

The Transformation of Production Relations through Economic Linkage Models in Agriculture Vietnam

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Abstract

The paper presents aspects of the transformation of production relations through economic linkage models in agriculture in Vietnam such as the cooperative groups Model, the Large Field model, the Value Chain model and the Farmers' Association model. The study uses economic statistics to collect and calculate the performance data of models for typical cases of these four models in the Mekong Delta, which has the most economic linkage models compared to other regions in the country. The results showed that the economic linkage models have driven the change in organization and production management in agriculture, creating a fit between the production force and production relations in agriculture in Vietnam. Through the study, the author also pointed out the limitations in these economic linkage models and proposed solutions to address those limitations.

Keywords: transformation, production relations, economic linkage models, Vietnam

1. Introduction

In the history of every economy, where there is a fit between the production force and the production relationship, where the economy will develop in the right direction. One of the three aspects of the production relationship) has made gradual changes to ensure conformity with the growing production force through models of economic integration in agriculture.

Around the world, the model of economic linkages in agriculture has been studied quite fully. Research by E. Charles and W.S. Andrews (2001, 2007) points to the benefits and problems that exist when farmers enter into agricultural contracts with businesses or sponsors, and points to specific models of agricultural contracting such as: the centralized model, the multipartite model, the nucleus estate model, the intermediary model and the informal model [1]. Eaton's research, C. and Shepperd (2001), Contract farming: Partnerships for Growth show 07 forms of linkage between farmers and the market: i) Linking farmers to merchants.; ii) Linking farmers to retailers; iii) Linking through farmers' representatives; iv) linking through cooperatives; v) Link between farmers and processing companies; vi) Link between farmers and export companies; vii) link under contract [2]. Other studies, such as that of I. Staveren (2002) or M. Paul et al. (2006), have also shown the necessity of horizontal linkages in agriculture among farmers in countries with agricultural production strengths such as China and Vietnam. Raoul Herrmann et al. (2015) using a cross-sectional data quantitative method that analyzes the impact of horizontal and vertical links and commercializes household welfare in sub-Saharan Africa, in the case of Tanzania.[3]. M. Zhang's (2016) study of vertical and horizontal linkage models in China [4]. Rozhan Abu Dardak (2015) study, which shows that trust between agents in the value chain will help participants share interests and that is the impact factor to strengthen relationships in the chain system [5].

In Vietnam, although economic linkage models have emerged recently, there has been much research on them. Research on the role and solutions of linking agricultural production and consumption in Vietnam and some provinces of Dang Dinh Long (2015) conducted research in 3 provinces: Ninh Binh, Lam Dong and Dong Thap. Nguyen Dang Hoc et al (2017) factors affecting the ability of farmers to participate in links such as education level, social status, ethnicity, scale of production [33]. Do Hoai Nam's research (2017) points to the role of merge land in the development of linkages between farmers and enterprises in agricultural production, and proposes solutions to promote merge land. [6].

Although there is a lot of research on economic linkage models in agriculture in the world and Vietnam, there has been no research in Vietnam analyzing the transformation of production relations in these models. This article will present that problem in order to find solutions to overcome the limitations that exist in the models. Thereby, promoting economic linkage models in agriculture to develop contributes to the rapid transformation of production relations in the direction of public ownership in line with the increasing socialization of the production force in Vietnam in the coming time.

2. Body of paper

2.1 Introduction

2.1.1 Cooperative groups Model

Over the years, since the disintegration of old-fashioned cooperatives, cooperative groups models in agriculture has emerged and is growing rapidly and diversely. The process of the creation of the cooperative groups' models are gradually institutionalized in accordance with the provisions of the Civil Code in 2005, 2015 and most recently Decree No. 77/2019/ND-CP. According to Decree No. 77/2019/ND-CP (effective November 25, 2019), the specific concept is as follows: "The cooperative group is an organization without legal status, formed on the basis of cooperation contracts, including 02 individuals, legal entities or more who voluntarily establish and contribute assets, work to perform certain tasks, benefit and take joint responsibility" [14].

