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## **An Overview on Pig Production and Pork Market in the Red River Delta in Vietnam**

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The economic renovation induced by the Doi-Moi policy has stimulated not only in terms of rice production but also of the pig production very much in Vietnam. Pig production in farm household has been increasingly developed with great number of pig-heads, amount of pig production and productivity. Pig production has been nearby rice production on main important sector for the contribution to total household's income in the Red River Delta of Vietnam, especially after the renovation policies in 1988.

However, it has a number of problems as in the followings. The first, the pig production and the price of Pig and Pork was different and not fair between Regions, Provinces and farm household category. The second, the establishment of mass distribution marketing system of Pig and Pork with marketing policy was very poor and not significant. The third, the determination of demand and supply of pork and data information of marketing organization is very difficult.

From these problems, we intend to examine the present situation and role of pig production, marketing channels of pig and pork, problems and its causes.

To achieve this purpose, we study in cooperation with some Japanese Professor in 1999 in Red River Delta of Vietnam.

### INTRODUCTION

#### **Rationale**

Farm households in the Red River Delta are traditionally characterized by crop production and animal rearing. Due to limitation of cropland in the region, animal rearing, especially pig production is considered to be an important sector of farm households. It generates a significant proportion of total household income, and contributes to improving farmers' living standards in this region.

After reform in 1988, farm households have been seen as basic production cells and they can make their owned decisions of what, how and for whom to produce based on their resources available of land, labor, and capital. Since that time, pig production in farm household has been increasingly developed with great achievements of both

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production and productivity increases. However, growth rate of pig production is not stable and trends to decrease since the pig consumption and pork market in the region is not well operated. To accelerate more pig production in farm households in the region, a study on pig production and pork market is required to do for finding out and releasing its constraints at present, then set up well-operated market for the coming time.

### Objectives of the study

- To overview the pig production circumstance in the Red River Delta in recent years
- To make an analysis on pig and pork market in the region.

## MATERIALS AND METHODS

### Study area and farm household selection

Three provinces which are representative for the Red River Delta are chosen as follows:

- Hanoi province: to be representative for suburban areas in the region.
- Hungyen province: to be representative for northern part of the region.
- Namdinh province: to be representative for southern part of the region.

In each province, three representative commune of a typical district are selected. The around of 15–20 farm households that engaged in pig production for each commune, and some pig traders, butchers, pork traders are directly interviewed.

### Data collection

#### 1) Secondary data:

Secondary data of pig production and pork market is collected through published materials from Statistic Bureau of Vietnam, and from the local Statistic Department of selected provinces, districts and communes.

#### 2) Primary data

Primary data is collected through out surveys by directly interviewing the selected farm households, pig traders, butchers, pork traders with prepared questionnaire set.

According to farm household classification proposed by Ministry of Labor, Invalid, and Social Affair (1997), farm households are classified into three categories as follow:

- Low income household: per-capita income per month is lower than 70 thousand VND.
- Medium income household: per-capita income per month ranges from 70 to

**Table 1.** Survey farm households by province and household category

Province	By household category			Total
	Rich	Medium	Poor	
1. Hanoi	14	25	10	49
2. Hungyen	15	25	9	49
3. Namdinh	19	33	13	65
Total	48	83	32	163

175 thousand VND.

- High income household: per-capita income per month is greater than 175 thousand VND.

The number of farm households in provinces and in categories are presented in the table 1.

### Method of the study

Collected data is processed by Excel software. The descriptive analysis method with percentages, arithmetic means, figures is employed for descriptive and comparative analyses in the research.

## RESULTS

### Overview of pig production situation in Vietnam and in the Red River Delta in recent years

#### 1) In whole country

After reform policies launched in 1988, agricultural production in general, pig production in particular, had been strongly developed. The heads of pig and total pig production in Vietnam was stably increasing at the annual growth rate of 4.98% and 6.98%, respectively. These achievements resulted from the renovation policy effects, crop production development and good perform of processing food for husbandry. However, this growth rate in North of Vietnam was greater than that in South of Vietnam as illustrated in the table 2 since crop production in North increased rapidly and stably for recent years.

Although average released weight of pig was annually getting higher, it was still low compared to other countries in the region due to shortage of production capital, poor conditions for animal rearing in the households.

