Research Findings and Policy Brief

September 2021

H2020 VALUMICS Project

Exploring the governance and fairness in Vietnam's milk value chain

Key message

This brief presents the main outcomes from a study of exploring governance and fairness issues in Vietnam's milk value chain, and the policy implications for upgrading the supply chain.

Research methods

This study uses the global value chain governance model and a qualitative framework. Data is collected from existing literature and from exploratory interviews.

Key findings

Since the economic reforms in 1986 and 1991, Vietnam's milk production and dairy market have developed considerably. The milk value chain is structured alongside three governance models, i.e. relational, captive, and hierarchy models. Vietnam's dairy sector has progressed through three phases of building, expanding in breadth, and developing in-depth and the governance models have adjusted positively since these reforms. However, Vietnamese dairy farmers, particularly those of small-scale, have been exposed to a low level of fairness and welfare across the supply chain. In the short term, dairy farmers in the relational model may benefit from more power and fairness, whereas farmers in the captive model may gain benefits and potential fairness in the long term. Vietnam has various regulatory interventions and these have positive and significant influences on the fairness, welfare, sustainability, and governance in the milk supply chain. However, not all farmers have benefitted from these policies and measures regarding fairness and welfare should be diverse, gradual, and inclusive.

Source of picture: Vinamilk (2021)[1]

Analysing the milk value chain in Vietnam

Overview of the milk sector in Vietnam

Since the Renovation in 1986, Vietnam's economy and dairy sector, in particular, has been reconstructed from a planned system to a socialist-oriented market system with a competitive market. Since then, the dairy sector has developed dynamically and become one of the most important agri-food sectors with providing diverse dairy products for the domestic market, creating jobs and incomes for farmers, and gradually replacing imported dairy products. In 2018, Vietnam is the sixth biggest milk producer in Asia and the second-largest producer in ASEAN with the dairy production of about one million tonnes, and an average growth rate of

[1] Vinamilk (2021). https://www.vinamilk.com.vn/

14.4% between 2010 and 2018[2]. The dairy revenue reached over €4 billion in 2018, accounting for an average growth rate of 13.6% from 2013 to 2018[3]. Vietnam's milk consumption has increased and reached 2.6 billion litres in 2018, accounting for about 10% of the total food expenditure[4]. In 2018, the local dairy production covered only 40% of its domestic demand, with the rest of demand met by imports. Vietnam also exports dairy products to 43 countries, mainly infant milk formula, with the value of over €110 million in 2018[5]. Although Vietnam's milk sector has experienced rapid growths in milk production, demand, and trade, dairy farmers have still faced various internal disadvantages and external challenges.

Characteristics of the milk value chain in Vietnam

- ✓ ***Core actors are farmers, cooperatives, processors distributors, and retailers.***
- ✓ ***Most dairy farmers participate in farming contracts and/or cooperatives as they cannot directly sell raw milk to retailers and end-users.***
- ✓ ***Concentration level of the milk processing enterprises is relatively high.***
- ✓ ***Large dairy firms have various types of sales channels and export market.***

Milk value chain analysis

The milk value chain in Vietnam is primarily created from core actors of farmers, cooperatives, processors, distributors, and retailers (Figure 1). The additional actors include input suppliers, importers, exporters, government, and associations. Most dairy farmers participate in farming contracts and/or cooperatives as they cannot directly sell raw milk to retailers and end-users. Therefore, dairy cooperatives and contract farming have expanded quickly, along with the emergence of nuclear dairy farms of large enterprises. In 2018, there were approximately 300,000 cattle in Vietnam of which the number of cows producing milk stood at 200, 000 heads, and accounting for an average growth rate of 9% over the period 2010-2018[2].

There are over 60 milk processing and trading enterprises in 2019 with over 300 dairy product brands in Vietnam. The largest local dairy companies are Vinamilk, TH True Milk, Moc Chau milk, IDP, and Nutifood and the biggest foreign dairy enterprises are FrieslandCampina, Nestle, and Abbott[6]. The concentration level of the milk processing enterprises is relatively high with the largest four dairy companies (7% of the industry) accounting for over 79% of the drinking milk market share[7]including Vinamilk (55%), TH True Milk (11%), FrieslandCampina Viet Nam (7%), and Moc Chau (6%). Vinamilk is also in the top 50 biggest dairy companies in the world, ranking 36th in 2020[8].

Distribution and retail systems of the milk value chain in Vietnam consist of (1) *Traditional sale channels:* grocery store, wet shop, firms' distributor with retail points; (2) *Modern channels:* supermarket and convenience store; (3) *Online shopping channels:* Social networks (Facebook, Zalo), e-commerce shop, website*;* (4) *HoReCa channels:* hotels, restaurants, and canteens; (5) *Export markets:* Exporting or investment in foreign markets. The large dairy firms can have all types of these sale channels.

