# Links in the Value Chain, Supply Chain of Vietnam's Agricultural Industry

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#### Abstract:

The article has an overview of Vietnam's agricultural industry, opportunities and challenges in the current context. Analyzing the role and importance of the agricultural supply chain, thereby analyzing the strengths of the value chain to help Vietnam's agricultural sector bring more added value. The author also conducted an overview of the supply chain, the value chain from which to apply to assess the achievements as well as the shortcomings and challenges of Vietnam's agricultural industry. Finally, the author has proposed recommendations and solutions to improve the efficiency of Vietnam's agricultural value chain and supply chain

**Keywords:** Value chain, supply chain, agricultural industry.

#### 1. Introduction

Vietnam is a country with over 70% of the population working in agriculture. Over the past twenty years, Vietnam's agriculture has achieved remarkable achievements, ensuring food security, turning us into a major exporter of agricultural products on commodities such as rice, coffee and rubber. pepper, cashew nuts, tea, seafood ... Agriculture is the only trade surplus, contributing to stabilizing the trade balance and helping us overcome recent economic crises. However, we are always faced with the challenges: "Good harvest, good harvest"; "Growing-planting" ... The causes of this existence are many, but the main reason is that we have not created our own market and stabilized the output market. We have made it clear that if we cannot create a domestic or foreign market, especially in the domestic market, farmers and fishermen cannot get rich and thus our country's agriculture cannot go any further.

In the development process, Vietnam's agriculture has revealed big gaps in production lines, post-harvest technology, quality and food safety and hygiene. Therefore, despite being one of the countries with large agricultural exports, the sustainability of our production is not high, presenting many major shortcomings from seed, technology, care to harvesting. Post-harvest and processing. The stages that create the highest added value in the agricultural value chain are almost outside Vietnam's territory such as processing and distribution, while the domestic stages create low added value, especially production. Therefore, raising added value through adding value at each stage and harmonizing distribution in the chain will contribute to increasing the competitiveness of agricultural products, improving farmers' incomes and ensuring the Sustainable development of agricultural production.

Vietnam's agricultural consumption market is expanding more and more, creating a stronger motivation for agricultural development, but it is also becoming more and more fastidious and requires increasing quality. Food safety and hygiene, environmental protection. Vietnam's agricultural products are also increasingly facing difficulties and challenges such as overcoming technical barriers, trade barriers that have been erected in major markets, anti-dumping lawsuits ...

Therefore, strengthening linkages in the supply chain and value chain of agricultural products is a very important task, contributing to promoting sustainable economic development and helping the agricultural sector to develop sustainably and promoting capital advantages. have of agricultural sector.

#### 2. Research overview

#### 2.1. Characteristics of links in production

Linkage between production and processing and consumption of agricultural products are voluntary, mutually beneficial, but closely linked economic activities under a prior agreement of the producers and processors. agricultural; is one of the forms of coordination between production and processing and consumption of agricultural products, associated with the forms of business organizations in the agricultural sector, subject to the institutional institutions to achieve targets of activities involved in the linking process.

Firstly, about the subject of the link

According to the concept of linking in agricultural production, there are 3 groups of subjects in 3 stages of production, processing and consumption. Depending on the degree of production organization with specific forms of each group of entities, the specificity of associated entities manifests in the intertwining of the entity in the stages of production, processing - processing., consumption or production, processing - consumption. Especially in the difference in level of associated entities.

Indeed, when considering the link between production and processing and consumption of agricultural products, it is often considered that the link in each stage of the agricultural production process is characteristic of the association. The actors in the linkage between production and processing and consumption of agricultural products have certain differences between groups and the role of each group in the linking process. Agricultural production is the starting point and the first link of the integration process, so it plays a very important role, although the level of association organization has many limitations. Processing and consumption are successive processes that create added value of agricultural products, sometimes creating a difference many times from the original value. Therefore, the influence of processing and consumption in the agricultural chain is very large.

Economic linkage between production and processing and consumption of agricultural products is an indispensable, but very unlikely, process. Because in the process, farmers are the subject of agricultural production, businesses are the subject of processing and consumption of agricultural products. Production organization level, the relationship with the market with the biggest difference is production in mountainous areas. Therefore, in the value chain of agricultural products, producers are often disadvantaged people, processors and consumers of agricultural products are often the ones who play an active and beneficial role in the chain.

### 2.2. The role of linkage in agricultural production

Firstly, contributing to ensure mutually beneficial parties in agricultural production

In fact, if there is no agreement on benefits, there is no agreement on purpose and action. For economic linkages in general and the linkage between production and processing and consumption of agricultural products in particular, ensuring mutual benefit is also considered the most basic principle and prerequisite condition for the relationship. link system. The benefits here should be comprehensively understood, whether there are immediate or long-term benefits, direct or indirect benefits, economic benefits or non-economic benefits ... to be fully guaranteed. sufficient and fair.

