use [10].

The fishery industry is changing strongly from extensive aquaculture to semi-intensive and intensive farming; gradually shifting from small-scale farming, households to farming under cooperative groups, cooperatives and enterprises.

The area of water surface for aquaculture increases rapidly. In 2000, there were 3,248 hectares and 3,548 hectares in 2005, by 2014, this figure increased to 7.6 thousand hectares, and in 2019, to 9.6 thousand hectares. The production of aquatic products increased from 2,285 tons in 2000 to 3,325 tons in 2005. In 2014, this figure increased rapidly, reaching 15,794 tons and 22,267 tons in 2019.

The value of fishery increased by 11.1% on average (the whole country increased by 4.9%), particularly Son La increased by 13.2%, Hoa Binh increased by 8% per year. New fishery production accounted for 2.2% of the total agricultural economic sector. Fishery is not a strong sector of the Northwest. However, in recent years, the region has taken advantage of the advantages of hydropower reservoirs, so the fishery industry has been of great economic value for the region, contributing to economic restructuring in general and the structure of agriculture - forestry - fishery in particular.

Northwest of Vietnam is the least developed economic region in the country. Industry is underdeveloped, with only a few developed industries such as exploitation of construction materials, processing industry, but still underdeveloped and inefficient. Industry structure has shifted. Processing industry accounts for a high proportion and tends to

increase gradually. Mining industry still accounts for a small proportion (over 2%). The production and distribution of electricity and gas accounted for a higher proportion than the national average (nearly 20%). Currently, due to the strong development of fruit trees in the region, the region has established fruit processing facilities in Van Ho district (Son La). The main industries that exploit construction materials are limestone and sand mining. Limestone is mined in all 4 provinces for local industry. Sand is mainly exploited on the Ma River (in the territory of Son La province). The exploitation of minerals as construction materials has left many consequences such as landslides, labor accidents, destroying the natural landscape and environment, polluting the water and air sources in localities.

The service sector attaches importance to tourism, trade and transportation development. These industries account for an increasing proportion of the GDP structure. The tourism industry attaches great importance to exploiting natural and cultural resources. Some tourist sites such as Hoa Binh (Hoa Binh), Moc Chau (Son La) and Muong Phang (Dien Bien) hydroelectric reservoirs have been effectively exploited and associated with sustainable development.

The economic zone structure has changed towards greater development in favorable areas such as along National Highway 6, centers of urban centers, and highland areas with large areas. These regions account for over 70% of GDP. Remote and mountainous areas, because of slow economic development, difficult transportation, just account for a small proportion.

The structure of economic sectors has changed. Non-state economic sectors accounted for a high proportion and tended to increase. State economic sectors accounted for a small proportion (0.06% in 2010; 0.62% in 2014, 0.66% in 2019).

3.2 Solutions to Restructure Agriculture in the Northwest

3.2.1 Solutions for Economic Development Policy

The North West is the poorest economic region in the country with insufficient capital to develop and expand production, therefore, it is necessary to make use of internal resources, attract foreign capital and science and technology to develop the economy. There should be a key investment, focusing on industrial development, making the industry a major industry, thereby promoting other economic sectors to develop.

It is necessary to apply scientific and technical measures, to introduce new varieties of plants, high productivity and suitable to local natural conditions for production; In addition, some ineffective rice growing areas should also be converted to crop production. Some areas such as Moc Chau (Son La) focus on developing subtropical and temperate fruits such as peaches, pears, plums and apples; Mai Son (Son La) focuses on developing longan, mango, guava, dragon fruit; Thuan Chau (Son La) attaches importance to developing passion fruit, prunes and apricots; The Ma River (Son La) focuses on developing longan and mango. Dien Bien district should focus on developing pineapple, tea and guava. There is a need for careful research on the soil and climate characteristics to plant the highest quality trees and specialty trees of each area. At the same time, it is necessary to plan concentrated agricultural development, proceeding to commodity agricultural production; Developing the region's cattle and poultry herds; Implementing well disease prevention, open training courses to improve techniques.

To carry out land allocation, forest allocation, capital investment, techniques for forestry development of the provinces.