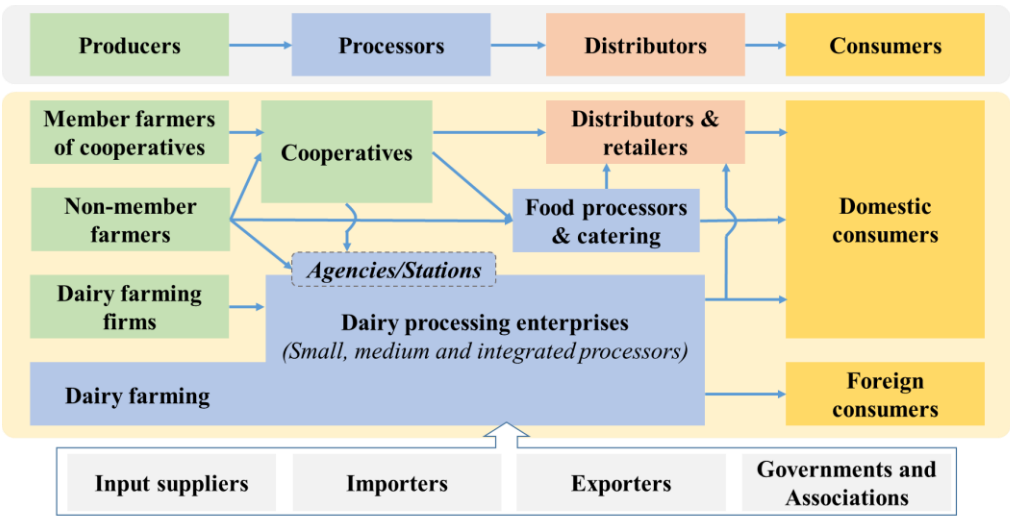

Figure 1: The milk value chain in Vietnam

[2] General Statistics Office of Vietnam (GSO, 2019). http://www.gso.gov.vn
[3] Babuki (2019). Vietnam's dairy market in 2018. https://babuki.vn
[4] VIRAC (2019). Vietnam Dairy Industry In-depth Report. https://viracresearch.com
[5] Nhu Huynh (2019). Vienam's dairy sector is winning and penetrate to the world market. https://vietnambiz.vn
[6] Nongnghiep (2019). Rapid increase in export of dairy products. https://nongnghiep.vn
[7] Minh An (2019). How will Vinamilk expand if they acquire GTN successfully? https://vietstock.vn
[8] Tran, V.N. (2021). Vinamilk ranks higher in top 50 biggest milk producers in the world. https://tuoitre.vn

Governance of the milk value chain

Governance models

✓ ***Vietnam's milk value chain is structured alongside three governance models, i.e. relational model, captive model, and hierarchy model.***

✓ ***The global governance model of Vietnam's milk value chain has progressed through three stages since the reform in 1986.***

Global governance of Vietnam's milk value chain

Three types of dairy value chain governance are identified in Vietnam, i.e. relational model, captive model, and hierarchy model based on the global value chain governance model[9].

Relational value chain: Dairy farmers in an area with sufficient farming conditions may participate in a dairy cooperative with both activities of raising dairy cows and processing milk products taking place at small and medium scales. These processors only require basic quality and safety standards of raw milk. The transaction is complex since it needs trust, social and spatial proximity, family and ethnic ties to control the mutual dependence. Member farmers sell their raw milk to the dairy cooperative through a simple contract.

Captive value chain: Big dairy processors demand more stringent quality standards of both raising cows and milk quality. In other words, it is the high ability to codify in the form of detailed instructions for standards that requires more knowledge, skills, technique and technology, and financial capital. Thus, dairy farmers need supports, interventions, and commitment to purchase from the dairy firms. Farmers can produce higher-quality milk with the support and guide of firms. They benefit from higher prices for the higher-quality milk. As the result, dairy farmers depend on the lead processing firms and become captive suppliers. Dairy farmers and processing firms usually have a tight and official contract with clear terms of quality standards, price, quantity, support, penalty, and others.

Hierarchy value chain: The most upgrading, modern, and high-technology milk value chain is the hierarchy governance model where a large firm integrates almost all of the key activities such as cattle feed production, milk farming, dairy processing, and dairy products distribution. Dairy farming in this governance model usually has quality certifications with a higher specificity in comparison with other models. Meeting high quality standards (such as Global GAP and EU Organic) and achieving effective production require complex and expensive processes and practices that cannot be applied by small and scattered milk farmers.