In the context of fierce competition, it is necessary to have large volume products, high quality, international standards, timely delivery, competitive prices. Individual farmers cannot do this. Farmers must organize "collective action" according to the common production process of each large field. The process of production, harvest, storage and trade of farmers is established on the basis of the requirements of businesses, markets for volume of supply, quality of goods ... These are the factors for farmers. build collective action. Agricultural commodities need to be clearly defined in quantity and quality for each market as a basis for formulating supply plans; clearly define the quality and quantity of agricultural products in production. The quality requirements of the market must serve as a basic basis to build technical processes for associated models.

For agricultural producers, associate with processing and consumption to receive capital, scientific and technological support; Especially for a stable consumption market. Not only that, farmers also improve their

production through training sessions, sharing production experience ... Since then, the connection between farmers and farmers is increasingly strong. Link farmers together to better meet market demands. Only then can farmers be able to supply products large enough in quantity, uniform in quality, and timely for many partners. Thanks to the link, farmers have the ability to build and manage collective brands, proceed to build brands for products, manage product quality to add value, meet increasing demand. high market for products with clear origin, ensuring safety and quality.

For processors and consumers, associating with producers of agricultural products to have a stable source of input materials, good quality ... to create conditions for improving the utilization rate of machinery and quality of processed products, thereby improving the added value and efficiency of processing and consumption of agricultural products. Implementing the linkage will contribute to ending the situation of enterprises producing agricultural products without stable supply of raw materials, unqualified raw materials and modern processing equipment. The material planning area is also the area where cooperatives, groups, farms are concentrated in producing one type of raw material, according to the process of achieving VietGAP or GlobalGAP quality. The key and core of effective agricultural production models is to build horizontal links (farmers with farmers) to take collective action and vertical linkages (farmers to businesses). ) to build a new distribution channel of actors in the value chain, meeting the most effective market requirements based on the principle of equal and mutually beneficial parties.

Second, increase the voluntariness and self-responsibility of the stakeholders involved

Volunteering is understood as the parties participating actively and voluntarily in a cooperative relationship to bring into full play their strengths, and at the same time offset their limitations, regardless of economic sectors, large and small scale. , domestic or foreign ... This is a necessary condition for the link. Besides being voluntary, self-responsibility is also one of the principal issues. Because self-responsibility is considered to be a sufficient condition of the process of integration in general, the link between production and processing and consumption in particular. Voluntary will define the responsibilities of the parties involved in the implementation of economic integration, mutual benefit and also share the risks if any in the process of economic integration. Since then, the economic integration activities among the participants have been carried out smoothly and effectively.

For the link between agricultural production and processing and consumption, voluntary and self-responsibility is also one of the important principles. This also stems from the role of stakeholders in the value chain of agricultural products, from the engagement of interests of each member of the value chain. Therefore, within the scope of linking each entity must perform well and ensure honesty in the production chain, processing and consumption of agricultural products. It is not accidental that the requirements on origin and products of products in the association are considered as testing the responsibility of each organization and individual in the agricultural product industry.

Thirdly, contribute to increasing efficiency in agricultural production

Implementing links to value chain production is one of the most important breakthroughs in agricultural restructuring for three reasons: Firstly, it allows the concentration of resources and capital. ... on commodities that our country has an advantage; Secondly, chain production will reorganize production in the direction of sharing benefits and risks for actors participating in the link chain, thereby creating motivation for production and promotion agents. to the best of my ability; thirdly, chain production allows quality control, hygiene and technical standards for products and goods to maintain the brand, increase competitiveness, bring goods to market, school. This is where we are weak.

Therefore, linking to production under the value chain is the backbone in restructuring agriculture, through the link chain, it will assign jobs suitable to each production object, thereby contributing to improving the added value. increase and sustainable development. In developed countries, production along the value chain accounts

for an absolute proportion. As in the US, value chain production has been in place since 1954, so far all livestock products follow this method. In Vietnam, new series production has appeared for about ten years under the form of enterprises ordering farmers to raise chickens and pigs ...

Livestock industry has surveyed nearly 20 linked chains in Hanoi, showing the good effect of the chain production model, specifically, employees have an average income from 36 to 60 million / year, meat prices. pigs if produced in chains is 39 thousand VND / kg of steam while individual production costs up to 45-46 thousand VND / kg. In Ha Tinh, the husbandry model is associated with the scale of 500-2,500 commercial pigs / litter for an average profit of 220 million VND / year, the small scale model achieves profits of 400-700 thousand VND / pig. Workers in Tan Thong Hoi Dairy Farm Cooperative (Ho Chi Minh City) have an average income of 2.5 - 5 million VND / month, Hoa Loc Cooperative reaches 4.5 million VND / person / month ..

