Agriculture Sector Profile

The population of Viet Nam as of 2018 is 95.54 million, from 79.91 million in 2000. Of this, about 64% live in rural areas and depend on agriculture for their livelihood. Gross per capita income of the country continues to grow and reached $2,400 in 2018, from $410 in 2000 (footnote 1). The country’s rapid economic growth in recent decades combined with rapid urbanization and rising per capita income are transforming the structure of the food and agriculture sector of Viet Nam. The fast-growing middle-class consumers, which are projected to reach 54 million by 2035, are creating demand for greater diversity and quality in food products.

Total agricultural land in the country was 12.2 million hectares (ha) in 2016. About 80% of cultivated land is irrigated while the rest is rainfed. The horticulture sector in Viet Nam is characterized by a diversified fruit and vegetable sector. On average, each household owns more than 0.5 ha of cultivated land. The scale of agricultural production is too small and fragmented since each household cultivates from 6 to 10 plots. Farmers’ cooperatives are growing. Viet Nam is a major producer of fruits such as bananas, mango, dragonfruit, orange, etc. Main vegetables include potato, onion, tomato, beans, peas, etc. Major food grains are rice and maize. The country produced 6.84 million metric tons (MT) vegetables and 6.40 MT of fruits in 2001, which had increased to 13.5 MT and 11.11 MT, respectively in 2016. However, overall production is dominated by cereal production.

In 2017, the share of cereal in total cropped land was about 58%; for fruits and vegetables, about 22%; and 20% for industrial crop (Figure 1). The share of vegetables and fruits in overall agricultural production has been increasing in recent years in response to growing demand. The growth of vegetable production is mostly from growth in yields rather than growth in cropped land. For example, about 58% of the growth of vegetable production during 2011–2016 was contributed by growth in yield, while the remaining 42% was contributed by growth in cropped land. In the case of fruits, growth in cropped land played a more significant role. About 74% of the growth of fruits production was contributed by growth in cropped land, while only 26% was contributed by growth in yield. This implies existence of a responsive farming community that responds to emerging opportunities to enhance productivity of vegetable and fruit production.

However, yields of fruits and vegetables in Viet Nam are low compared other countries. For example, yield of potato (ton/ha) in Viet Nam is significantly lower compared to yields in European countries like Belgium, Netherlands, Spain, and Turkey; the United States (US); and South Asian countries like Bangladesh and Pakistan (Figure 2).

Viet Nam is predominantly an exporter of horticulture products. The People’s Republic of China is the largest destination market, which accounts for about 27% of total vegetable exports, followed by Japan with about 7% share. Other vegetable export markets include the US (5.2%); Indonesia (5%); the Russian Federation (4.3%); Taipei,China (3.3%); the Republic of Korea (3.1%); the Netherlands (3%); Thailand (2.8%); and Singapore (2.8%). Viet Nam exported vegetables and fruits worth $3.5 billion between January and November 2018, representing a rise of 11.6% over the same period in the previous year. Role of import in overall consumption of fruits and vegetables in the country is also increasing. The country imported fruits and vegetables worth $64.2 million in 2001, which had increased to $1,744.57 million in 2018.

The increasing daily per capita consumption of vegetables in Viet Nam is the same as in developed countries. In 2013, per capita vegetable consumption was about 120 g/day compared to 40 g/day in 2000.

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consumption was 147 kg, which was higher than Europe and the US and second only to the Republic of Korea (Figure 3). However, per capita fruit consumption in the country was not similarly impressive: 68 kg compared to 95 kg in Europe and 105 kg in the US in 2013. Consumers buy fruits and vegetables mostly from traditional wet markets and small stores where quality of food is not ensured.

Horticulture Value Chain

The major actors in the circulation and distribution of fresh vegetables in Viet Nam are producers, collectors, wholesalers, retailers, and export organizations. Each marketing actor can take over one or more functions such as transportation and distribution.

Collection and Shipment

Collectors are villagers and even vegetable producers. At harvest time, the producers either sell their own products or collect vegetables from other producers who often live in the same villages or communes to retail in marketplaces or directly to the final consumers. Products are grouped together and transported mainly by trucks. They are packaged before shipment using local materials. In most cases, such packaging fails to preserve the freshness and quality of products. The flow of fruits and vegetables distribution in Viet Nam is shown in Figure 4.

Depending on the collected and traded quantity, the collectors and/or traders can be grouped into small, medium, and large assemblers and traders. Large assemblers usually have trading volumes of more than 3 tons/year; medium-scale assemblers 1–3 tons/year, and small-scale assemblers below 1 ton/year. Most large-scale assemblers have been operating for more than 5 years. Medium- and small-scale assemblers are in general former traders or orchard owners, usually specialize in one type of fruit, and have seasonal operation.

Negative Impacts of Current Value Chain

Majority of the people in Viet Nam buy vegetables and fruits from unorganized local sources like wet markets and street vendors. However, the role of supermarkets in the horticulture value chain is increasing. For example, the share of supermarkets as a source of fruits in a household’s monthly expenditures in Ho Chi Minh City is about 20%\(^5\). The country has about 60 fruit and vegetable processing enterprises with a total capacity of 290,000 tons/year. The existing cold storage capacity is inadequate, and only about 5% of total vegetables produced in the country can be stored in them.

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Different middlemen are involved in the supply chain of fruits and vegetables. A reliable system of price information does not exist in the country. Different players along the value chain greatly influence the prices. As a result, farmers’ shares in the retail prices of fruits and vegetables are low, less than 30% (see Table). It means the share of the middlemen who do not carry out any value addition activities like cleaning, sorting, grading, packaging is more than 70% of the retail price. The broken value chain also results in high spatial as well as seasonal variation of price of fruits and vegetables. The annual cost of price fluctuation is about $581 million given the number of consumers and per capita spending on fruits and vegetables.

