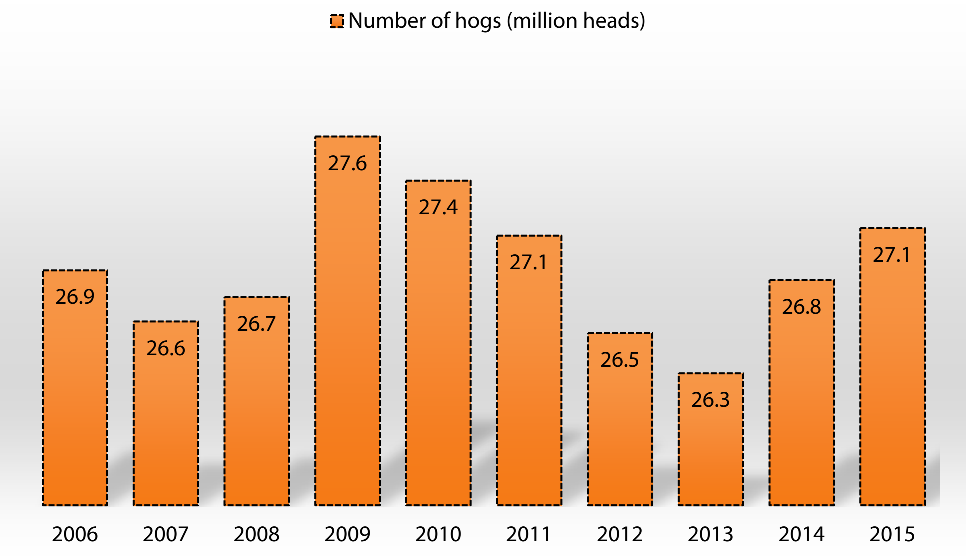
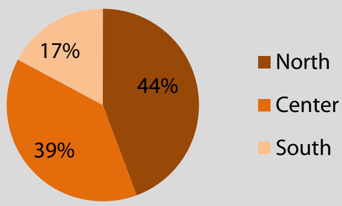
HOA PHAT-
THE FIRST STEP ON THE LIVESTOCK PATHWAY



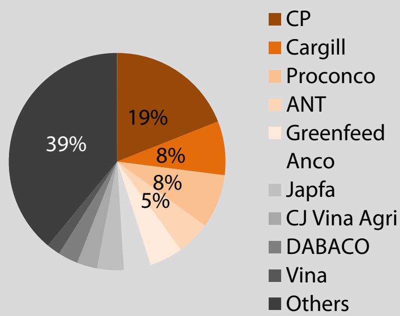
Source: MARD

Industry indices	
Number of hogs (million heads)	27.1
CAGR2010-2014 (%)	1.9
Pork consumption (million tons)	2.3
CAGR2010-2014 (%)	2.1

Hogs distribution



Hog feeds market share:



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THE HOG INDUSTRY IN BRIEF

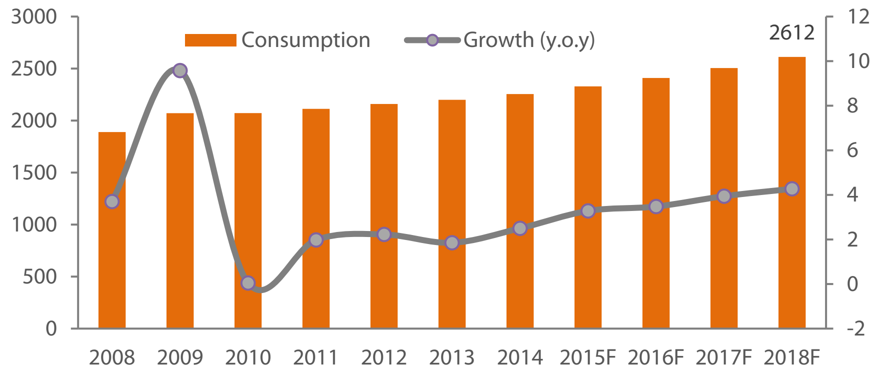
Vietnam, having an ancient but underdeveloped agricultural background, is entering a new year bringing along its own strengths and weaknesses in the race to several FTA preparation. Not having to face harsh competition from imports like beef, poultry or milk industries are doing, the hog raising industry has been sufficient in satisfying the domestic demand in quantitative terms. However, there have been big gaps that need improving in order to compete against large pork exporters such as Thailand, the US or Australia as tariffs are going to be demolished. The report presents an overview on the supply-demand condition in the domestic pork market, subsequently points out entry opportunities for Hoa Phat Group JSC (HPG-HSX).

CONSUMPTION: Necessity goods with stable annual growth

Pork consumption has been growing firmly in recent years. Pork consumption grew by 3.13% annually during the 2008-2014 period. Exception belongs to 2009 when pork was a common substitute for chicken and 2010 when growth rate was 0% due to PRRS virus. Noticeably, pork has been the majority and is predicted to contribute the largest proportion in meat consumption.