Fourthly, contribute to improving the efficiency and the role of state management of the economy

State management of the economy in agriculture is the overall state's interventions on agriculture through laws and policies, plans to create a favorable legal and economic environment for real estate activities. agricultural production and business towards the common goal of the whole agriculture; handling economic units' relations in the production, circulation, distribution and consumption of agricultural products; regulating interests among regions, sectors, agricultural products, between agriculture and the whole economy; carrying out control over all activities in agriculture and rural economy to stabilize and healthy all social and economic relations ... The handling of such relations through public management tools, including mechanisms, policies and planning tools. This is a typical intervention of economic state management activities. However, agriculture and rural areas are a sectoral system with many unique characteristics, requiring the State to take different interventions from other sectors and fields.

With these contents, many people emphasized the role of creating the economic and legal environment of the State to the business and production activities of entities (households, farms, enterprises ...) in general. in the economic linkage between production and processing and consumption of agricultural products in particular. However, with the role of regulating interests and supervising the adjustment of economic relations, the State has engaged in economic integration as a partner through economic levers and tools. In fact, Vietnam is aware of this problem, so it considers the State to be one of the participants in economic integration, in the "four-party link".

### 3. Strengthening links in the value chain

In recent times, in many places, many synchronous value chains have been formed from production, processing and consumption of products with the participation of enterprises, cooperatives, cooperative groups and farmers in different agro-forestry and aquatic products, such as a closed-chain model of VinEco Agricultural Production Development Investment Limited Company for vegetable products; a closed livestock chain from supplying inputs such as breeds, animal feed, veterinary to production and processing of products such as CP, Mavin, Dabaco ... Especially the model of sustainable cooperation rice value chain between Loc Troi Group and Phoenix Group, creating conditions for Vietnam's rice value chain to participate more deeply in the international rice value chain. This model links and benefits about 10,000 Vietnamese rice producing households, expanding the area of sustainable rice cultivation to over 10,000 hectares in the Mekong Delta. In addition, a number of fruit and vegetable value chains are produced according to the PGS process (the system of mutual participation of households, inter-households, inter-group groups of internal cross-supervision of the system and certified by partners. It is being formed and developed in Vietnam by chain participants such as producers, businesses, consumers, state management officials, etc.).

With many policies to support and encourage businesses and cooperatives in production and consumption to be issued, more and more agricultural value chains have been formed in different forms of association, such as linking consumption products and services; linking capital contribution to production ... This is a form of close

association, sharing the benefits and risks between businesses and farmers. At the same time, in recent years, a number of agricultural supply chains have successfully applied new technologies such as information technology, blockchain (decentralized database to store information in linked information blocks). together by coding and extending over time) in supply chain management such as applying information technology to connect production and consumption, and traceability of agricultural products to increase value.

Notably, in recent years, our country has been developing development chains in three levels: national key products, provincial products and local products. In order to focus resources on developing key national agricultural commodity value chains, the Ministry of Agriculture and Rural Development has issued a list of national key agricultural products to guide priority in attracting businesses. invest in agriculture and rural areas according to Decree 57/2018 / ND-CP with 13 key products including rice, coffee, rubber, cashew, pepper, tea, vegetables, fruits, cassava and products. from cassava, pork, meat and poultry eggs, catfish, shrimp and wood and wood products. Accordingly, the closed value chain of key national product groups from production to consumption has been gradually completed. Especially, the rice value chain has received a lot of support from production, linking in production and consumption through trade contracts to building rice brands and supporting the promotion of export market development.

In addition, the provincial key product value chain has gradually formed with the special attention of the provincial People's Committees in quickly identifying and promulgating the list of provincial key agricultural products to attract invest, promote linkages between enterprises and cooperatives, cooperative groups and production farmers. Bac Giang is one of the leading provinces with 4 major agricultural product chains including Luc Ngan litchi, Yen The hill chicken, Ven village tea and Chu noodles. The People's Committee of Bac Giang Province has implemented the Project on building and developing commodity agricultural products at the provincial level in the period of 2019-2021 to support businesses and cooperatives in production and consumption, market connection and specialization. paying special attention to branding and product traceability. Currently, many provinces across the country have also issued provincial key product groups such as An Giang, Son La, Kon Tum ...

