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FARM DEVELOPMENT IN TAY NGUYEN ECONOMIC REGION: SPECIFICITY OF FORMATION AND DEVELOPMENT

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Abstract. The development level of businesses and their competitiveness has a significant effect on the growth of an economic region. The improvement in comparative advantage for regional social and economic development will contribute to the strengthening and expanding possibilities for farm owners as well as to encouraging the authorities of the province to pay a special attention to an accelerated farm transformation in the agriculture of Tay Nguyen region. Farm economy development is considered to be an inevitable trend and its effectiveness does not rely too much on laws and market practice but on the understanding of the regional structure taking into account the demands and peculiarities of this economic agent. Using the methods of descriptive statistics and the analysis of secondary data, this paper is devoted to the analysis of the essence of farm economy of Tay Nguyen region. A special place has analysis of the theoretical basis of economic zones and the identification of comparative advantages of the region in farming development. The results of this empirical research aim to discover the specificity of formation and development of farm economy in the Tay Nguyen region nowadays.

Key words: economic region, comparative advantage, Tay Nguyen region, formation, development, farm.

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ОСОБЕННОСТИ СТАНОВЛЕНИЯ И РАЗВИТИЯ ФЕРМЕРСКИХ ХОЗЯЙСТВ В РЕГИОНЕ ТАЙ НГУЕН

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Аннотация. Уровень развития форм бизнеса и конкурентоспособности оказывает сильное влияние на рост экономического региона. Улучшение сравнительных преимуществ для регионального социально-экономического развития будет стимулировать потребности в укреплении и расширении позиций владельцев фермерских хозяйств, а также побудит власти провинции уделять особое внимание ускорению трансформации фермерских хозяйств в

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сельскохозяйственном секторе Тай Нгуена. Развитие фермерского хозяйства считается неизбежной тенденцией, и его эффективность зависит не столько от построения правовой и практической базы рыночного института, сколько от представления о региональной структуре с учетом требований и особенностей данного экономического субъекта. Используя методы описательной статистики и анализ вторичных данных, дается анализ сущности фермерского хозяйства региона Тай Нгуен. Особое место уделяется анализу теоретических основ экономической зоны и выявлению сравнительных преимуществ региона в развитии фермерских хозяйств. Результаты этого эмпирического исследования направлены на выявление особенностей становления и развития фермерского хозяйства в Тай Нгуене в настоящее время.

Ключевые слова: экономический регион, сравнительные преимущества, Тай Нгуен, формирование, развитие, фермерское хозяйство.

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Introduction

Effective socio-economic development of regions is an important prerequisite for Vietnam's economic growth. It requires the provision of strategic conditions and priorities to promote the economic development of regions, taking into account their natural, economic, scientific, technical and labor resources' potential. Each region puts their own interest in achieving economic growth and being able to make effective use of the competitive advantages of their territories.

Tay Nguyen is evaluated to be a region with many advantages of agricultural development and international economic integration. Many previous studies have proved that the Tay Nguyen is a land of "particularity" in large-scale agricultural production, including form of farm [Nguyen, Nguyen, 2006; Pham, 2015: 11-15; Vu, 2016; Bui, Tran, 2020]. This particularity is reflected in cultural identity, ethnicity, ecology, resources, people, geoeconomic and geopolitical position. This particularity differentiates Tay Nguyen from other territories across Vietnam which requires a theoretical and practical basis to make a reference to investment and regional plan to effectively promote special advantages. Therefore, the objective of the article is to review the traits formation and development of farms in Tay Nguyen economic region on the basis of identifying its comparative advantages.

Literature review

The concept of a modern economic region has a history of development for decades with many changes on economic, political and social conditions of each country (described in Table 1).

The Soviet Union and most of the countries in the former union of Eastern Europe still consider

E.B. Alaev's definition of an economic region as a value concept: An economic region is an intact territorial part of the economy of national economy which has the following signs: specialization in basic national economic functions and synthesis (in a broad sense as the interrelationship between the most important components in the economic structure and the territorial structure of the region). The region is also considered to be an integral system, an organized unit in the territorial management apparatus of the national economy [Nguyen, Nguyen, 2006: 20]. Since the collapse of the Soviet Union, the concept and the structure of economic regions of Russia have changed a lot. No subject of the Federation can belong to both one economic region and another. The establishment or discharge of regions, macro-regions, or any changes in their structure is at the discretion of the Federal government [Russian Government, 2001].