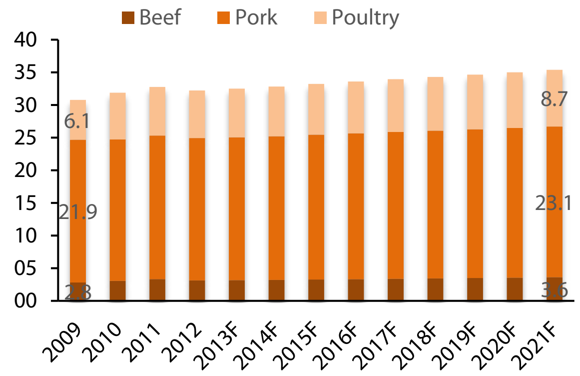
Pork used to be massively imports due to domestic disease outburst, however has been lowered in recent years. USD 22.3 million worth of pork was imported from the US, Spain and Canada in 2008, plummeted in the next two years and bounced back one year later and recently stabilized at USD 6.7 to 6.9 million per year.

Figure 1: Domestic pork consumption (thousand tons)



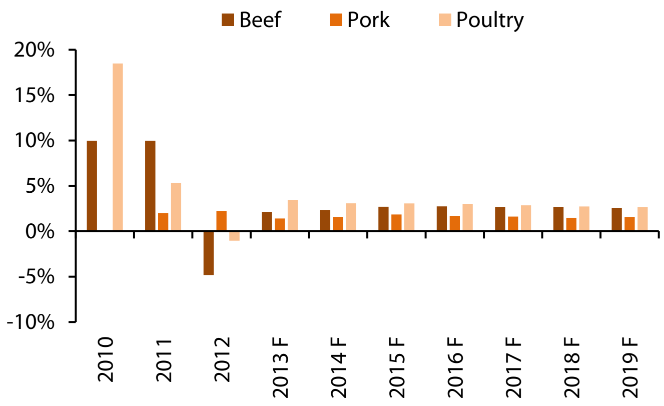
Source: BMI

Figure 2: Meat consumption breakdown (%)



Source: FAPRI

Figure 3: Meat consumption growth (%)

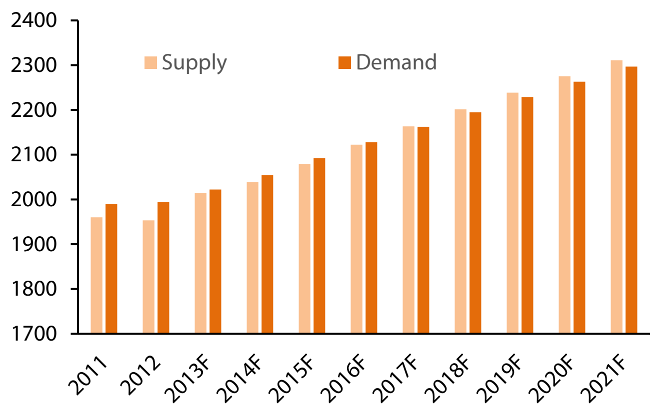


Source: FAPRI

Consumption behavior remains unchanged, which is buying from traditional retailers., even though modern retail channels have surged in popularity especially in large cities. Traditional retail channels include wet market meat sellers and mini grocery shops, while the modern ones include convenience stores and supermarkets. It is observed that the retail industry's nominal value grew strongly during 2009-2014 period at more than 20% per annum, in which goods traded through the modern channel stayed low at around 4 and 5%, the rest were of small private retailers.

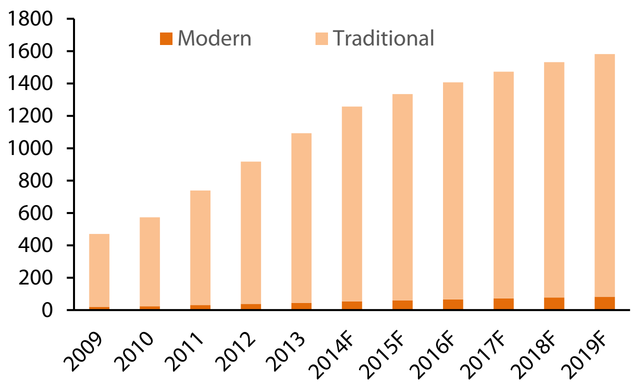
Similarly, pork has been consumed fresh and newly butchered, which partly prevents frozen imported products from dominating the market. Vietnamese consumers' habit has been shifting to frozen packed beef and chicken sold in supermarkets, but pork has still been mainly sold fresh at wet markets. Most Vietnamese housewives choose pork according to its texture while few are concerned about its origin.

Figure 4: Domestic pork supply- demand (thousand tons)



Source: FAPRI

Figure 5: Retail channel values

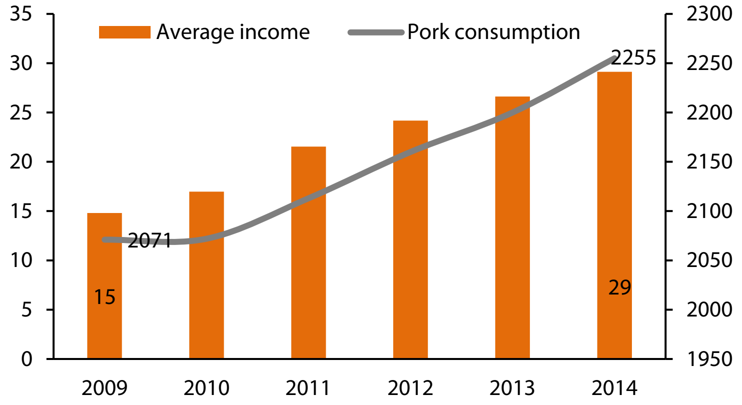


Source: GSO

Demographic factors are of importance to pork consumption trend. Vietnam's population went up 1% per annum since 2009, which is similar to pork consumption. Age 15-29 population accounts for more than 25% of the total population, as well as urban population rate reached 33.1% in 2014 has made way for industrial meat's growth. According to Euromonitor, fast food consumption in Vietnam wen up 16.5% per annum during the 2008-2013 period and reach VND 11.3 thousand billion in 2014.