The development of local specialty product chains (OCOP) has also been promoted since 2013 with Quang Ninh province, the leading province in the country implementing it methodically, with this program system. After 5 years of implementation, Quang Ninh has developed 339 products with nearly 139 participating economic organizations, of which 131 products are rated. Economic organizations that meet OCOP product criteria are supported by the province to build collective marks, geographical indications and domestic and foreign trade promotion. From the initial results of OCOP product development, to promote this program, on May 7, 2018, the Prime Minister issued Decision 490 / QD-TTg approving the National Program products for the period of 2018-2020 (OCOP Program). According to the Ministry of Agriculture and Rural Development, specific targets by 2020, standardize at least 50% of existing products, equivalent to about 2,400 products; consolidating and perfecting the organization of production along the direction of linking production households with cooperatives and enterprises ...

# 4. Some restrictions in linking

Although receiving much support from the Government in organizing the linkage between cooperatives and farmers and enterprises in the agricultural value chain, the rate of formation of a complete agricultural value chain from producers (farmers / cooperatives / cooperative groups) with enterprises are still very low, most of the links in the chain are still very loose, mainly through intermediaries.

Some quality agricultural inputs and materials have not been guaranteed and used inefficiently. The phenomenon of farmers buying some fertilizers and pesticides that are not of good quality and of unknown origin still exists. In addition, farmers also have difficulty accessing the supply of quality plant and animal breeds.

The scale of production is fragmented and the proportion of agricultural products produced according to sustainable quality standards is still low. The level of application of technology in the post-harvest and storage stages of Vietnam is not high, resulting in a high rate of post-harvest losses of Vietnamese agricultural products. Processing technology has had many modern factories but in general, there is a lack of deep processing, fine processing, and processing of by-products.

Logisitics services for export activities of Vietnam's agricultural products are limited, directly affecting the rate of damage and quality and form of goods. In fact, enterprises in agriculture and logistics have not yet been closely linked. Transactions between the two parties are still mostly implemented in the form of leasing contracts but do not have links to support each other in price to improve service quality. The high logistics costs have indirectly reduced the competitiveness of Vietnamese agricultural products in the world market.

Branding has not been adequately invested. Many agricultural products of Vietnam have not built a brand on the world market. This has made the effectiveness of trade promotion activities of Vietnam not bring much value. Moreover, inadequate information and forecast service activities in the world market of agricultural products limit the access of Vietnamese agricultural products to the market.

# 5. A number of solutions for developing agricultural value chains

Reorganize production according to the value chain of product groups. Development of national key product axes: Ensuring the locality has a high degree of natural adaptability, socio-economic, facilitating the direction, having conditions to organize production, being able to protect production and protect environment, landscape, and ability to provide natural resources. To build large-scale concentrated commodity production areas, balancing the supply-demand and supply of the whole commodity industry on a national scale in order to maintain price-profitable production levels. Reorganize production. Collaborate with large enterprises that are capable of leading the national key product value chains to review all planning strategies, planning areas, construction, investment proposals for synchronized value chains and following the cluster industry model; promote large enterprises connecting with local small and medium enterprises, local authorities, farmer organizations to invest in value chains in the form of PPP.

Regarding the development of the main product axis at the provincial level, localities shall base on advantages and market demands, select this product group to plan specialized farming areas with favorable natural and socio-economic conditions, technical facilities and necessary support services, convenient for transportation to connect with the main market. Identify key markets for key agricultural commodities, prioritize local businesses as the leader of each commodity, connect with large processing, distribution and / or target markets. The state should act as a bridge for businesses and local farmer organizations to market or large processing and consumption enterprises through the provision of market information, market brokerage, and investment brokerage. The State cooperates with large enterprises, research institutes or associations to transfer modern technology suitable for local SMEs and farmers; or developing an agricultural innovation incubator for local farmers or groups of farmers. Reform agricultural extension, participate in this process as a technology broker.

Regarding the development of local specialties, it is necessary to closely associate with the construction of new rural areas in districts and communes according to the model "one commune one product". Determine the most appropriate locality and object of production; building processes and standards, technical standardization; planning to organize production into a system. Focusing on incubating the management capacity of farmer groups and trade villages for available specialty products. Attract or build intermediary organizations to act as financial brokers and commercial brokers to commercialize these products from local markets to domestic and international markets.

The study identifies the position of agricultural products in the global market to restructure the market for commodities, production, processing, logistics, etc. to prioritize development resources. Review planning and production structure in line with advantages, market and climate change adaptation.