The new Eastern European countries have also continuously made reforms on their economic structures, including the restructuring of economic regions to meet the requirements of international integration process, especially being integration with other countries of the European Union. Poland is a case study for a new approach to the concept of economic regions. The regional innovation system basically consists of two main types of factors and their interrelationship. The first factor is companies in the major industrial cluster in a region including their supporting industries. The next factor is the institution, for instance, research institutes, higher education institutions, technology transfer institutions, vocational training organizations, business associations which sufficient financial capacity and legal framework to support the regional reform process [Asheim, Isaksen, 2002].

Cluster is defined as geographically close companies in a vertical or horizontal relationship related to an infrastructure that supports a localized

Table 1

Concept of “economic region” in some countries of the world

Country	Concept	Classification	Traits
Russia	An economic region is an overall social field made up of firms, institutions as well as regional identities and actors [Nguyen, Nguyen, 2006: 20]	Russia is divided into 12 economic regions, which are also groups of administrative units [Russian Government, 2001]	i) social and economic goals and are all involved in development programmes; ii) economic conditions and potentials are relatively similar; iii) geological, ecological and climatic conditions are in common; iv) similarities in new construction engineering inspection methods; v) similarities in customs supervision methods; vi) overall similarity in living conditions of the population [Russian Government, 2001]
Poland	An economic region is an overall social sector that includes: i) organizations/companies seeking to restructure their environments; ii) pre-existing laws and institutions operate to both constrain and facilitate regional actors; and iii) strategic factors in organizations helping to maintain group cooperation and divergent interests [Fligstein, Sweet, 2002: 1211]	Divided into 14 economic regions. According to the scope of the territory, there are 5 regions in Eastern Poland, 2 regions in the South, 5 regions in the West and 2 economic regions in the Central region [Polish Government, 2006]	Regional capacity is closely tied to the organizational capacity of firms, its industrial structure, patterns of specialization and its institutional structure. This trait is associated with the concepts of innovation systems in targeted regions and regional clusters [Asheim, Isaksen, 2002: 83]
Canada	An economic region is a way of grouping intact population units into 1 standard geographical in order to analyze regional activities [Statistics Canada, 2011a]	Divided into 6 geographical regions, including: Atlantic, Quebec, Ontario, Prairies, British, Columbia, Territories [Statistics Canada, 2011b]	The development of each region is influenced by its economic history, industrial location, urbanization, natural resource use, market access, and availability of technology for making use of advantage or overcoming challenges [Statistics Canada, 2011b]
United States	–	There are many ways of dividing economic regions in the United States based on differences in culture, geography and even race [Crone, 2005]	Depending on the purpose of research and development, each government agency will have different ways of division [Crone, 2005]
Vietnam	Region is defined as a part of the national territory, which has relatively independent socio-economic activities and implements the division of social labor of the whole country	Divided into 6 socio-economic regions (including Tay Nguyen) and 3 key economic regions	From the legal aspect, region is not a state's administrative management unit. In reality, it is a territorial unit for strategic planning and territorial socio-economic management in each region including connecting the development of administrative units inside and outside the region

company with the same vision of development for business growth on a basis of competition and cooperation in a particular market area [Cooke, 2001]. The importance of supporting institutional structures is very high. These institutional structures are the “memory” of region, the result of cooperation experiences and conflicts in the region. These institutional structures are described by Salais and Storper [Salais, Storper, 1997] as regional orders, including regional traditions and behaviors. Administrative structures are crucial to the innovation potential of regions and regional companies, as they make a strong relation to operational model,

management and innovation which always create patterns of inter-organizational cooperation and competition. In addition, they govern the relationships between business, science, technology, education, and politics [Cooke, Uranga, Etzebarria, 1997].

Unlike the relatively complex definitions above, Canadians have a very simple definition: “An economic region is a way of grouping intact population units to form a standard geographic unit for the purpose of making analysis of regional economic activities”. Within the province of Quebec, economic regions are also known as administrative regions governed by law. In all other provinces and territories,

economic regions are formed by agreement between Statistics of Canada and the province/territory concerned. Prince Edward Island and three other territories are considered an economic region. There is an exception to Ontario where the economic region boundaries do not conform to the residential unit boundaries, in which Halton residential unit is separated by the Hamilton-Niagara Peninsula economic region and the Toronto economic region [Buckner, 2000].

