

DEVELOPMENT SUPPLY CHAIN OF SAFE FOOD IN HANOI

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Abstract

The issue of safe food has been receiving great attention in countries like Vietnam and in Hanoi specifically. To ensure food safety, the supply chain needs to be analysed and improved. The result of qualitative research has shown that most supply chains providing safe poultry and vegetable in Hanoi have very loose relationships and most participating members do not care about how the safety of their food is ensured throughout the chain. This research calls for immediate changes in the behavior of participating members of the chain, in supply chain management and in policies as well.

Keywords: *Supply chain, supply chain management, safe food.*

1. Introduction

Food consumption has always been important in the lives of Vietnamese people. The strong urbanization process has led to an increasing demand for food in both quantity and quality in the large urban markets. Food quality is directly related to human health. The consumption of unsafe food not only negatively affects the health of the people but also the development of the race and the future of the whole Vietnamese nation, causing frustration for the whole society. The issue of ensuring safe food supply for consumers, especially in big cities, is gathering more and more attention in Vietnam. The supply chain of food items is a system of network of livestock establishments, processing facilities, food distributors and the final consumer. Therefore, research in developing supply chain models linking the stages of production, processing, distribution, circulation, consumption by industry, group or food item with many participants, in order to ensure the supply of safe food for the people is an urgent requirement of Vietnam today. With safe food supply model, food hygiene and safety will be controlled from the origin and throughout the entire circulation process from farms to the consumer's table.

Hanoi with a population of about 9 million in 2020, in which the urban population accounts for a large proportion, this is a large market for food products. The reality of the Hanoi market is that there are many types of food that are not safe and hygienic while they are an important commodity for Hanoi consumers. Businesses providing safe food products are facing many difficulties because they have not been able to convince consumers to buy and use them. There are also supermarkets and retail chains such as Big Green, Big C, BacTom, etc being interested in organizing the supply chain of products sold in their system.

In fact, the supply chains of safe food for the Hanoi market in the direction of linkage are few and their activities are very limited. In addition, state management agencies do not have good mechanisms and policies to manage the food market, control food hygiene and safety, and protect people's health and the living environment. How to develop effective safe food supply chains for the Hanoi market? How to change the method of buying and selling food in the direction of modern civilization and safety? How to organize and manage the entire food production and distribution process according to safety standards and achieve business efficiency? Which safe food supply chain model should be developed for the Hanoi market? The above are pressing questions for safe food manufacturers and regulators. For the above reasons, the research aims to develop safe food supply chains for the Hanoi market. In the results of this study, the authors focus on presenting two main chains: safe poultry chain and safe vegetable chain.

2. Method

- **Approach:** The study uses a supply chain approach in the analysis of safe food supply chains for the Hanoi market. The study will use this approach to map the safe food supply chain, describe the activities and functions of the chain, and describe the actors involved in the chain from producers, processors, distributors. distribution, to the final consumer. Comprehensive study of actors involved in the safe food supply chain across all aspects of business operations will be conducted. The research comprehensively analyzes the theoretical basis of the safe food supply chain for markets to provide objective perspectives, principles and steps in the process of safe food supply chain management.

The research project of safe food supply chain models has been successful at home and abroad to draw lessons for safe food supply chain management for the Hanoi market. The thesis researches the issue of safe food supply chain management from the point of view of system administration and in relation to other activities of business entities. In particular, the topic also studies the role of state management, the legal system in the management of safe food supply chains for the Hanoi market. With the above scientific approach, the research will propose specific orientations and solutions for safe food supply chain management for Hanoi market in particular and Vietnamese cities in general. The proposed solutions include both short-term and long-term ones to ensure high applicability in practice.

- **Information/data to be used in the research:** Primary and secondary information

- **Data collection and analysis method:**

+ Empirical survey: The project is expected to investigate and survey groups of members in the supply chain of safe poultry and safe vegetables for Hanoi market, including: Group of households, farms , enterprises; Group of organizations and household businesses, wholesale and retail of safe vegetables; The final consumer is the household,...

+ The topic investigates the above groups to collect information about the supply chain such as behavioral characteristics of actors participating in the chain; scale, structure and characteristics of customers consuming safe poultry and safe vegetables for Hanoi market,...