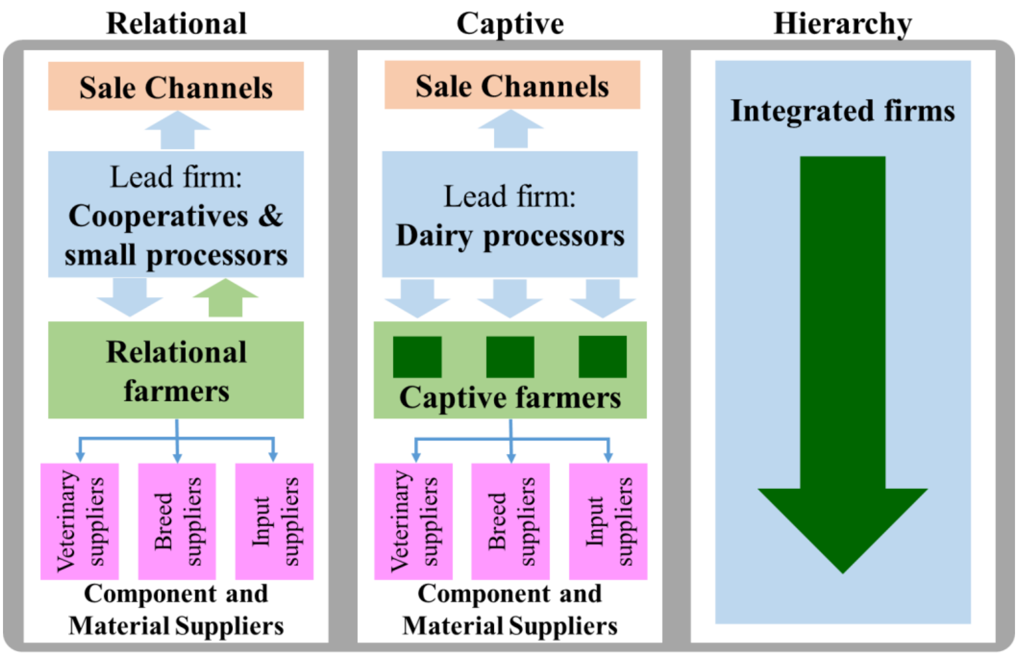

Figure 2: Three types of cow milk value chain governance in Vietnam

Evolution of the milk value chain governance

Vietnam's dairy sector has progressed through three phases of building, expanding in breadth, and developing in-depth since the reforms. Accordingly, the governance models of the dairy value chain have positively changed and upgraded. *The first phase of building:* The key goal of

[9] Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. *Review of international political economy*, 12(1), 78-104.

Vietnam in this period was to meet people's basic demand for food and reduce poverty. The private and commercial dairy actors are appeared and developed. The value chain governance models are mainly market, modular, and relational. *The second phase of expanding in breadth:* Dairy farms and firms were quickly built and expanded over the country, enlarging from small subsistence farms to large-scale farms, with the support and promotion of policies under the national industrialization and modernization strategy. Large dairy state-owned enterprises are equitised, foreign dairy companies are established, private large dairy farms and firms are grown and modernized. The governance models are mainly modular, relational, and captive. *The third phase of developing in-depth*: Vietnam's dairy sector has developed in a sustainable and modern way in this period. Leading firms start merging and acquiring, building large-scale farms with high technology, modern management, and sustainable quality standards. The main governance models in this period are relational, captive, and hierarchy.

Fairness: Price and contractual arrangements

Fairness for farmers

✓ ***Milk farmers in Vietnam are exposed to a low level of fairness and welfare across the supply chain.***

✓ ***In the short term, dairy farmers in the relational model may benefit from more power and fairness, whereas farmers in the captive model may gain benefits and potential fairness in the long term.***

Fairness in the captive governance model

The contract between dairy firms and farmers is annually signed and renewed in main terms of quantity, quality standard, price, payment, and processes. The transaction milk quantity needs to reach the registered amount, and farmers need to supply the quantity stipulated in the contract. The milk prices are different and depend on the milk quality. The quality standards are measured for three main criteria such as total solids, fat content, and somatic cells. The best-quality milk gets the highest price that is usually higher than the market price; the average-quality dairy gets a medium price which is similar to the market price; and the lowest-quality milk gets the lowest price that is relatively lower than market price. The price is weekly determined by the dairy firm after collecting milk and testing quality, and then the firm pays farmers accordingly. It is supposed that the lowest price is just equal to the production cost, hence there is no profit for farmers. It is also difficult and rare for small-scale farms to achieve the best quality. In general, the contract in the captive governance model can bring more stable and higher prices for farmers, but they are the weakest link in this model, they have no power to negotiate, hence they are at the mercy of the leading firms. Farmers do need to improve milk quality and enhance capacity to successfully benefit from this type of model.