As for Americans, the concept of economic regions has had a significant change. Since the mid-19th century, the Census Bureau has compiled data of states into multi-state regions. The Bureau has recently divided 50 states into 4 economic regions and those are in turn divided into 9 sub-regions. However, after the 1950 census, an Interagency Committee under the Ministry of Commerce revised the definition of region using the criteria of socio-economic homogeneity. The final basis for region classification includes both economic and non-economic factors. Other economic factors considered in the regional definition are all structured by income according to 1950 data sources. Non-economic factors used to group states into regions include population density and growth, ethnic and racial structures. In the late 1970s and early 1980s, American economists made suggestions that the regions of the Federal Bureau of Economic Analysis should be used for analysis as grouping the states into economic regions was advantageous for analysis. Economic regions according to the division of the Federal Bureau of Economic Analysis were used to make an evaluation of regional effects on monetary and fiscal policies. Since the late 1990s, the economic zones of the Federal Bureau of Economic Analysis have been used; currently, there is a trend of using cluster analysis to identify regions and classify 48 states into 8 different economic regions on a basis of cluster analysis [Crone, 2005: 617-618].

In Vietnam, the region is defined as a part of the national territory which relatively independent socio-economic activities occurs and there is an implementation of labor division of the whole country. Many regional development policies have been promulgated and implemented. The highest current policy on regional development is the Vietnamese Government's Decree No. 92/2006/ND-CP on formulation, approval and management of socio-economic development [Vietnamese Government, 2006] and Decree No. 04/2008/ND-CP on amending and supplementing some articles of Decree No. 92/2006/ND-CP [Vietnamese Government, 2008a], in

which there are two types of regions: economic region (including Tay Nguyen region) and key economic regions.

The nature of the economic region is the specialization of production on a basis of favorable conditions of the region in terms of nature, economy, society and history to produce many products and goods with good quality and low cost, meeting the needs of many other regions of the whole country and for export. The production specialization of the economic zone shows the traits of the region, roles and tasks of one region with another region as well as to the national economy in a certain historical period. The specialized production industries in the region are formed and developed on a basis of the favorable conditions of the region. Therefore, these industries are often the ones that give the highest economic efficiency, determine the main production orientation of the region and play a key role in the regional economy.

Material and method

The content of the article is written on the basis of an interdisciplinary approach, making comprehensive analysis on the field of farm economy development in Tay Nguyen. The solution of particular problems is provided by a complex of historical analysis methods (problem-chronological, comparative-historical, systematic, etc.). These methods have been successfully tested in the determination of developing regional traits of farms. Statistic methods are used to process quantitative information.

This scientific article is based on the materials of the current archives of various departments, periodicals and summary data of publications of the statistical department of Tay Nguyen region, as well as on basis of many scientific papers, which can be divided into several groups. The studies of P. Cooke, M.G. Uranga, G. Etxebarria [Cooke, Uranga, Etxebarria, 1997]; P. Cooke [Cooke, 2001]; P.A. Buckner [Buckner, 2000]; T.M. Crone [Crone, 2005] and legal documents of some countries in the world which analyzes the concept and characteristics of economic zones of general theoretical importance. Thematic studies on determining the comparative advantage of Tay Nguyen in agricultural development in general and farm development in particular [Nguyen, Nguyen, 2006; Pham, 2015: 11-15; Vu, 2016; Bui, Tran, 2020]. The relationship between articles developed by different scientists with information from other sources has allowed the

authors of the article to explain the traits of formation and potential of farm development in Tay Nguyen economic region in the period which is under review.

Results

Traits of formation of Tay Nguyen economic region

In parallel with the process of globalization, regionalization processes are taking place, which means there is an increase in the role of regions in the economic development of countries. Establishing a country/region's comparative advantage becomes the starting point for government's regulatory purposes over its economy. Farm economy in Tay Nguyen was formed due to the policy of the Party and States which creates a new management mechanism and a perception of taking advantage of comparative advantages in the development of agriculture in rural areas and farmers.