+ In-depth interview: the topic conducts in-depth interviews with state management agencies, businesses, and households participating in the supply chain to collect qualitative information about the supply chain.

+ Group discussion: conducted with a group of retailers (each group of 15 retailers) and consumers (each group of 15 consumers) to collect qualitative information about their ability to participate in supply chain, job allocation in the chain, governance, innovation and upgrading capabilities in the chain.

3. Results and discussion

3.1 Current state of poultry product supply chains for Hanoi market

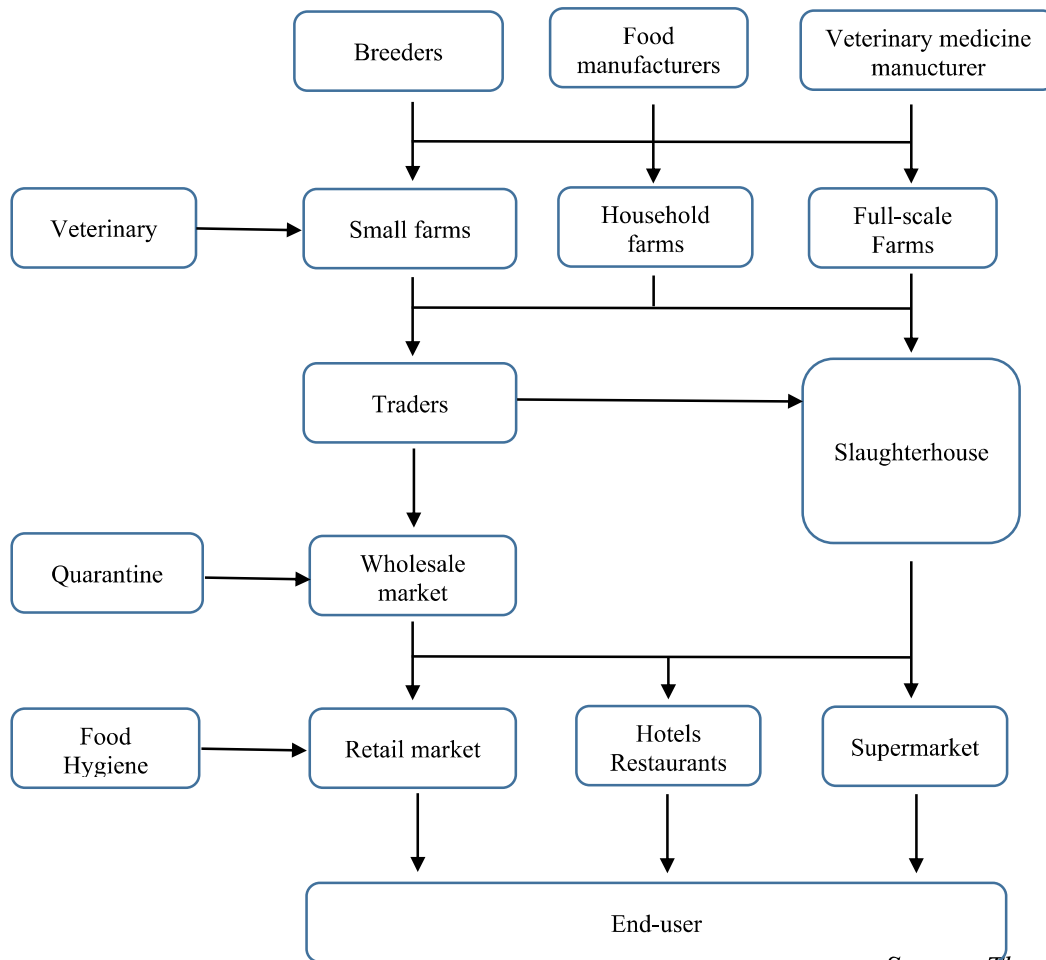
3.1.1 Current state of poultry product supply chain models

It can be seen that, to serve the inner-city market of Hanoi with nearly 9 million people is a network system of many complex poultry supply chains with many different intermediaries and many different types of poultry, participating business organizations and poultry supply chains intertwine and integrate with other food supply chains in the market. Most poultry supply chains are small in scale, with a narrow market scope. Besides the traditional poultry supply chain system, modern poultry supply chains have also been formed (although the number is still small).