**Table 2.** Pig production in Vietnam in recent years

Year	Heads of pig			Total production	Average Released weight
	Total	North	South		
	(1000)	(1000)	(1000)	(1000 tons)	(kg/head)
1990	12260.5	6986.2	5274.3	729.0	59.46
1991	12194.3	6964.6	5229.7	716.3	58.74
1992	13891.7	8571.6	5320.1	7971	57.38
1993	14873.9	9345.6	5528.3	878.4	59.06
1994	15587.7	10053.5	5534.2	939.2	60.25
1995	16306.4	10513.6	5792.8	1006.9	61.75
1996	16921.7	10706.4	6215.3	1056.1	62.41
1997	17635.8	11179.6	6456.2	1124.2	63.75
1998	18038.6	11425.1	6613.5	1235.0	68.46
Average growth rate (1990–1998)	4.98	6.34	2.87	6.98	—

Source: Agricultural Statistic Book, 1990–1998

## 2) In the Red River Delta

Pig production in the Red River Delta is presented in table 3. Heads of pig as well as total pig production in the region occupied relatively high proportions of 27.14% and 26.45% compared to the whole country. Pig rearing was found stronger development in some provinces of Hanoi, Namdinh, Hatay, Haiduong, and Thaibinh. High released pig weight was recorded in Haiphong and Thaibinh province.

**Table 3.** Pig production in the Red River Delta in 1998

Location	Head of pig		Total pig production		Released weight (kg/head)
	(1000)	Rate (%)	(1000ton)	Rate (%)	
*The whole country	18038.6	100.00	1235.0	100.00	68.46
* Red River Delta	4895.6	27.14	326.7	26.45	66.73
1. Hanoi	470.6	9.61	31.04	9.50	65.96
2. Hungyen	430.4	8.79	27.99	8.57	65.03
3. Namdinh	652.9	13.34	41.50	12.70	63.56
4. Haiphong	418.3	8.54	32.87	10.06	78.58
5. Hatay	1039.1	21.23	68.69	21.03	66.11
6. Haiduong	655.9	13.40	40.73	12.47	62.10
7. Thaibinh	673.0	13.75	48.30	14.78	71.77
8. Hanam	279.5	5.71	18.32	5.61	65.55
9. Ninhbinh	275.9	5.64	17.23	5.27	62.45

Source: Agricultural Statistic Book, 1990–1998

**Table 4.** Pig production in farm households in survey provinces of Red River Delta  
(averaged for a farm household)

Item	Unit	Average	Farm household categories		
			Rich	Medium	Poor
I. Hanoi Province					
1. Heads per a litter of pig	Heads	4.5	7.4	3.3	2.8
2. Number of litter per year	Litter	3.1	4.2	3	2
3. Average released weight	Kg	70.9	71.7	70.5	70.5
4. Duration of a litter	Month	4.1	3.5	3.9	5.1
II. Hungyen Province					
1. Heads per a litter of pig	Heads	8	14	7.4	2.7
2. Number of litter per year	Litter	2.9	3.3	2.9	2.4
3. Average released weight	Kg	53.1	59.2	50.2	79.9
4. Duration of a litter	Month	4	3.5	3.9	4.6
III. Namdinh Province					
1. Heads per a litter of pig	Heads	10.9	22	7.3	3.4
2. Number of litter per year	Litter	2.3	2.5	2.4	2
3. Average released weight	Kg	75	70	78	76
4. Duration of a litter	Month	5	4.5	4.5	5

Source: survey data, 1999

Generally, farm households are basic units of pig production in the Red River Delta. Since natural and socioeconomic conditions are various among locations in the region and among farm households, scope and results of pig production is found quite different in among farm household categories as showed in table 4.

In all survey provinces, pig production in rich farm households was strongly developed. All indicators of pig rearing in this farm category were recorded at highest levels. In poor farm household category, pig rearing was not well performed, showed by lowest heads of pig per a litter and lowest number of litter per year. This revealed that, socioeconomic conditions of farm households greatly affect on their pig rearing.