One of the most important things of regional comparative advantage is the division of labor and the specialization of production. The deeper, that division and specialization is the greater the need for cooperation and development. Meanwhile, specialization depends mainly on the advantages of each region over other regions. The most commonly used theory to explain regional division and specialization is the regional trade theory, which learns the concept of "comparative advantage" in the neoclassical theory of international trade, introduced by D. Ricardo, E. Heckscher and B. Olin [Vo, Do, 2016]. The term can be thought of as the added value of certain resources or factors. When the concepts of regional farm economy development and regional advantage are brought together, an industry has a regional advantage as there is a great relationship between regional traits and product segments. Therefore, each region's conditions will be the key to specialize in its best field and participate in the value chain to bring the greatest benefit with the use of the same resources.

Tay Nguyen is a territory with an important geopolitical position as it is located at the junction of the Vietnam – Laos – Cambodia border, adjacent to the Southeast region and the Mekong River Delta. This position makes Tay Nguyen become a region with many advantages for cultural and economic exchanges between economic regions and between countries in the Mekong sub-region. In terms of administrative boundaries, Tay Nguyen consists of 5 provinces: Kon Tum, Gia Lai, Dak Lak, Dak Nong

and Lam Dong. Tay Nguyen has an area of 54,474 km² (equivalent to 16.8% of Vietnam's area), a population of more than 5.5 million people (accounting for more than 6.1% of the country's population), and 47 ethnic groups, in which there are 1.5 million local ethnic minorities [General Statistics Office, 2021]. This is an economic region possessing many favorable conditions for agricultural development, from natural conditions to socio-economic conditions. Regarding its natural conditions, climate must be first mentioned. Tay Nguyen has an average temperature of 22–24 °C which is seasonal and stable in the whole region, so it is possible to develop a tropical agriculture with a wide variety of crops and livestock and create diversity in production as well as restructuring agricultural production [Pham, 2015]. The second is land, according to statistics, Tay Nguyen has 5,366.3 thousand hectares of land, accounting for 98% of the natural land area. The most prominent is the fertile basalt red soil with an area of nearly 2 million hectares (accounting for 60% of the basalt land fund in the country), which is very suitable for industrial crops such as coffee, cocoa, pepper, mulberry and tea. In addition, there are ten thousand hectares of black soil, alluvial soil and many other soil groups suitable for many different crops [Vu, 2016]. Thirdly, Tay Nguyen has a fairly thick system of rivers and streams with a total surface water of about 50.2 billion m³. This area is considered to have great potential for hydropower, ranking second in the whole country, after the Red River area [Nguyen et al., 2013]. The fourth thing is forest with a large area (coverage 54.6%), diverse flora and fauna. Moreover, Tay Nguyen has very good conditions for developing forestry. At the same time, it is also a zone to keep the ecological balance and become a source of aquatic life of the river and stream system in the Central and Southeast regions.

In addition to the natural advantages, advantages of socio-economic conditions of Tay Nguyen such as abundant labor resources have gradually changed labor force and initial experience in agricultural production, consumer market, etc. Widespread and ever-expanding consumption are also outstanding advantages, making contribution to agricultural development during the past time [General Statistics Office, 2021]. In addition, in Tay Nguyen, there are 47 ethnic groups, which are very diverse in languages, customs, habits and also achieve different levels of economic development, social organization and religion. For a long time of living together, the ethnic groups have had a process of cultural exchange. The common values among ethnic groups are the basic

conditions that bring stability to agricultural development.

With advantages from natural and socio-economic conditions, Tay Nguyen soon became a key area for agricultural production, so it was also the driving force for the formation of farms.

Reality of Tay Nguyen economic region development

Policies of the region with respect to the advantages of climate, land and forests in the development of farm economy has been implemented effectively. Tay Nguyen economic region has encouraged and created favorable conditions for all economic sectors to invest in the development of agricultural farms, focusing mainly on cultivation and animal husbandry.

Figure 1 shows that the number of farms in Tay Nguyen has increased sharply over the years, increasing by nearly 55% from 2622 farms in 2012 to 4056 in 2017 and decreasing to 3518 farms in 2019 due to the impact of the climate change, African swine fever virus and pests in industrial crops such as coffee, pepper.