A survey of poultry supply chain models serving the current inner-city market in Hanoi shows that most of the poultry supply chains operate in a pure market relationship model (meeting 80% of market demand).). Only about 20% of poultry products reach consumers' tables through organized supply chains, mainly supermarkets and large processing enterprises. The results of the survey of chain participants from poultry farmers to poultry distribution participants show that the chains are organized and governed in the style of a pure market relationship with many organizations/enterprises and participating individuals have formed a complex supply network in the Hanoi market. Poultry from raising households through traders is concentrated to sell to wholesalers at wholesale markets and from there through these poultry business households for further distribution to retailers and end consumers. and. With tens of thousands of livestock from households in the suburbs and neighboring provinces, hundreds of collectors, hundreds of wholesalers at wholesale markets and thousands of retail poultry shops in markets throughout the inner city. Hanoi has made the poultry supply network quite complicated. According to statistics, there are 1,042 markets in Hanoi's inner city; 417 supermarkets and fresh food stores; about 4,200 establishments consuming poultry meat products such as restaurants, hotels and collective

kitchens. As a result, the poultry supply chain for Hanoi often has to go through many intermediaries, leading to increased transportation costs and high selling prices. Moreover, because there are many intermediaries and many members are involved in each stage of the supply chain, it is difficult to trace the origin of poultry and it is difficult to control food safety due to the steps in the chain. Therefore, the quality and safety of poultry products sold to Hanoi consumers are not guaranteed. Through the survey of large poultry raising areas such as Yen The, Ba Vi, Chuong My, the farming households all reflect that the consumption of products is completely dependent on traders. Traders buy according to their consumption capacity and market price at the time, with no commitment to livestock producers. On the contrary, livestock households do not have commitments to sell poultry to specific traders. The form of a product sales contract and a mechanism to ensure contract performance are not yet available. Traders depend on the orders of wholesalers at the wholesale market. However, the binding between traders and wholesalers is also loose and based on the commitment of each deal. Linkages between breeders, traders, wholesalers and retailers have not yet been formed. In the traditional poultry supply chains on the Hanoi market, the business relationship is often through buy-and-sell transactions between two adjacent members. Traders collect and buy poultry from farms and sell them to wholesalers at wholesale markets. Farmers only know about traders who buy and sell and do not care how their poultry continues their journey to consumers' tables. Breeders, traders, wholesalers and retailers participate in transactions only to seek direct profits, they are not interested in the operation of the entire chain. Therefore, the division of work and benefits between members in the chain is often not reasonable or fair. The operation of the chain is expressed through free transactions between independent business organizations/individuals who do not have a leadership role in the activities of all stages in the supply chain. In the current poultry supply chain structure, there are many competitive acts both horizontally and vertically, including conflicting acts. As a result, the chain of operations is inefficient, there are many conflicts that take place, breaking the existing business relationship, such as disagreements about operating locations, prices, delivery conditions, quantity and product quality, etc. When there are conflicts, chain members are willing to abandon the current business relationship in search of another (other supply chain) relationship that is more profitable, increasing circulation costs due to the disruption from overlapping functional operations in the chain.

Figure 1: Poultry supply chain for Hanoi inner city



Source: The author

Due to the large number of livestock raising households, small-scale collectors and retailers, the transaction relationships in the chain are very complicated, sometimes overlapping. The lack of system-wide management has led chain members to pursue short-term profits and their own goals, and has also given rise to negative issues in food safety and hygiene such as the use of banned substances in raising and preserving poultry meat causing unsafe food.

3.1.2. Current state of relationships and linkage mechanisms among members in the poultry product supply chain for the Hanoi market

As pointed out above, the food supply chains for the inner city market in Hanoi are mainly chains according to traditional market relations, so the linkage between chain members is very loose. Business transactions are mainly on a case-by-case basis, with little commitment to maintaining a long-term business relationship. The mechanism to create the

link is mainly based on the credibility of the business person. Sanctions to create a solid guarantee of purchase and sale relationships between organizations participating in the supply chain are incomplete and not yet effective.