Income also is a factor affecting pork demand. Higher income likely results in higher meat proportion in daily diet. In short, consumption factors are biased towards predicting the pork industry's strong growth in the following years

Figure 6: Average income (VND million) and pork consumption (thousand tons)

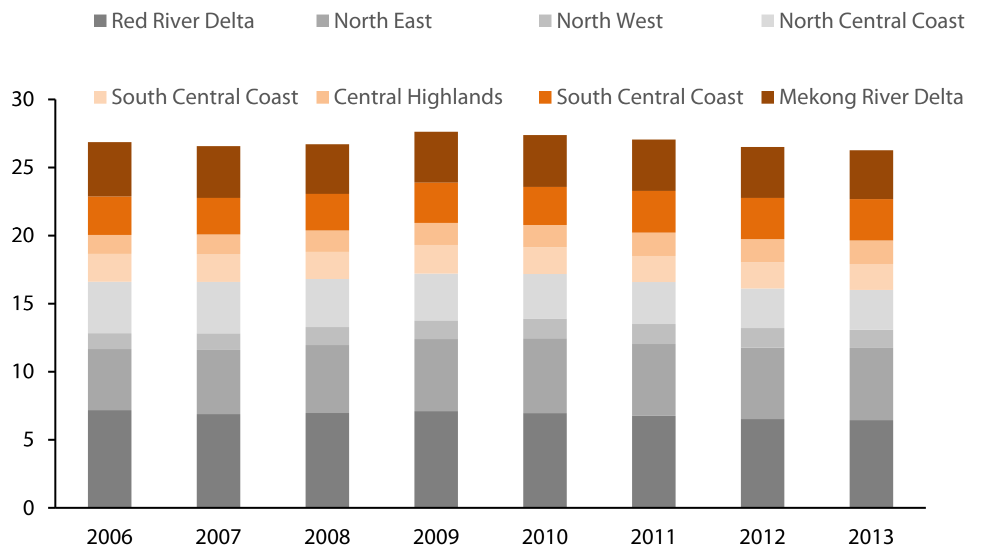


Source: GSO and FAPRI

PRODUCTION: protected by locals' habit

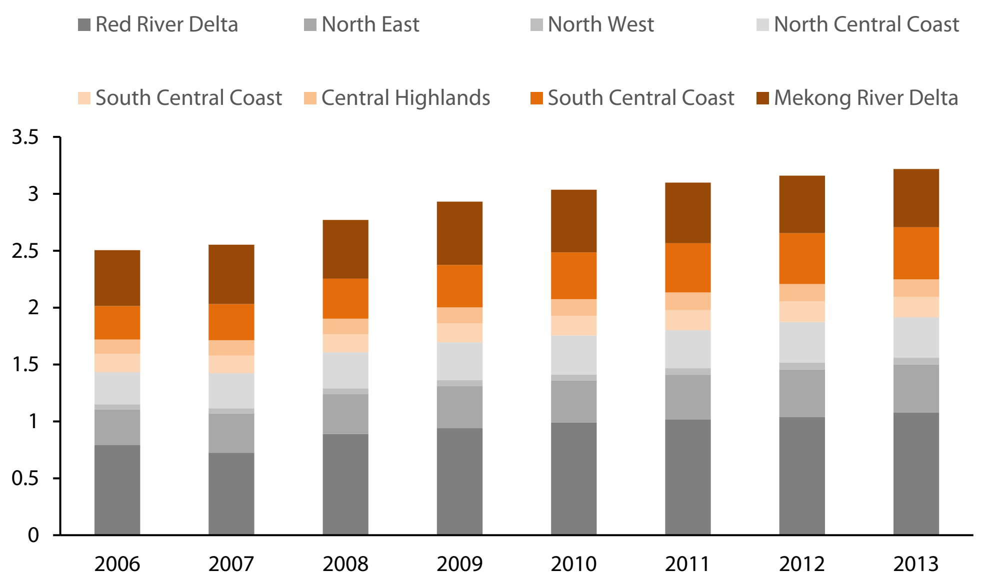
The number of hogs as at April 1st 2015 was 27.1 million, 2.8% higher than the previous year. According to GSO's statistics, 2015 domestically produced amount reached 3.4 million tons, 2.1% higher than the previous year and FAPRI predicts an average growth rate of 2.4% for the 2015-2018 period.