Another outcome of the inefficient horticulture value chain is the high postharvest losses. According to the Food and Agriculture Organization of the United Nations, Viet Nam’s postharvest losses account for 10%–20% of root and tuber crops, and 10%–30% of fruit and vegetables. A reduction of these losses by around 75% would be equivalent to an annual saving of approximately $1.875 billion. The inefficiency of the wholesale markets results in very high marketing cost for sellers and logistics cost for buyers, especially for restaurants, hotels, and the companies that supply them. If these costs can be reduced by $0.025/kg to $0.005/kg, Long Bien wholesale market in Ha Noi City alone will see annual savings of $0.95 million to $4.62 million.

### Current Situation of the Main Wholesale Markets in Viet Nam

The situation of five Vietnamese wholesale markets was analyzed through physical visits, namely, (i) Long Bien Market, (ii) Southern wholesale market, (iii) Minh Khai wholesale market, (iv) Ha Vi Poultry market, and (v) Yen So fish market. The key findings are as follows.

#### Physical Limitations

Ha Noi City has three wholesale markets for fruits and vegetables with a total daily turnover of approximately 840–880 million MT. The wholesale market for fish and seafood has a daily turnover of 100–150 million MT. These markets have, on average, an area of 2–3 ha each, and most of their facilities are outdated and no longer capable of meeting food safety and hygiene requirements, neither parking nor logistics needs. The two main wholesale markets, South Terminal and Long Bien, which also function also as terminal wholesale and retail markets, are situated in Ha Noi City, contributing to city congestion and air pollution. Both markets lack room for expansion. No permanent stalls are available. Produce are sold in trucks and vans at the loading–unloading zones, and in the parking areas. In contrast, the markets in Ho Chi Minh City are relatively better. The cleaning and surveillance services are relatively of good quality standards. There is a safe environment for traders’ activities, and traffic routes and parking places allow a fluid movement of cars, vans, motorcycles, and trucks. Selling prices are collected for statistical purposes.

#### Managerial Limitations

Overall management of the wholesale markets is a mixed bag, with markets in Ho Chi Minh City relatively better managed compared to markets in Ha Noi. Market authorities in Ha Noi lack capabilities for efficient waste management, cleanliness, and food safety. Ha Noi operations lack transparency and the markets are underfunded, especially for repairs and maintenance, due to insufficient collection of revenue. The services provided by the management to the traders are of very poor quality. The shared responsibilities of different actors within the management are poorly coordinated. No inspection to detect food contamination and ensure food safety is taken. The market authorities lack reliable statistics on volumes traded, consumers’ purchasing habits, price information etc. The authorities lack the professional skills to carry out these activities.

#### Poor Peripheral Infrastructure

The parking areas in all the surveyed markets are small, insecure, and haphazardly managed. There is no designated loading and unloading docks. The waste management system outside the market is missing. No cold storage is available in the vicinity of the markets, forcing the wholesalers to have their own cooling room. Refrigerated transport for fresh produce is yet to be introduced. Installation of bins in all pedestrian routes is required. Maintenance of roads, buildings, lighting, and other utilities around the markets are poor and needs a new model of management.

### Recommendations

Based on the above analysis, a number of short- and long-term recommendations to improve existing wholesale markets and construct new ones are in order.

#### Short-Term Measures

Wholesale markets in Ho Chi Minh City have served the city well for the last 10–15 years by supplying about 90% of the current demand for fresh products. Out of the city’s three markets, two have no land for further expansion. Therefore, measures to increase operational efficiency are recommended. The situation in Ha Noi City is different. One of the main problems is missing permanent stalls with shades. These should be built as a priority. The markets suffer from missing and/or poor waste management system. This leads not only to an unhygienic environment, but also affects the operation of the market. The traders and management emphasized the introduction of a new waste management system as early as possible. Selling operations in open spaces and haphazard loading and unloading have to be regulated. Measures should be strengthened to prevent food contamination and promote food safety.

#### Long-Term Measures

For Ho Chi Minh City, the current initiative of the government to build a large wholesale market in the Lam Dong Region, close to Ho

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Chi Minh, should be thoroughly studied. In the case of Ha Noi City, building a new wholesale market in the outskirts of the city should be considered. The new wholesale market should offer services like phytosanitary inspections, certifications, traceability, laboratory examination, e-auction, banking, catering and restaurants, accommodation, price information, and others. The rents and charges of the new wholesale markets should be competitive so as to provide sufficient incentives for commission agents, wholesalers, and other potential tenants to use the market facilities; and to be able to repay the capital cost incurred to build it.

Besides setting up modern wholesale markets, an effective production and marketing architecture has to be set up in the country in collaboration with farmers’ cooperatives. In this regard, collection centers with cold chain and other agri-logistics have to be developed in the hinterlands around the production areas. Depending on the need of the locality, some of these centers can function as terminal markets while others can specialize and serve the function of an assembly market. These centers will also require organized transports to carry goods from farms. Site selection and the space requirement for different postharvest management and handling need to be carefully studied.

There is a dearth of reliable and timely data on production in Viet Nam, making it difficult for government to undertake effective actions related to export, import, public procurement of crops, or advisory services to farmers to stabilize agricultural prices. Therefore, either the capacity of the current statistical authority should be enhanced, or a new institute has to be established to provide big data on production, consumption, and price of agricultural products.