Relationships among members in traditional supply chains

First, the relationship between farms and livestock households with customers who are traders or slaughterhouses. Breeders sell products to these customers on a one-to-one basis. Traders buy poultry from households and then sell it to wholesalers at wholesale markets, accounting for the largest proportion (95%), in addition, poultry slaughterhouses also buy directly from households. Poultry household farms in the suburbs of Hanoi and neighboring provinces are mostly small-scale ones. Poultry sold to traders usually does not have a legal contract. Quantity and price agreements are based on acquaintance and trust between individuals, payment is mainly in cash.

Second, the relationship between traders and wholesalers at wholesale markets. These links are relatively loose. Wholesalers at the wholesale market can import goods from many different traders. Although, traders also have prior contacts with wholesalers regarding the number of batches of poultry. However, the wholesaler's commitment on the quantity of imported goods is usually on a per shipment basis, with no long-term commitments. Wholesalers easily switch to import goods from new traders if they see better prices and supply conditions.

Third, the relationship between wholesalers at wholesale markets, poultry slaughterhouses, retail establishments, and processing facilities. The link and coordination between the members of the chain at the last stage before the poultry reaches the consumer's table is less binding. As mentioned above, consumers have the habit of buying fresh poultry and poultry products. This leads Hanoi people to buy poultry mainly from small retailers in traditional markets and poultry retail business households buy poultry from wholesalers for slaughter, preliminary processing, and sale. for consumers. Due to the small daily consumption, retailers do not usually rely on long-term, secure supply contracts.

A general assessment of the limitations in the linkage relationship between members of the traditional poultry supply chains for the Hanoi market can be seen:

First, the lack of a leading link in the chain. Except for the chains of large companies and traditional supply chains, the cooperation is mostly spontaneous and usually occurs in only a few stages of the chain. There has been no cooperation from the stage of business planning of each chain member, only stopping at the stage of direct purchase and sale of poultry products.

Second, the degree of linkage between the stages in the chain is often loose, the level of commitment is very low, the cooperation and consistent implementation of commitments

among the chain members are not high, resulting in commitment terminating. The act of mixing poultry products of unknown origin into the supply of goods delivered to buyers is relatively common. Trust among chain members on the stability of long-term business relationships is low, so they often conduct business according to short-term benefit calculations.

Third, in the chain, there are many intermediary stages that do not significantly contribute to the real value of the chain (5%) but account for a large share of economic benefits, accounting for 19-21% of the chain's profits, compared to 4.5 – 8.5 % of the farmers (according to the survey results of the Department of Livestock Production).

Fourth, it is not possible to create a system of organizations supporting the poultry trading activities of the chain members effectively, for example, to coordinate in transportation, to share information on the consumption market, to buy input materials of the livestock industry, and to coordinate to increase the economic value of by-products, etc.

Fifth, business transactions are often not planned in advance. The majority of enterprises and organizations participating in the poultry supply chain admit that they make business transaction decisions mainly based on habit rather than on scientific research, and that the transaction process is an iterative one. Iterative, in which later decisions are based on discoveries and experience drawn from previous (possibly erroneous) decisions and of other firms.

Sixth, the lack of respect for legal contracts in the course of business transactions is quite common in poultry supply chains for Hanoi, showing the low level of effectiveness of Vietnam's legal system. In addition, the business culture of entrepreneurs is oriented towards free transactions without regard to legal issues. Confidence in the protection of the law for the rights and responsibilities of each party in business transactions is still low.

Seventh, the chain members are not interested in cooperation links in the chain, making them unable to ensure food hygiene and safety throughout the whole chain. Loss of food safety and hygiene can occur in every stage of the poultry supply chain. The participating members do not see their responsibility to ensure food hygiene and safety for the final product. The organization of business transactions is fragmented in a random fashion, and management is based on experience, not knowledge. Additionally, poultry supply chain participation is very low. Safe food traders in general and safe poultry in particular are very vulnerable to changes in the macro environment, bankruptcy or downsizing of their businesses.