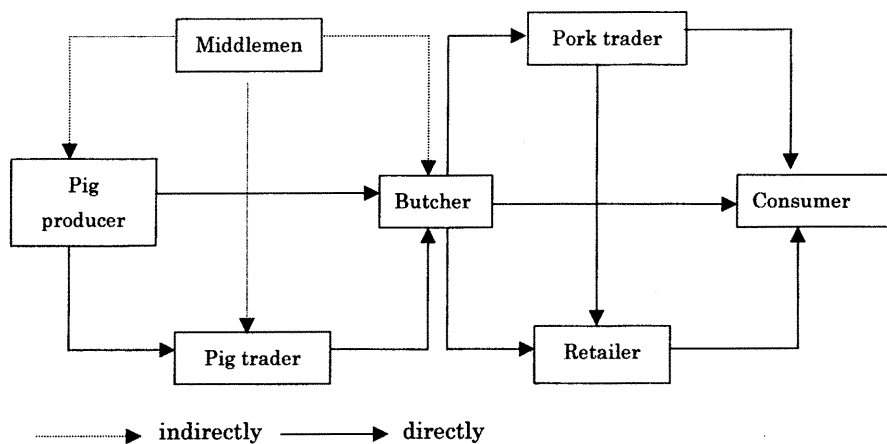


Fig. 1. Marketing channels of pig and pork consumption in the Red River Delta

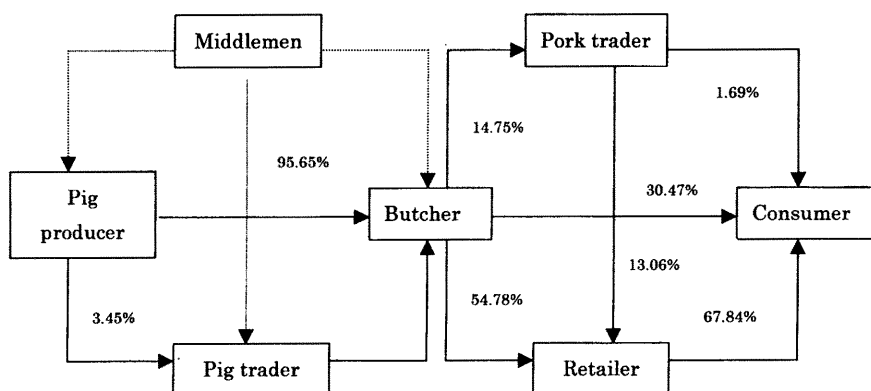
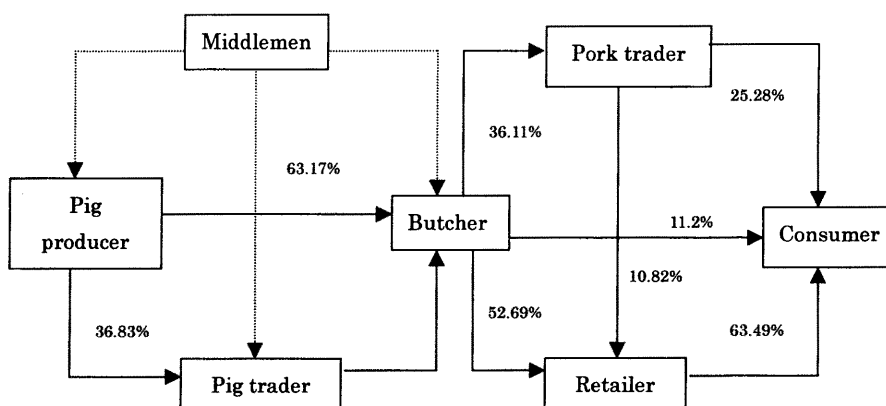
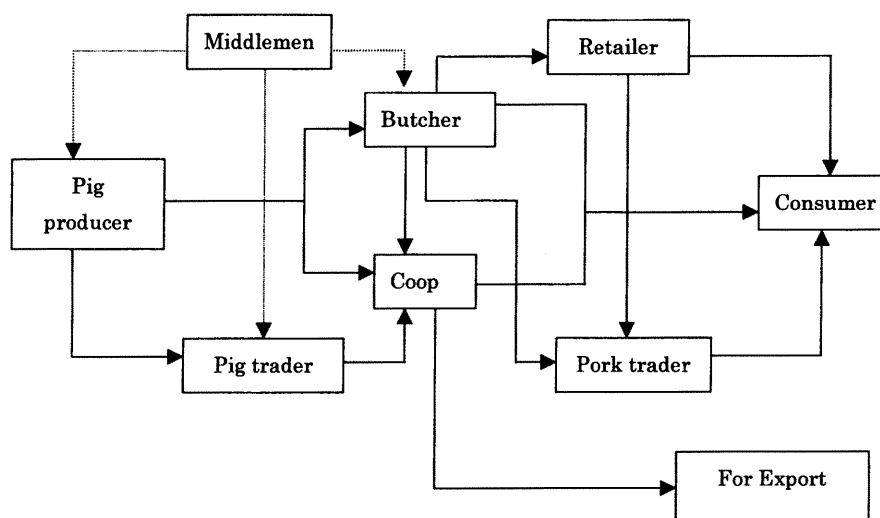


Fig. 2. Marketing channels of pig and pork in Hanoi Province

- In Hungyen:



**Fig. 3.** Marketing channels of pig and pork in Hungyen Province



**Fig. 4.** Marketing channels of pig and pork in Namdinh Province

### Pig and pork market in the Red River Delta

Through the interview of pig producers and butchers in three survey provinces, consumption channels of pig and pork are found as presented figure 1.