Figure 7: Number of hogs per region (million heads)



Source: MARD

Figure 8: Pork amount per region (million tons)



Source: MARD

There were about 10,000 husbandry farms around Vietnam in 2014. They primarily locate in the Red River Delta, Northeast, Southeast and Mekong Delta areas which are the good areas in Vietnam with high population and convenient transportation. The farms mostly locate in Dong Nai (over 1,800 farms), Hanoi (about 1,000 farms), Hai Phong and Hung Yen (over 550 farms per province). The provinces with the large capacity of pigs (over 1 million pigs per province) in the order are Hanoi, Dong Nai, Bac Giang, Thai Binh, Nghe An.

The husbandry industry of Vietnam is small and fragmented. In 2011, there are 4.1 million families raising pigs. The families having fewer than 4 and having fewer than 40 pigs accounted for 71.6% and 86.4% respectively while this type of husbandry produced only 32.4% the amount of meat in the market. Recently, some provinces are rezoning the husbandry areas in order to encourage people to form large scale farms. However, the number of families raising over 100 pigs is only 17%.

Small farms with inadequate conditions are vulnerable to diseases such as foot-and-mouth disease in 2006, PRRSV from 2010 to 2013. That led to a big economic loss in 2010 with 1.6% nationwide pigs destroyed. Those diseases have not been eliminated completely so far. Although those diseases could not widespread, they still infect small farms and cause loss. In addition, while standard slaughterhouses are facing with a desolate situation, there are many traders use the service of inadequate slaughterhouses despite there is a lot information about detecting and controlling activities of the underground slaughterhouse in the media. According to Trade Ministry and the Ministry of Agriculture, the slaughterhouse must meet the requirements:

- Separate from residential areas
- Having sufficient means of slaughter and container
- Having fresh water, hot water, and sufficient treatment system

However, there are many traders looking for profit and ignore those requirements. That causes many difficulties in food safety controlling.

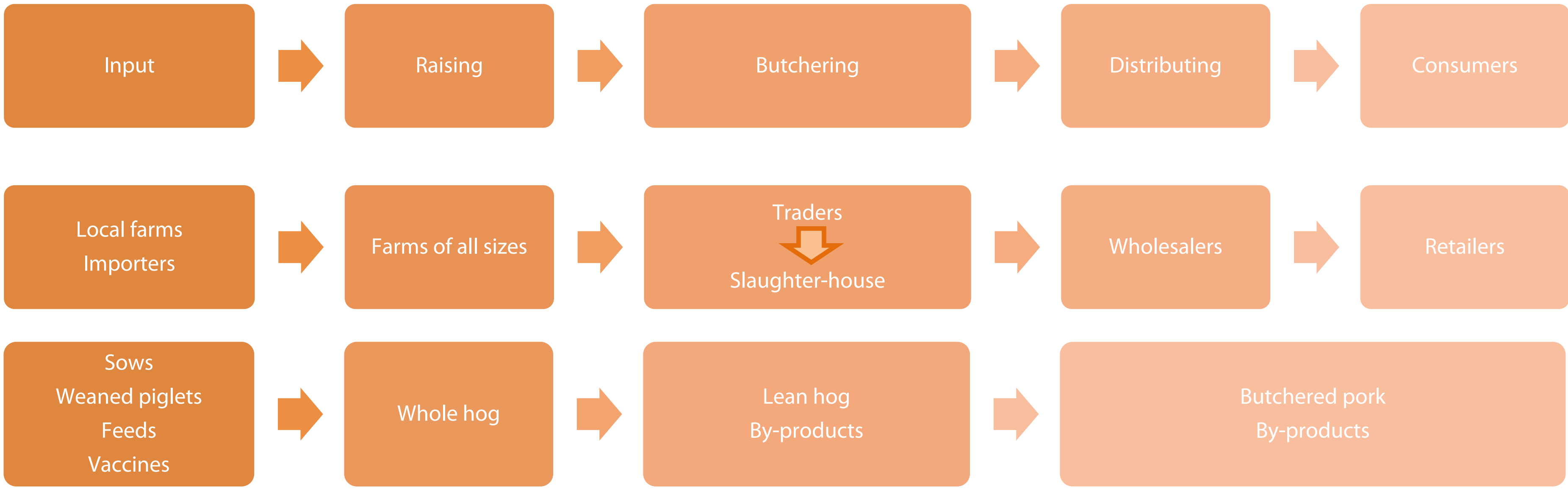
The Government has announced 2 official documents to support husbandry farmers such as the document 50/2014/QD-TTg on 09/04/2014 about household livestock raising improvement in the period 2015-2020 and document 210/2013/ND-CP about policies encouraging investment in agriculture by supporting land, construction, training, and research fees. Ministry of Planning and Investment has also issued Circular 05/2014/TT-BKH guiding the implementation of those documents. However, according to a report of the Government, there had been 23 provinces implementing the document No.50 up to Jul 2015 so that the livestock production sector has not gained much benefit from those policies.

Scaling up is evitable but progressing slowly. Facing with the competition and diseases, farmers have realised the advantages of investing in cooperative organizations. However, the process of pig-meat production industrialization is very slow since there are disadvantages in technologies and lack of capital. The volatilities profit makes farmers hesitate to borrow money from a bank to invest into the farm. Vietnamese husbandry households had average 7 pigs in 2011 while Thai households had nearly 66 calculated in the same year. In Philippines, since 2008, the two largest pig husbandry areas, Central Luzon and Calabarzon, had 63% of the pigs raising in the large scale farms.