3.2. Situation of safe vegetable supply chain for inner city of Hanoi

Through the survey, the farmer households all reflected the reality of consuming safe vegetables mainly through retail stores and supermarkets in Hanoi. These retailers buy

according to their consumption capacity and market prices at the time, with no long-term commitments. This relationship is relatively loose based on the commitment of each deal. In traditional supply chains, there is no link between farmers, wholesalers and retailers. Business relations are direct transactions for profit, the parties are not interested in the operation of the entire chain. The lack of system-wide management has led chain members to pursue short-term profits and their own goals, which has also generated negative effects in ensuring food hygiene and safety. The analysis shows that safe rations cannot be supplied to the market through the current free market mechanism supply system. Safe vegetable must be supplied to customers along proactively organized and managed supply chains that link from farmer to retailer.

A relatively typical model of a safe vegetable supply chain for the Hanoi market is the *Dominant model of Supply Chain Management*. Dominant supply chain management occurs when smallholder farmers are dominated by large distributors/buyers who have the power to control all stages of the supply chain. Organizing and operating these chains is a large retailer with a chain of safe food stores that actively places orders, commits to purchasing and consuming safe agricultural products for smallholder farmers in production areas. For example, Hon Dat State Company Limited, with a chain of 22 food stores under the brand name Bac Tom in the inner city of Hanoi, has established the supply of agricultural products from hundreds of small farmers in safe production areas. with certain commitments. The company has staffs to supervise the agricultural production of farmers to ensure the correct safe production process and that the agricultural products meet the standards set by the company.

A number of large retailers have been implementing supply chains that are managed in the style of enterprises signing contracts to ensure the supply of seeds and agricultural materials to farmers, and at the same time cover all safe agricultural products. . For example, Vietnam Joint Stock Company has invested quite successfully with the 3F business model from feed production to livestock farms and retail stores. Some other supply chains are organized by large supermarkets such as Vinmart and Big C import safe vegetables regularly from a number of large contracted purchasing centers.

However, the reality is that many safe vegetable supply chains operate inefficiently, and some chains even fail. The relationship between agricultural farmers and consumer enterprises is still loose. The fact that the retail company organizing the chain has not been able to manage the entire operation of the chain, leading to the failure to ensure the quality standards of safe vegetables and not to create the trust of customers. Many chains have not yet been able to sign contracts between retailers and farmers. If there is a contract, contract enforcement is not serious. Some contracts between purchasing focal points and supermarkets are not supervised to ensure compliance with the commitment to safe vegetable quality standards. In fact, even the safe food supply chains organized by large

supermarkets have strict management processes but still allow contaminated food products or excessive antibiotic and banned substances residues. There are many reasons for the inefficient operation of the chains, including the inherent behavior of chain actors, which has led to difficulty in managing the supply chains of safe vegetables in the Hanoi market.

Figure 2: A typical model of a safe vegetable supply chain in Hanoi



Source: The author

4. Conclusion

To successfully develop safe food supply chains for the Hanoi market, it is necessary to have policies and solutions to accelerate the transformation and upgrade of existing supply chains and build organized supply chain models led by a large and powerful member. At the same time, it is necessary to improve the effectiveness of law enforcement in the field of ensuring food hygiene and safety, ensuring regulations and quality standards for products sold on the market.

Transforming and upgrading existing traditional supply chains with many limitations such as unsanitary products, low economic efficiency and low competitiveness is a process that requires strong and long-term efforts of many organizations and actors. Understanding the factors driving this process will help organizations participating in the safe food supply chain transform and upgrade themselves to achieve better business results and better meet consumer needs. Institutional actors such as authorities, functional agencies implementing food hygiene and safety monitoring also need to improve laws, processes, procedures and implementation methods to apply pressure to accelerate the transition process.

Therefore, there is a need for a fundamental and comprehensive change in the roles and activities of organizations and actors involved in the supply chain of safe cities for Vietnamese cities. The process of improving the strength and capacity of chain management of members will also be the process of shifting supply chain management from discrete market relationships, from unorganized to organized chains that have leadership members based on association with higher business efficiency, ensuring better food safety and hygiene. The legal system and the operation of food safety management agencies need to change in order to better supervise and create a fair business environment for all participants in the supply chain.

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