From 2020, on implementing the Circular No. 02/2020/TT-BNNPTNT [Ministry of Agriculture and Rural Development ... , 2020], the number of farms in Tay Nguyen will decrease to 1740 farms as it is determined by new criteria (accounting for 7.4% of farms nationwide). Although many farms are still operating well and contributing to promoting agricultural production, they do not meet both criteria in terms of scale and value. On promoting the advantages of land and climate, Tay Nguyen has invested in development mainly focusing on cultivation and livestock farms. In 2020, there are 866 crop farms (49.8%), 845 livestock farms (48.6%) and 1.6% other farms (illustrate in Table 2). Over the years, Tay Nuyen has made its reputation of being the number 1 in the number of agricultural products with great export value such as coffee, rubber, and pepper in which coffee production area is the largest in the country (accounting for more than 90% of the area and 93% of the country's coffee production); the second largest rubber area in the country after the Southeast (accounting for 26% of the area and 19% of the country's rubber output); the largest pepper growing area in the country (accounting for more than 58% of the area and 70% of the country's pepper production) [General Statistics Office, 2020].

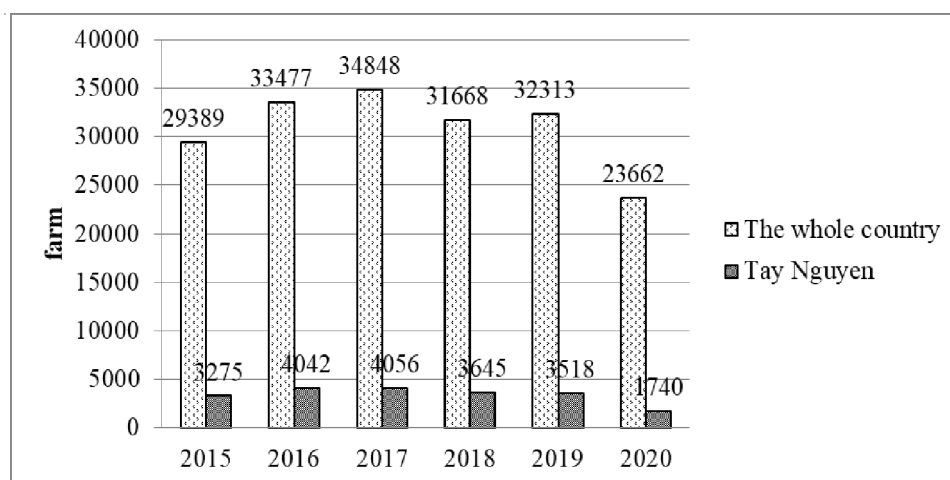


Fig. 1. Number of farms in Tay Nguyen areas in the period of 2015–2020

Note. Source: [General Statistics Office, 2021].

Table 2

Number of farms in Central Highlands by production sector

	Total	Crop farm	Livestock farm	Aquaculture farm	Other farm *
Tay Nguyen	1 740	866	845	9	20
Kon Tum	53	38	15	—	—
Gia Lai	284	237	47	—	—
Đak Lak	678	212	440	8	18
Đak Nông	234	121	112	1	—
Lam Dong	491	258	231	—	—

Note. Source: [General Statistics Office, 2021]. * – Including: Forestry farm and combining farms.

Due to the different natural conditions in the provinces, different forms of farms have been formed and are unevenly distributed among provinces in the Tay Nguyen. In 2020, Dak Lak is the province with the largest number of farms, 678 farms, followed by Lam Dong, Gia Lai, and Dak Nong. Kon Tum is the province with the lowest number of farms in the region with only 53 farms. Livestock farms are concerned mainly in Dak Lak. Perennial crops are mainly concerned in Lam Dong and Gia Lai. The distribution of the number of livestock farms is consistent with the livestock development policies according to the centralized model on a large scale, far from residential areas to minimize environmental pollution.

The contribution of farms to the economic development in Tay Nguyen region is shown in Table 3. Particularly, farms have provided jobs for 16.3 thousand regular workers with an increase of 5.5 thousand workers (up 52.2%) compared to 2011, in which, the labor of the farm owner is 9.6 thousand people, accounting for 59.4% of the total number of employees, the rest are regular hired workers. On average, a farm employs 4.0 regular workers, in which, the highest is Kon Tum with 5.1 employees, Dak Nong with 4.4 employees.

The total area of land used on farms is 25.6 thousand hectares of agricultural land. Of which, there are 2.8 thousand hectares of land for growing annual crops; 21.5 thousand hectares of land for perennial crops; 837 ha of forestry land and 385 ha of aquaculture land. On average, a farm uses 6.4 hectares of agricultural land (Table 3).