A movements of livestock production also entail risks for farmers. Famers have a trend to increase much production when the price goes up. That makes the price goes down and lead to losses in profits. At that time, farmers are going to reverse the trend.

Pork supply chain:

Figure 9: Pork supply chain



Source: VEPR

Table 1: Supply chain participants

No.	PARTICIPANT	ROLE	NUMBER	INFLUENCE	DECISIONS
1	Breeders	Importing and breeding piglets	Few	On farmers	Breeds to import
2	Farmers	Raising hogs	Many	On breeders On companies	Bear the environtment costs. Choose among: Independent business: unstable income Cooperative business: with companies such as CP, Japfa, Emivest, dependent in terms of breeds, feeds, vaccines and output prices but stable income
3	Large farms	Importing breeds Negotiating input/output contracts	Few	On investors	Choose among independent business and cooperative business Price advantage thanks to economies of scales

4	Companies	Control supply chains	Few	On farmers: being the monopolist in providing breeds, feeds and vaccines	Tight control on farmers Do not have to pay environment costs Negotiating long-term contracts with distributors Offer competitive prices
5	Small slaughterhouse	Providing butchery service Buying live hogs and selling lean hogs	Many	On independent farmers On small retailers	Buying live hogs and providing butchery service via traders Short-term contracts, negotiable prices
6	Large slaughter house	Providing butchery service	Rát Few	On large farms On distributors	Long-term contracts, possibly via traders
7	Traders	Trading live hogs	Many	On farmers	Same as wholesalers. Prefer trading with farmers due to price negotiation
8	Wholesalers	Trading hogs with contractor slaughterhouses/traders	Many	On slaughterhouses On retailers	Short-term contracts with small slaughterhouse Long-term contracts with large slaughterhouse
9	Retailers	Selling to consumers	Many	On slaughterhouses On wholesalers	Buy from wholesalers or importers Compete against imports
10	Major distributors	Buying from wholesalers/slaughterhouses Selling to customers	Many	On wholesalers and slaughterhouses On consumers	Make pricing decisions, usually higher than retailers due to preservation costs Sell both fresh and frozen meat
11	Importers	Importing pork	Few	On retailers	Compete against domestic pork Sell frozen pork
12	Exporters	Exporting pork	Few	On wholesalers	Export to China, Thailand etc.
13	Authority	Controlling the industry's long-term direction		Unclear	Encourage large scale businesses, modern technology, large slaughterhouses.
14	Consumers	Buying from retailers/ major distributors	Many	On retailers and major distributors	Choose among Cheap pork at wet markets and preserved pork in supermarkets Fresh and frozen meat Domestic and imported pork

Source: VEPR

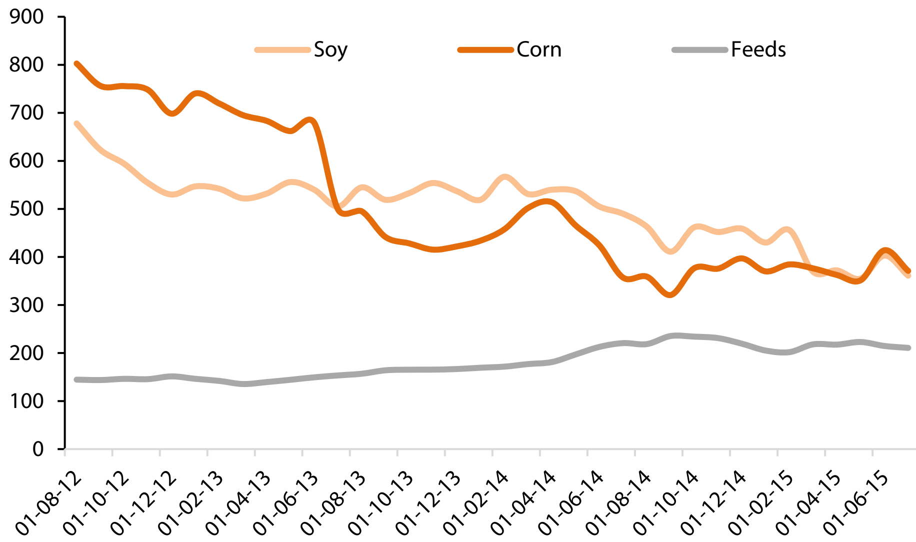
In the industrial supply chain which is small and fragile, notable links are major livestock companies and investors taking part in improving the output scale for meat products. This sector includes many livestock and livestock product companies such as C.P, Fapfa, Emivest. In 2014 CP Vietnam cooperated with approximately 3,000 processing livestock farmers through providing breeds, feed, technical staff and after that purchase the whole products. With this model, farmers are responsible for investments in standardized stables and raising swine. On the other hand, the companies provide breeds, feed, medicines, equipment, tools and purchasing the products. 3F model (Farm – Factory – Food) of these companies completes pork production circle, ensure the output for companies and farmers.