Policy impact

Vietnam's regulatory interventions have positive and significant influences on the fairness, welfare, sustainability, and governance in the milk supply chain. However, not all dairy farmers can benefit from policies and schemes.

Fairness in the relational governance model

Cooperative contracts with open and flexible terms and conditions can be characterised by higher levels of farmers' power and fairness in the relational governance model. The milk price is discussed and determined by both processing cooperatives and members, hence benefits are shared and ensure an appropriate income for farmers. The milk quality standard is at the basic level and it is controlled by two criteria: no dilution and no antibiotics. The quality testing is not very strict. Although the quality testing in this model is less stringent than that in the captive model, it is guaranteed by the high level of trust and the cohesion between cooperatives and farmers. There is only one contract price for all milk quality grades in the relational governance model. It is usually similar to the medium price of leading firms. This price mechanism is stable and good for dairy farms, especially for those of small-scales and lower milk quality.

In summary, the contract terms in the captive model are more standard, obligatory, and obvious than those in the relational model while the fairness and power of farmers in the relational governance model seem to be higher than those in the captive governance model. In the short term, dairy farmers in the relational model may benefit from more power and fairness, whereas farmers in the captive model may gain more benefits and potential fairness in the long term.

Regulatory interventions

Vietnam has become a socialist-oriented market economy with the core goals of enhancing social welfare, fairness, democracy, and civilization since the reforms. The changes in political and economic systems have led to the development of the agricultural sector and the dairy value chain in particular. To achieve these targets, Vietnam's government has implemented a series of policies, projects, and programmes to develop dairy sectors and support milk farmers. The regulatory interventions have significantly and positively affected fairness, welfare, governance, and sustainability in Vietnam's dairy value chain and these interventions can be categorised into seven groups as follows:

- Developing the dairy sector in general
- Enhancing the capacity of dairy farmers and cooperatives
- Increasing the income, welfare, and poverty reduction of farmers
- Linking: cooperative and contract farming
- Improving dairy safety, human nutrition, and milk demand
- Promoting the transparency and openness of information
- Protecting the environment and animal welfare

Implications

✓ ***Not all farmers have benefitted from supporting policies, hence measures regarding fairness and welfare should be diverse, gradual, and inclusive.***

✓ ***The main measures can be cooperative and contract farming, farm scales, product diversity, milk quality and certification, science and technology, access to market and information sources.***

Policy Implications and Recommendations

Under the high pressures of globalisation, climate change, and changes in consumer behaviour, Vietnam's milk value chain has been notably upgraded in a more sustainable and modern way. The government's regulatory interventions have also had considerable influences on the fairness, welfare, sustainability, and governance in the milk supply chain. However, not all dairy farmers have benefited from these supporting policies and schemes. Thus, the regulatory interventions on enhancing of the fairness and welfare to dairy farmers should be diverse, gradual, and inclusive. The main and potential measures can be recommended as follows:

- Enhancing linkage by contract farming and dairy cooperatives
- Increasing milk cow farm scales
- Diversifying dairy products with the higher value added
- Improving and certifying milk quality
- Upgrading science and technology in milk cow raising and dairy processing
- Enhancing the access to the market and information sources.

Key sources for further information

To discuss the research presented in this brief, please email: viet.hoang@ueh.edu.vn

VALUMICS country report from Vietnam

Hoang, V., Nguyen, A., Hubbard, C., & Nguyen, D. (2021). Investigation of Governance and Fairness in the Milk Value Chain: An Exploratory Study in Vietnam. ***A supplementary country report to Deliverable 5.1*** VALUMICS "Understanding Food Value Chains and Network Dynamics", funded by European Union's Horizon 2020 research and innovation programme GA No 727243. University of Economics Ho Chi Minh City, Vietnam. 32 p.

Barling, D. and Gresham, J. (Eds.) (2019) Governance in European Food Value Chains. VALUMICS "Understanding Food Value Chains and Network Dynamics", funded by European Union's Horizon 2020 research and innovation programme GA No 727243. Deliverable: D5.1, University of Hertfordshire, UK, 237p. DOI 10.5281/zenodo.4956325

Published scientific papers

Hoang, V. (2021). Impact of Contract Farming on Farmers' Income in the Food Value Chain: A Theoretical Analysis and Empirical Study in Vietnam. *Agriculture*, 11, 797. https://doi.org/10.3390/agriculture11080797

Hoang, V.; Nguyen, A.;Hubbard, C.; Nguyen, K.-D.Exploring the Governance and Fairness in the Milk Value Chain: A Case Study in Vietnam. Agriculture 2021, 11, 884. https://doi.org/10.3390/agriculture11090884

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