According to the Department of Rural Development and Cooperation, as of March 2005, the whole country had 93,648 cooperative groups in agriculture and rural areas. Many localities set up cooperative groups quite quickly such as Thanh Hoa 22,752 cooperative groups; Hung Yen 1,754 cooperative groups; Quang Binh 1,172 cooperative groups; Nghe An 2,000 cooperative groups, Yen Bai 2,500 cooperative groups. Especially in the Mekong River Delta, the cooperation group becomes the main form of collective economic organization of the region, considered to have the most sustainable, effective and dynamic way of livelihood (Hiệp Ninh Van, 2012) [6]. However, by 2016, compared to 2005, the number of cooperative groups across the country decreased to only 15,354, in 2020 increased to 29,987 cooperative groups [7].

2.1.2 Large Field Model

In Vietnam, large fields model first appeared in the Mekong River Delta, in An Giang province with different names such as High-quality Large Field (Long An), modern field (Dong Thap), model of raw material area (An Giang), produced in the direction of VietGap (Can Tho). The large field model is a solution to concretize the policy of building a concentrated goods production area associated with processing and consuming products through contracts under Decision No. 80 of the Prime Minister and Directive No. 24/2003/CT-TTg of the Prime Minister on building raw material areas associated with processing and consumption. Building a Large Field is identified as an important and long-term solution to contribute to promoting the process of agricultural restructuring towards enhancing added value and sustainable development in the spirit of Resolution 21/2011/QH13 dated November 26, 2011 of the National Assembly. The Government then issued Decision No. 62/2013/QĐ-TTg dated October 25, 2013 (instead of Decision 80/QĐ-TTg) on policies to encourage the development of cooperation and link production associated with agricultural consumption and labor construction. Decree No. 98/2018/ND-CP dated July 5, 2018 on policies to encourage the development of cooperation and linkage in the

production and consumption of agricultural products (replacing Decision No. 62/2013/QĐ-TTg from August 20, 2018).

Over 10 years of implementation, overall, the number of large field models has decreased sharply. Compared to 2016 and 2020, the number of large fields of the country and the Mekong Delta decreased rapidly. In 2016, the country's large field number was 2,262, and by 2020, only 1,660 fields remained.

Although the number of large fields decreased significantly throughout the country, statistics also show that in 2020, the proportion of large fields signed contracts to cover products increased sharply compared to 2016, the proportion of product consumption contracts compared to the planting area only reached 29.2% nationwide but in 2020 reached 47.5%.

Table 1. Comparative statistics on Large fields in Vietnam (2016-2020)

Region	The number of Large Field		The number of participating households		Cultivated area		Contracted area for product consumption	
	2016	2020	2016	2020	2016	2020	2016	2020
WHOLE COUNTRY	2 262	1 660	619 343	327 326	581 698,3	270 998	169 850,6	128 779
Red River Delta	705	504	264 331	111 127	67 855,8	31 849	12 733,8	11 654
Northern midlands and mountain areas	176	114	41 162	19 041	11 078,8	5 382	4 006,7	1 286
North Central and Central coastal areas	675	550	159 807	110 406	54 930,4	39 505	32 400,0	19 217
Central Highlands	83	51	10 235	5 599	11 348,9	4 157	3 185,1	1 365
South East	43	45	2 138	3 268	7 637,2	6 149	6 764,7	2 158
Mekong River Delta	580	396	141 670	77 885	428 847,2	183 956	110 760,3	93 099

Source: General Statistics Office [8], [9]

2.1.3 Agricultural Value Chain Model

In 2018, the Ministry of Agriculture and Rural Development of Vietnam recommendations the Government to issue Decree No. 98/2018/ND-CP dated August 5, 2018 on policies to encourage production development associated with the consumption of agricultural products to further promote the implementation of linkages in production and consumption of products.

Agricultural products are related to a sector of agricultural products that includes related activities, from providing inputs, organizing production, collection, processing, and ultimately selling products to consumers. The main value agents are: farmers, cooperatives, traders, businesses ...