To adopt policies on forest planning, protection, development of raw material forests and development of a farm model combining VACR to take advantage of natural conditions.

3.2.2 Solutions to Mobilize Investment Capital Sources

Investment capital is very important to the Northwest of Vietnam. It is necessary to study,

elaborate, promulgate or submit to the competent State agencies for promulgation some specific mechanisms and policies suitable to the actual conditions of the people and development requirements in each period to attract investment, create breakthroughs in infrastructure development such as urban areas, mutual clusters, service areas, and key tourist areas.

To expand forms of investment in BOT, BT, PPP... to develop forms of joint venture, investment cooperation, investment capital contribution with assets; Promote socialization to attract investment in agricultural development; Link agricultural development with eco-tourism development; Invest in building eco-agricultural areas associated with tourism development.

To mobilize capital sources for investment in building a system of irrigation works to ensure water sources for arid regions, especially areas specialized in industrial crops and fruit trees.

To mobilize investment capital for afforestation; expand planted forest area; associate forest development with industrial and fruit tree planting; Planning areas can be associated with sightseeing — some forest areas associated with tourism development such as General Vo Nguyen Giap forest (Son La), Muong Phang area (Dien Bien), etc.

3.2.3 Solutions on Policy Mechanisms and Administrative Reform

- To attract enterprises with preferential policies on natural resource tax, income tax, exploiting enterprise tax ...; To promote potentials and advantages of production and trading of key products; Effectively participating in global value chains, production networks; create motivation for socio-economic development in the early planning period.
- To improve the investment environment, production and business environment, continue to reform investment procedures towards neatness, transparency and publicity; Promulgate investment support mechanisms

and policies on the basis of local economic development advantages and law provisions.

- To encourage the development of various types of trade; To speed-up the construction of wholesale markets, Moc Chau tourist center, general services area, international border gate area, system of district markets, towns, etc., and improve market access of economic units.
- It is necessary to take measures to control the use of chemical fertilizers and pesticides, to avoid the inflation of chemicals affecting the environment and the quality of agricultural products.

3.2.4. Solutions for Developing Human Resources

Northwest is the region with the lowest number of trained workers in the country. The percentage of trained workers is only 8.6% (2018) [10], so labor training is very important. The proposed solutions are:

- To develop a human resource training plan appropriate to the needs of the labor market; To encourage the development of direct training forms at enterprises, training according to the needs of investors.
- To promote the link between training institutions and vocational training centers at large centers; focus on developing and adopting policies to attract high-quality human resources to work locally, especially in key commodity production and trading industries.
- To organize training courses, disseminate knowledge, organize for farmers to visit typical economic models with high efficiency so they can study and build economic models for achieve higher results.

3.2.5 Market Solutions

For the economy to grow stronger and move in the right direction, it is necessary to carefully research the market, the market demand, produce goods that meet the market demand, avoid rampant production of goods, following the movement. For many years the agricultural development of the region has not been

linked to the market. Many products produced are not sold, produced unstable. It is necessary to carefully research the market to develop under market demand. It is also necessary to fully study the general market trends to have timely solutions to avoid risks in production.

Before producing the products, it is necessary to carefully study the conditions for development, avoiding the production of products not suitable to the natural and socio-economic conditions of the province; No mass production without research, evaluation and pilot production.

To implement economic development solutions, focusing on investment in the development of territorial industries, will contribute to shifting the economic structure of the region more appropriately.

To strongly develop processing to consume agricultural products faster and more efficiently.

4. Conclusion

The economic structure of Northwestern Vietnam is still backward. Agriculture is the main economic sector, accounting for a high proportion. In recent years, the economic structure has shifted, but it is still slow. The forestry and fishery sectors account for a small proportion, the production value is not high. In agriculture, cultivation plays a major role, while livestock has small value and not a high proportion. For economic development of the region, there must be economic restructuring. The solutions to economic restructuring are to have appropriate economic development policies, investment capital, labor training, administrative and market reform. It is necessary to synchronously implement solutions to better exploit the economic development strengths of this region.

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