In term of farmers, the cost of production surged during 2010 – 2012 from about VND20,000 to VND30,000/kg due to the input prices from companies/investors based on the regulation. According to Vietnam Institute for Economic & Policy Research, costs of breed and feed accounted for over 80% of total cost of swine feeding. All of the farmers have to buy breeds and feed at the determined prices by producing companies. It could be a disadvantage when the input prices increase and there is no change in purchasing prices. In addition, breeding swine and raw input for feed have been imported at high prices.

Majority of breeding swine have been imported from US, Canada, Thailand and Taiwan. Because the underdeveloped breeding technique domestically (among 20 countries with highest number of swine, Vietnam stands last in term of reproductive performance), breeding swine imports significantly increase. During the first 9 months of 2014, Vietnam imported over 1,700 swine at USD1.6 million, increased by 86.5% yoy. When there is no investment focusing on domestic breeding development, trading deficit in term of breeding prices could lead to the surge in feeding prices and pose several financial difficulties on farmers.

Domestic animal feed production has to be imported majorly from abroad, leading to the dependency on raw input prices. However, there is no positive correlation between selling prices to farmers and import prices. In 2014, Vietnam imported more than USD 3 billion of animal feed and raw material for feeding while this figure for the first 7 months of 2015 achieved USD 4.1 billion. Global corn and soybean prices have been in the decline trend for 3 years; simultaneously, animal feed prices have initially shifted to the decline trend since Q22016, becoming the advantage for animal feed producers. As for farmers, feeding cost significantly depends on the producers because feeding market in Vietnam has been heavily dominated by FDI/associated companies (with over 65% market shares). In fact, domestic feeding prices show several signs for a recovery. According to the Industry and Trade Information Center (VITIC) – Ministry of Industry and Trade, domestic prices for feed in 7/2016 significantly decline year over year and were expected to increase in August due to tight supply and higher demand. At this moment, feed prices in Vietnam has been higher than the region by approximately 20%.

Figure 10: Feeds and feeds' ingredient prices

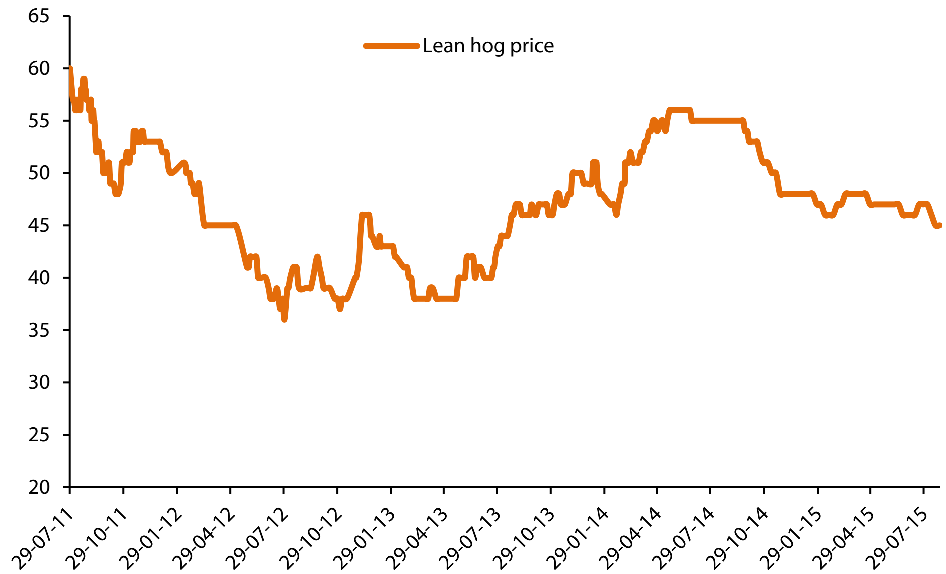


Source: Bloomberg

Barrier to entry for livestock has been relatively low. With small model for farms, the barrier could be non-existence when farms have to only sign a contract with major livestock companies and invest in building stables, purchase breeds, feed and medicines. However, companies with millions of swine should control both inputs and outputs for their products. That means, first of all, they need to find the supplies with low cost for feed. If they could utilize that factor, economy of scale will become an advantage. Under the situation that FDI/associated companies dominate the market and could control the prices, self-sustain factory to produce feed could become the most suitable strategy for controlling the input of the business. Secondly, in term of outputs, livestock companies with large annual outputs need to sign long-term contract with retail stores, or build their own retail chain. In addition, helping their products to approach and attract large customer bases could become the ultimate barrier for the swine industry.

High competitive risks with imports in the next 5-10 years. Currently, even though Vietnam has sign several free trade agreements such as MFN, AFTA, VJEPA or AANZFTA, port imports still bear 25% of tariff and swine products face 15%, leading to the small import value. With higher average prices in this type of product compared to global market, fierce competitive when the tariff declines as TPP and AEC taking effect will be inevitable. Until 2018, import tariff for pork in AEC could decline to 5% and become 0% in 2020. In addition, TPP could force the tariff to 0% level in the period of 5 – 10years. Domestic swine industry also directly competes with port imports from exporting countries such as Thailand, US, Australia.