By November 2020, the country has implemented the chain of linkage- processing - consumption of agricultural products with 4 participating actors, there are 271 scientific organizations, 586,585 farmer households, 4,028 agricultural cooperatives participating in linking with 1,867 enterprises in production, harvesting and consuming agricultural products. For safe agricultural chains, there are 1,621 certified chains with 2,346 products (mainly products focusing on vegetables, tubers, fruits of all kinds; rice, coffee, pepper, cashew, tea, chicken, beef, pork, shrimp, pangasius, marine fish, fruits, eggs, fish sauce...); 2,989 points of sale of agricultural products along the value chain, of which 983 business addresses have been issued certificates of safe food supply chain. Currently, there are 841 agricultural cooperatives owning OCOP products [8].

Table 2. Results of implementation of linking consumption of key products under Decree 98 of 2020

Order	Product	Whole country	Red River Delta	Northern midlands and mountain areas	North Central and Central coastal areas	Central Highlands	South East	Mekong River Delta
1	Rice	8,8%	4,6%	4,5%	9,3%	2,0%	10,0%	10,4%
2	coffee	16,3%	24,9%	4,5%	0%	16,5%	3,4%	0%
3	Rubber	6,6%	35,4%	0%	8,2%	4,2%	7,1%	0%
4	Cashew	6,3%	0%	0%	0%	25,0%	1,4%	0%
5	Pepper	13,1%	0%	0%	0%	2,8%	0%	7,3%
6	Tea	18,2%	18,8%	23,4%	0%	3,5%	0%	0%
7	Vegetable	9,6%	7,0%	8,1%	0%	8,4%	33,0%	5,9%
8	Cassava	10,5%	1,7%	22,2%	22,4%	6,4%	0%	0%
9	Pork	17,1%	12,3%	20,9%	24,8%	25,3%	12,4%	6,6%
10	Meat and egg of poultry	12,8%	9,3%	99,9%	14,6%	2,4%	56,7%	3,5%
11	Catfish	49,3%	0%	0%	0%	0%	33,4%	50,4%
12	Shrimp	6,2%	13,2%	0%	9,1%	0%	48,8%	4,3%
13	Wood	6,4%	28,2%	9,4%	2,3%	0%	5,0%	0%
14	Other products	53,6%	21,8%	36,1%	94,3%	39,7%	67,5%	51,9%

Source: Author's calculations from data from the Ministry of Agriculture and Rural Development of Vietnam

2.1.4 Farmers' Association model

Established in 2016, with 7 associations, then the number of associations is constantly increasing. In 2017, 25 new associations were established; In 2018, 35 new associations were established, in 2019, 22 new associations were established. As of February 2020, Dong Thap province has had 89 associations, with more than 4,994 members. [11].

After its establishment, farmers' associations achieved many practical results. There are 17 cooperatives established on the basis of farmers' associations. The Farmers' Association

has connected with businesses such as signing with Coopmart Supermarket, Vincom, Vinmart, VinEco Vincom, Long Uyen Company, Vietnam - Germany Food Technology Company, ... [12]. In addition, members of the Farmers' Association are guided, approaching the production process in the direction of technology, clean, safe production, ... Since then, there have been many creative ways, new models such as: "My mango tree", "My garden orange tree", "My home field", ... through models to help farmers, cooperatives promote the brand Orange in Cao Lanh city, Mango district Cao Lanh without cost through traders. Besides, some members of Farmer's Association designed their flower – gardens, their fields become a homestay destination. Thereby, it has created a ripple effect in the development of tourism in the locality, especially community tourism contributing to the implementation of the province's policy on developing tourism into a key economic sector by 2030.

The association has certain impacts on the community such as: Impacting participants in aspects (figure 1); Promote the creative initiative of relatives in production and business; Change the way of thinking and doing in agricultural production associated with the market; Towards the development of effective types of cooperation and linkages; Building the spirit of autonomy, self-governance, self-determination in the community; Contributing to solve social problems towards sustainable rural development (Huyen Bui Van, 2020) [13].