Strengthen research, application and transfer of agricultural science and technology, focusing on the stages of seed, production processes, processing and value chain management. There are special preferential policies for developing high-tech, green, clean and organic agriculture. Develop, perfect and apply a system of regulations, standards and technical processes. Strengthen control of management of planting areas, farming areas and exploitation areas, accelerate the implementation of numbering of planting areas. Establish a monitoring and evaluation system for farming areas to always ensure the requirements of the market, especially the standards of importing countries.

To attract investment in enterprises to form closed, hi-tech processing clusters in the main specialized farming areas, with infrastructure and logistics services to increase the efficiency of linking production to the market. Developing logistics system applying technology 4.0 to serve key agricultural trade. Build and manage national brands for each key agricultural product

Promote international integration and market development: strengthen information, forecasting, warning, negotiation, dispute resolution, branding, traceability and trade promotion capabilities for the market. domestic and foreign schools.

Renewing and developing cooperative economy, farm economy; developing forms of value chain linkage, attracting private investment, promoting PPP models, reforming state-owned enterprises, reorganizing commodity associations. State management innovation: consolidating the vertical management system; decentralize and increase the activeness of localities; socialization of public services and public service delivery units ...

### 6. Some solutions to promote the role of linkage in agricultural production

Firstly, implementing the planning and building of economic - technical infrastructure system for the material area

Regarding the planning and construction of technical infrastructure systems in service of agricultural production, first of all, priority must be given to the development of major crops and livestock. Depending on the characteristics of each region, it is necessary to concentrate on building elements in the technical infrastructure system. Practical experience shows that the investment in building technical systems is meant to guide the development of agricultural production. This requires the hands of the State from the planning, design to capital mobilization, construction organization, organization of exploitation and management of works for people with low levels of skills. poor capital cannot be done.

Raw material areas need to have developed infrastructure system for production. In order to carry out the infrastructure construction, the units need to thoroughly grasp and implement the motto that the State and the people work together, the people do it for the works directly associated with production, depending on each condition, sue the localities with reasonable support.

Second, formulating and selecting organizational forms of production

Each type of organization has different organizational and management content, suitable for each stage of the agricultural product industry, demonstrating the advantages in linking between production and processing and consumption of different agricultural products. Therefore, in order to organize and manage production to promote its role, to link and promote the role of linking production and processing and consumption of agricultural products, it is necessary to develop and select organizational forms. suitable.

To select the organizational forms, it is necessary to analyze the advantages and disadvantages of each form in each stage and the link between the stages. Assessing the conformity of these forms with the organization and management characteristics of each commodity line and each locality with agricultural production, processing and consumption activities. Reorganize production in the direction of close coherence and ensure harmony of

interests between farming, planting, purchasing, processing and exporting stages. In particular, reorganizing households according to the model of community management (group of households, cooperatives, associations ...); rearrange the system of processing and consumption establishments to suit the material production areas according to the appropriate scope of each locality.

Thirdly, there is a mechanism to support farmers and processing facilities in organizing activities linking production and processing and consumption.

Participants in the association are farmer households, small processing facilities, so the information and qualifications of participating are limited. In particular, in the drafting and implementation of associated contracts will arise many legal and economic issues because agricultural production is subject to objective and disciplined impacts on the enforcement of laws on low economy. Therefore, when deploying affiliate activities, it is inevitable embarrassing. In this context, supporting linkage actors becomes an urgent requirement.

The state management agencies and trade union organizations in each locality shall select potential enterprises, especially enterprises with professional staff members, who have reciprocal and prestigious impacts in Associations to introduce to farmers. Creating a favorable environment, especially administrative procedures, economic policies to attract businesses to invest in agriculture.

Agencies processing and consuming agricultural products need to learn carefully about partners who are intending to associate and introduce them so that they can know their business activities to negotiate and sign contracts to join. Providing fully and truthfully information proving the potential of the enterprise to state management agencies. Promote business image to farmers. Proposing forms of linkage suitable for farmers in each material area.

Fourthly, enhance the role of commodity associations and legal awareness of actors in the link between production and processing and consumption of agricultural products.

In the context of deeper and deeper international economic integration, the daily industry associations play an increasingly important role for enterprises of the agricultural sector. Therefore, developing and improving the role of commodity associations plays an important role in developing the linkage between production and processing and consumption of agricultural products.

Linking requires entities to comply with the agreements in the contracts. For a long time, in Vietnam, issues related to contractual commitments in linking production, processing and consumption have often been overlooked, leading to "rafters". This situation not only affects the activities of the parties involved in the association, but in the context of increasing domestic and international integration, the integration will face many difficulties and economic losses when violating, contracts will be strictly dealt with in trade agreements, in contracts with foreign partners. Therefore, raising the legal awareness in the link between production and processing and consumption of agricultural products is very important

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