The farm has created a lot of value for agricultural, forestry and fishery products. Total revenue from agricultural, forestry and fishery

production of farms in 2016 reached VND 7,557 billion, an increase of 138.2% compared to the year of 2011, in which, the most efficiency are farms in Lam Dong province with a total value of 2 598 billion VND. Kon Tum is the province with the least production efficiency with VND 102 billion earned from agricultural production. On average, a farm reached 1,870 million VND (increasing 42.4% compared to 2011).

In addition, Tay Nguyen region also benefits from policies in the region's socio-economic development, including Decision 25/2008/QĐ-TTg on the promulgation of a number of mechanisms and policies to support socio-development for Tay provinces until 2010 [Vietnamese Government, 2008b]; Decision 1194/2014/QĐ-TTg on the master plan for socio-economic development of Tay Nguyen until 2030 [Vietnamese Government, 2014]; Decision 3936/2013/QĐ-BGTVT on the orientation for the development of transport infrastructure in the Tay Nguyen to 2020 [Ministry of Transport of Vietnam, 2013]; Decision 6448/2015/QĐ-BCT on the industrial and commercial development planning in the Tay Nguyen to 2025 [Ministry of Industry and Trade of Vietnam, 2015], and policies on farm economic development such as supporting agricultural product processing enterprises, credit policies. These policies are considered important tools to help Tay Nguyen plan agricultural development, identify key agricultural products, link production between regions and businesses, develop transport, create a favorable market to attract investment and thereby exploiting more effectively the comparative advantages in farm development of the region.

The above fact affirms that the development of farm economy in Tay Nguyen region is the right

Table 3

Some basic indicators of farm economic development in Tay Nguyen region in 2016

	Tay Nguyen	Kon Tum	Gia Lai	Đak Lak	Dak Nong	Lam Dong
Regular labor (person)						
Family labor of farm owner	9 681	162	2 081	2 205	3 042	2 191
Labor	6 612	230	1 224	1 031	2 333	1 794
Average labor of one farm	4.0	5.1	3.8	3.5	4.4	4.3
Used land square (ha)						
Agricultural land square	25 679	1 191	6 053	6 548	7 539	4 348
Land for annual plants	2 891	12	910	1463	178	329
Land for perennials	21 565	1 154	5 067	4 290	527	269
Forestry land	837	8	72	527	55	175
Aquaculture land	385	17	4	269	26	69
Business results (Million VND)						
Revenue of agricultural production	7 791 825	105 230	1 317 413	2 122 079	1 585 282	2 661 821
Revenue of agricultural service	7 557 733	102 053	1 262 276	2 079 021	1 515 879	2 598 504
Average revenue of one farm	1 870.3	1 325.4	1 434.4	2 242.7	1 237.5	2 788.1

Note. Source: [General Statistics Office, 2017].

direction to help farmers promote their comparative advantages, expand production scale, improve productivity, efficiency and competitiveness. Farm economy has made an important contribution in the process of shifting production from small to large production, concentrating resources through the process of accumulating land associated with attracting labor, restructuring of agriculture and increasing farmers' income.

Despite achieving results in production, the main export products in Tay Nguyen such as coffee, pepper, rubber, cashew nuts have almost no brands in the international market. The added value and quality of the product is still very low. Most of the main agricultural export products of the region are in raw or semi-processed form, so the value obtained is not high due to obsolete processing technology, unattractive designs, and high production costs lead to poor competition in the market. The link to develop the agricultural value chain, although initially formed for some products, has not yet been effective which only stops at the stage of production and preliminary processing. There is no connection between production – processing – market, from supplying inputs to processing and consuming final products to create products with direct access to the global value chain with high added value. Therefore, the competitiveness of agricultural products is not high in comparison with other competitors in the market [Central Highlands Steering ... , 2016].

Conclusion

Comparative advantage analysis helps us draw meaningful conclusions about reorientation of the farm system towards economically efficient activities in an economic region. Although the farm has not become the main place of agricultural production for the past time, it plays an important role in economic development. As an agricultural production unit in the Tay Nguyen economic region, it accounts for a large proportion in the total value of products in the region and solves the problems of occupations as well as improves the income of rural people. Therefore, the right perception of comparative advantage in each stage of agricultural development is a prerequisite which has a great influence on the orientation and development of farms in Tay Nguyen in the future.

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