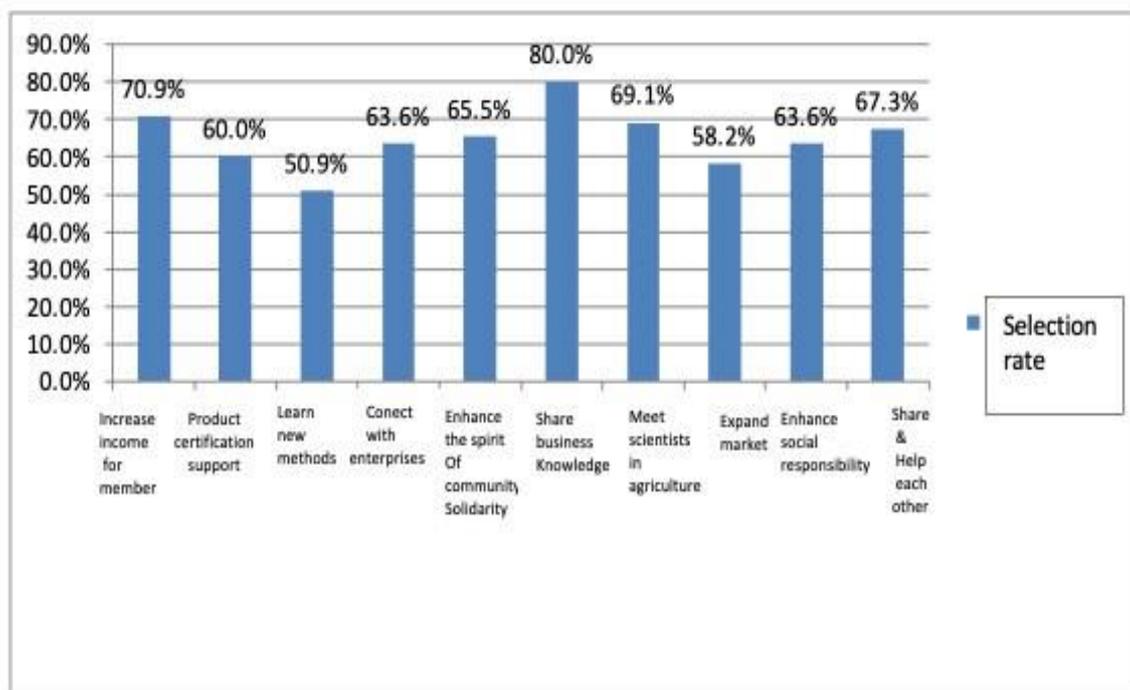


Figure 1. The impact of the peasant association on the participants

Source: Van Huyen Bui (2020)

2.2 Research method

This study investigates available documents and research reports related to economic linkage models in agriculture of General Statistics Office of Vietnam and management policies from Ministry of Agriculture and Rural Development of Vietnam. These document and report are:

- Ninh Van Hiep (2012), “Cooperation group in agriculture and rural areas - a sustainable way of livelihood of farmers” [6].
- Ministry of Agriculture and Rural Development Vietnam (2021), Documents on consolidation and merger of agricultural cooperatives [7].
- General Statistics Office Vietnam, Results of 2016 Rural, Agricultural and Fisheries Census [8]
- The Department of Statistics Vietnam (2020), “Press release on the results of rural and agricultural surveys in the mid-term of 2020”[9]
- Ho Ngoc Yen et al (2020), The value chain of vinh long agricultural products [10].
- Report of The Center for Agricultural and Rural Water Services (2020), Report No. 18/BC-TTĐVNN&NSNT dated February 13, 2020[11].
- People's Committee – Dong Thap Province (2019), Report on proposals, seminar on “Practical review, theoretical research on the Association model” [12].
- Bui Van Huyen (2020), The association model in Dong Thap province and some hints for new type of collective economic development in our country [13].

Besides, this study used figures which are collected from document of Ministry of Agriculture and Rural Development Viet Nam. The economic linkage models studied include: the Collaboration Group model, the Large Field model, the Value Chain model, and the Farmers' Association model.

2.3 Result and discussion

2.3.1 The transformation of production relations in economic linkage models in agriculture in Vietnam

First, there is a change in the subject of economic linkage models. Basically, the subject in the organization - production management has changed compared to farmers who do not participate in the model. Both the vertical link models and the horizontal link models have the participation of many subjects, that is clearly demonstrated collective nature in the models.