Figure 11: Lean hog price per kilo



Source: Department of Animal Husbandry

Output prices heavily depend on the market demand because pork is the immediate consuming product. From 2012 to late 2013, depressed period of pork consumption remarked at the price of ~VND40,000/kg. At this period, blue ear pig disease, acute diarrhea that had been received wide-range coverage from media along with news about banned hormone injection for swine growth made consumers cautious, declined the demand and output prices. Until 2014, while diseases and illegal injection have been under control, prices recovered. Slight pork price has been relatively stable at VND45-50,000/kg since earlier this year. If the disease and legal control maintain at this level, pork prices could slightly decline at the end of 2015.

Another noteworthy point in the forecasted demand is the excess supply in 2018 (figure 4). It could be the signal for the increase in pork production to meet the domestic and export demand. Along with the farm expansion and price reduction, 2018 could be the turning point for the producers to improve the livestock quality to meet the requirement for exports. Poor quality also resulted in losing the contract to export 50,000 tons of port to Russia (Thailand won) during late 2014. However, it implies that exporting opportunities still exist but the restructuring need longer term for Vietnamese products to meet the demand of even the most fastidious international markets.

Table 2: Pork prices

Country	Price (USD/lb)
Canada	0.4969
Korea	2.3700
The US	0.5784
Spain	0.6301
China	1.1800
Vietnam	0.9462

Source: Genesus

Therefore, in order to to catch two waves of strong integration from TPP and AEC, the livestock sector in general needs to focus on increasing the scale to reduce costs throughout the entire chain of supply chains. When beef and chicken were tested by cheap imports from Australia and the US, pork has not really confronted the flow of competent imports from major exporters such as the US, Australia and Thailand. Domestic products have still been protected by consumers' consumption habits, but also is slowly transforming itself through modern consumer trends. Consumers have the power but these changes need to be from the supply side, as the domestic pig herd needs more large investors to compete against FDIs and cooperative businesses before facing up with the wave of free trades.

HOG RAISING COMPANIES' POTENTIAL

At the beginning of 2015, HPG, who has been known as one of the leader firms in the steel industry announced the plan of entering the livestock business, in particular the pork industry.

Project summary:

- ✓ Feeds production plant of 300,000 tons per year capacity in Pho Noi A Industry Zone (Hung Yen province) at VND 300 billion capital, and another plant in Dong Nai of 200,000 tons per year at VND 200 billion capital, both built within 2015-2016.
- ✓ Targeted capital up to VND 10,000 billion, targeted number of hogs is 1 million heads after 8 to 10 years.

Advantages regarding capital and scale:

Hoa Phat company has enough capability to build a high-tech husbandry area. The company has a total debt to total asset ratio under 50%. Owners' equity and total asset (about 11,8 trillion and 22,8 trillion VND respectively) which are big-support resources for their subsidiaries have steadily increases over years. They plan to invest 300 billion VND in an animal feeding mill and 8 to 10 trillion VND in company's husbandry sector. With that strong capability, they aim to get one million-pig herd in order to compete effectively with FDI enterprises. They are buying Dambreed which is a breeding stock from Denmark with high reproductive performance, average 35 piglets per litter and 2.750 USD per piglet. According to this group, they will invest their own assets, technologies and develop their own techniques in order to avoid depending on a third parties.

That production process helps to reduce cost of animal feed and piglet accounting for more than 80% of the input cost. Assuming that a piglet cost 485.000 VND per kilo and the cost of raising a piglet to 100kg is 2.880.000 VND so the cost of goods sold is 33.650 VND.

According to VEPR report, a herd with more than 50 pigs helps reduce 5% of the input cost. The gross margin is expected from 27% to 30% since the average pork price is about 50.000 VND per kilo in August 2015. The said pre-tax profit to revenue ratio is possible since Phu Son Livestock JSC, which is a company in livestock production sector, has reached 21,47% in the EBT to revenue ratio in 2014 while this company has been buying animal feed from the Proconco company during that year.

Local businesses have major advantage in developing husbandry areas and distribution system.

Hoa Phat brand previously associated with the construction sector so people usually come as a surprise when they hear that the company also participate in the animal feed and fresh food sectors. Recently, The Gioi Di Dong uses their advantage in the retail sector to join the fresh food distribution sector. Hoa Phat is also one of the biggest retailers with specialties in distribution and staff management. Unlike FDI enterprises, we believe that the advantage of being a local business will help Hoa Phat company sell their products effectively.

The animal feeding company of Hoa Phat group was established in the first quarter of 2015. Their feed mills also started to construct at that time and were expected to have products in the first quarter of 2016. Initially, the company tested the market by distribution the imported animal feed. According to second quarter report of 2015, the group recorded 88 billion VND from the husbandry and animal feed business activities.

Based on the analysis above, we believe that Hoa Phat group could achieve a high profit ratio in this kind of business.