For models of horizontal linkage between farmers as cooperative group models, there are at least 2 to 3 farmer households participating. The cooperation group is set up voluntarily by 02 individuals, legal entities, contributing assets and efforts to achieve certain goals, benefiting and taking responsibility. Or the horizontal linkage model such as the Farmers' Association

model, specifically “Canh Tan Association”, the first establishment model in Dong Thap province, has a membership of 105 members who are all farmers.

For vertical linkage models such as large field models or value chain models, there are also many participants in addition to farmers, traders, businesses also have local authorities and scientists. That is an encouraging signal of the participation of many subjects in the models, especially businesses, to move towards the collective economy.

The best examples for this model are the 3-level catfish chain model in An Giang (Figure 2) and the pomelo value chain model in Vinh Long (Figure 3).

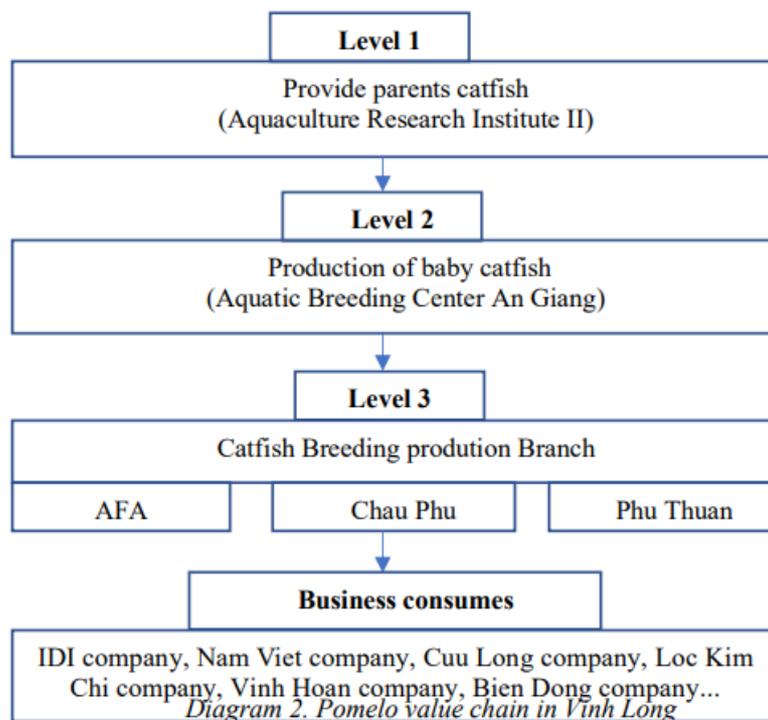


Figure 2. 3 level catfish value chain model in An Giang, Viet Nam

Source: Author

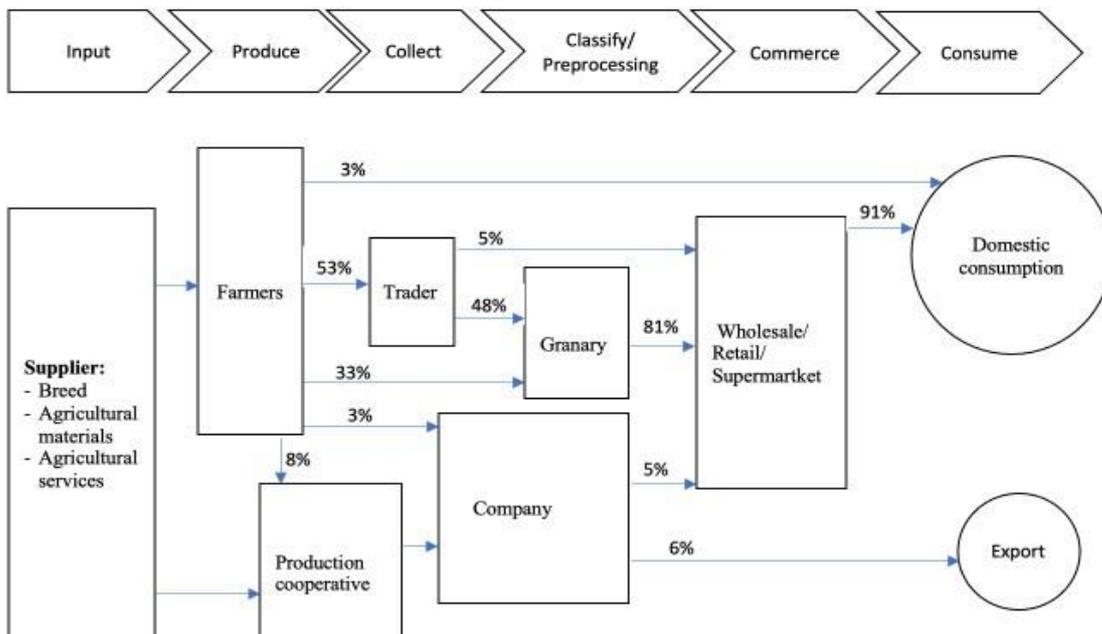


Figure 3. Pomelo value chain model in Vinh Long

Source: Branding project for key agricultural products, famous typical products of Vinh Long province in the period of 2018-2020 [10]

Second, there is a change in the operational target of the models. There are large differences in the purpose of the subjects in the economic linkage models compared to those that do not participate in the model. That is, although there are many actors involved, they all aim for the common goals of the collective such as: Bringing economic benefits to the members; Sharing and learning experiences of organizing and managing production; Improving the quality and value of agricultural products; Strengthening the competitiveness of agricultural products; Share risks in agricultural production. Conversely, those who do not participate in the model usually focus only on the sole purpose of personal gain.

Third, there is a change in the way of organization - management production. Decisions related to production and business are collective. Compared to individual farmers, when participating in the economic linkage model, farmers in the model must comply with regulations, production processes, technical standards according to general guidelines.

In the production and business activities, the subjects promote the spirit of mutual support and cooperation. Farmers will receive support from the State, scientists and enterprises on the signing of contracts for agricultural consumption, branding of agricultural products, training on scientific and technological progress, safe and environmentally friendly production and business standards, share risks when responding to natural disasters, climate change, ... Farmers can share experiences in the production and business process, information about the market, passion in the field... together.

The way the subjects work in models highlights the voluntary nature, as well as the role of

linking. It is a voluntary enhancement of the spirit and responsibility of each subject in the models. When participating in these models, farmers discard their own private nature in order to comply with the signed contract or general provisions of the model. Businesses play a major role in promoting links. The state acts as a conductor to create a proper legal corridor, ensuring close and effective alignment. Scientists play an important role in guiding farmers to apply scientific and technological advances, traceability, bringing farmers the experience of production and business theoretically and practically in the world and in the country.

The way of organizing and managing production in economic linkage models towards the development of modern agriculture, application of scientific and technological advances and sustainable agricultural development. The economic linkage models clearly show the linkage objective to go to the production of large goods applying scientific and technological advances, producing branded products, ensuring technical standards, environmentally friendly. The concrete manifestation is that, increasing the participation of specialized scientists in economic linkage models to bring science into production towards industrialization and modernization of agriculture.

2.3.2 Limitations of economic linkage models and the causes Institutional limitations

There is no adequate institution for economic linkage models in agriculture. Specifically, the Large Field model, which still does not have a full regulation of the role and responsibility of members, therefore, there are changes that arise beyond the management capacity of the subjects participating in the model, so the area of the Large Fields is getting narrower and narrower [see Table 1]. Some places do not even know how much of the field components are called large fields. For value chains, some places do not have policies on organizing and managing the value chain of agricultural products. Or there are not many mechanisms and policies to promote public-investment cooperation in logistics infrastructure investment for the development of agricultural value chains.

The reason for the above limitations is that these models are new, some places implement the movement model, the policy regulations set out have not been implemented in a timely manner and have not kept up with the changes of operating practices in these models.