Competition challenges:

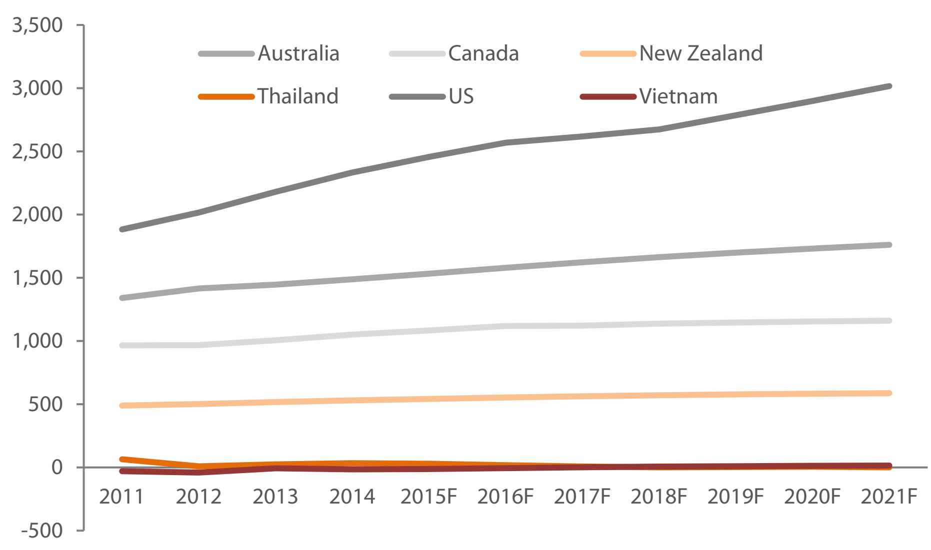
Despite the above advantages, Hoa Phat will face many challenges in this industry

such as distribution network building, which will take a long time, in order to compete with big chain supermarkets. According to our opinion, the output consumption of products could not be done in the short term. The company will use the Hoa Phat Group brand like a marketing factor to get a place in supermarkets and food stores, or they will open its own store chain as Vissan and Duc Viet companies? Those are big challenges anyway.

The competition will be very aggressive since there are many big competitors with FDI capital and many years of experience in this sector such as C.P and Japfa companies. They have been working 20 years and 10 years in this sector respectively and having sustainable cooperation with farmers. With this model, those companies do not have to rent land, pay environment tax or invest into husbandry area. That cooperation also helps in product consumption and input cost decrease. Typically, CP Vietnam has gained benefit from this kind of cooperation with 2.07 billion USD revenue in which animal feed contributed 40%. Especially, their food processing sector were growing 25-30% over the period from 2013 to 2014. CP also owns a retail chain with 569 kiosks across the country to support the sale. Hoa Phat has not cooperated with farmers in that models. We suggest that they should cooperate with farmers in order to reduce input cost as well as use the advantages of this model.

There will be a lot of challenges coming from the integration. The pork import tax from the ASEAN countries will be reduce from 15% - 25% to 5% after 3 years from now and will down to 0% from the year 2020. This sector will face an aggressive competition from lots of strong competitors coming from Canada, New Zealand, USA, Australia, and Japan when Vietnam join TPP zone. Productivity improving and effective cost management are the big challenges not only for Hoa Phat but also for all Vietnam enterprises at the integration time.

Figure 12: Net pork exports (Export minus Imports in thousand tons)



Source: FAPRI

Large pig farms's hygiene is experiencing more scrutiny from industry regulatory bodies now. Under Vietnam Ministry of Natural Resources and Environment's requirements, farms that rear over 1,000 heads must meet the Category A – sewage treatment (equivalent to water for daily use). On the other hand, pig farmers lament on high investment cost of installing the required Category A sewage treatment system, which estimates to take up 25-30% of total invested capital for a pig farm. We believe that the time it takes for HPG to generate profits from venturing into consumer goods manufacturing (low-value added) is what that matters more than the large capital out-lay required.

Taking a quite cautious move to agriculture sector, HPG started off with animal feed manufacturing. Currently, HPG is importing and distributing raw materials used to manufacture pig feed. At the same time, the firm is also investing 02 new feed factories in Hung Yen and Dong Nai province, expecting to go commercialized in 2016 in both areas. Besides, HPG plans to invest another pig farm at the size of 50-60 hectare in the North. However, the firm has not announced plan to participate in pork processing and distribution of finished products to consumer.

Industry risks:

FX volatility may have an impact on HPG's bottom-line performance given the firm's breed import from Denmark. So, any possible depreciation of VND could well hike up HPG's investment cost.

Reliance on raw materials import for feed manufacturing represents a price risk to the firm's COGS, despite the downtrend in global commodities prices in the last 3 years.

Epidemic on pig herd is another risk that could affect HPG's farming business negatively. Notheless, given HPG's high quality rearing facility with upheld hygienic, quarantine, vaccination requirements, chances for serious epidemic looks quite remote.

CONCLUSION

Pig raising activity has a long history of establishment but is now facing challenges from the need to modernize and rising competition brought on by FDI's integrated pig rearing system holding large market share. While consumers still favor domestically sourced meats and demand growth is rated stable, large domestic firms' opportunities to participate in this industry still looks bright looking forwards. HPG is one of those that has seen the potential of pig farming industry and believes that this particular industry would grow to become the firm's second spearhead business beside steelmaking with appropriate approach and investments.

We are able to evaluate HPG's agriculture business success outlook by comparing to similar facets from its current steel making activity. Major similarities would visibly be uncomplicated business nature, competing on economy of scale, production process, supply chain and locality factor. Based on these factors, HPG could take advantage of the large-scaled focused rearing model to compete with the currently popular affiliated method. By doing so could enable HPG to better control finished product by upholding input breed and feed quality and minimizing the fatality rate of first generation.

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