2.3.3 Limitations relate to the subjects of economic linkage models in agriculture.

Farmers: Farmers have not complied with the general regulations when participating in the models. Farmers lack knowledge of science and technology; Farmers have not put much faith in models, especially when agricultural prices fluctuate, cheap price. Farmers lack confidence in participating in linkage models, and rely on the support of the other subjects. The reason of these limitations which cause these problems are traditional and old - fashion production habit of farmers.

Businesses: There are fewer businesses investing in contracted agricultural links. Because the financial potential of businesses in the link is limitation. The other reason which causes

without linking of businesses is the effect of rampant production of farmers outside the model. Therefore, this causes competition between standard agricultural prices and substandard agricultural products.

State: The state has not yet promulgate institutions to timely adjust the economic linkage models in practice. The reason is that there are many different models, different ways of linking, requiring diversity in institutional proposals but local authorities at all levels have not kept up.

Scientists: They have not yet studied many ways to transfer science and technology to businesses and farmers most effectively. There is no solution to connect farmers to modern science and technology. This is due to scientists' perceptions of the link to farmers, who think they play a role in helping support farmers in models. So, they don't take responsibility. Another reason why scientists have not linked farmers closely is that there is no institution that clearly defines the responsibility of scientists in linking models when successful or failed.

2.3.4 Limitation of the way organized and managed production

There is a lack of synchronization, inconsistency as prescribed by the collective in models such as how to produce, the use of seeds, fertilizer type, etc. That affects the maintenance and development of some linkage models such as the Large Field model. This is because link in the models retains private ownership of the production materials. The linking content has not yet penetrated into the linking for the use of production materials, the linking only manifests on the surface for the aspect of exchange, learning experience, calling voluntary.

2.3.5 Limitation relates to the benefits between businesses and farmers.

Businesses and farmers still don't have a common voice. Both subjects lose mutual trust so that these models do not thrive. Specifically, when price of agricultural products (rice, pangasius) is low, the enterprise deliberately extends the buying time to force the price of farmers, on the contrary, when the price increases, farmers cancel the contract with business to sell other businesses who do not sign contract with farmers. This is because the short-term thinking of subjects causes the link between businesses and farmers unsustainable.

2.3.6 Proposing solutions

Solutions for farmers: Farmers need to change their mindset in agricultural production, need to raise awareness in linking, not chasing short-term benefits; Improve the knowledge and ability to apply science and technology to production and business to avoid being outdated in current and future agricultural production system. Understand the rules in the models to do it right. Farmers should appreciate agriculture and maintain the love of agriculture to the next generation and society, which helps farmers to explore and create effective ways of production and business and better cooperation with other subjects.

Solutions for the State: Strengthening the propaganda to change the perception of the subjects in relation about the benefits of economic linkage models, besides, the state should encourage subjects to participate, maintain and develop models; There should be a strategy to develop concentrated agricultural areas for each province in a synchronous way, ensuring that no province is left behind to reduce pressure for the settlement of agricultural output; The state needs to design a strategy to intellectualize farmers to help them integrate into modern agriculture. Besides, The state should have a strategy to build high-quality human resources for agriculture in the future; The state should increase infrastructure investment, help reduce logistics costs, increase profits for agricultural products; The State should develop an agricultural insurance market associated with models of economic linkage in agriculture.

Solutions for business: Businesses should change their mindset in participating in linking models in the direction that the subjects are beneficial; Enterprises should build trust in farmers through maintaining and maintaining commitments in contracts; Businesses should plan to make the most of the domestic market to increase the capacity of consuming agricultural products.

Solutions for scientists: Scientists need to understand the practical needs of farmers and businesses in linking models to show solutions that make the linkages of these two subjects more sustainable; Research on how to help farmers apply science and technology to production in the simplest way; Scientists should study both theory and practice to effectively exploit the advantages of linkage models, the potential of the subjects participating in these models.

3. Conclusion

The article shows that economic linkage models have contributed to the transformation of production relations in agriculture in Vietnam. Research has also shown that there are still limitations in these models, and the solutions of this study can resolve those limitations in order to promote models to achieve better results. However, solutions are only effective when participants in economic linkage models must be determined to implement them. Therefore, the subjects need to have specific strategies, otherwise it is difficult to achieve the desired results, even, models are only implemented by movement and easily fail over time.

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