The agents of these channels include:

- Pig producers

In the Red River Delta, they are farmers who rear pigs, and also the pig sellers

- Middlemen

These people help pig purchaser and pig sellers (farmers) meet each other and discuss about the selling price. These middlemen do not need the cash or capital to operate this activity but they are full of information about pig in the locality. Main function of these people is only to support selling and purchasing activity, help sellers and purchasers get the price agreement. They receive a small tip from the purchasers, or sellers, sometimes from both of them due to their introduction activities. The middlemen usually operate in the location where they are living. They also cooperate with each other as a group in the same location. A middleman can engage around of 150 affairs in one month and he can receive from 5 to 7 thousand VND for one affair in the average.

- Pig traders

These people have enough necessary capital and knowledge of pig market. Main function of them is to buy pigs from farmers, and resell these pigs to butchers. They are considered as primary pig providers for butchers and they get profit from the gap of purchasing price and reselling price. Usually, they operate in a large geographical area and have tight cooperation with middlemen and butchers.

- Butcher

They purchase pigs from the pig traders or directly from farmers for slaughtering, and then they sell pork to wholesale traders and retailers in particular kind of pork such as lean, buttock, bone, grease with given price for each kind. The scope of one butcher is 500 kg of live weight per one day.

- Pork traders

These people have enough necessary capital in cash and pork market information. They buy pork from the butchers and then resell it to retailers in local market or to pork processing men, or directly to consumers. They get profit from the difference variance of pork purchasing and pork reselling price. They stronger operate in winter and spring since pork demand in these seasons is higher than that in other seasons.

- Pork retailers

They often have a small store in the local markets. They purchase pork from the pork traders, sometime directly from the butchers and sell pork to consumer in the local markets. The retailed price is higher than the price they bought from pork traders and they get profit from this difference of price.

- Pork consumer

They buy pork for consumption demand of daily life.

The pig and pork consumption channels in survey provinces are presented as follows:

- In Hanoi:

Most farmers in the survey areas directly sold their pigs to the butchers (95.65%), only 4.35% of interviewed farmers sold their pig to pig traders. This is resulted from the fact that: since pork is daily consumed in huge amount in Hanoi, the butchers around farmers' place are well-know, farmers there usually directly sell their pigs to these butchers for getting higher price without needs of introduction of middle man.

From the butchers, pork was directly sold to pork retailer in largest ratio of 54.78%. The amount which was sold to pork traders accounted for only 14.75%. Thus, in Hanoi, the pig producers (farmers), butchers, and pork retailers have a very close relations and are main agents in pig and pork consumption channels.



– In Hungyen:

In Hungyen province, the direct sale of pig to butchers also take a largest proportion of 63.17%. However, the middleman and pig trader there seem to play more important role in pig market. Their purchase amount occupied 36.83% of total sold amount from the farmers.

For the pork, pork traders there also play more important role than in Hanoi. 36.11% of total pork from butchers were on trade by pork traders. Only 52.69% of pork from butchers directly went to pork retailers.

– In Namdinh:

Pigs from farmers directly went to butchers at the rate of 62.6%. The rest of 37.2% went to butchers through the middlemen and pig traders.

In addition to butchers, in Namdinh province exists pig slaughtering cooperatives. The pig traders not only purchase pigs in the local province, but also from other near provinces, and then resell pigs to the cooperatives. The most of cooperative's products go to export (61.8%), and the rest is consumed in domestic through retailers in locality or directly sell to consumers.

### **Pig and pork price in the market of the Red River Delta**

Farm gate price of pig is around VND 10,000 per kg (equivalent to 0.8 USD) and varies according to the seasons of a year. In winter and spring, since it is cold, and there are a lot of festivals in the localities, pork demand increases. It results in the increase in pig and pork price. In the autumn and summer, pork demand decrease due to hot climate, therefore pig and pork price decreases consequently.

Pig and pork price also varies among the localities. In suburban area such as Hanoi, Namdinh pork demand is much higher so that it drives higher pork price compared to the price in rural areas. Pork price also depends on its qualities and kinds as showed in the table 5.

In addition, the prices of pig and pork were different among agents in the marketing channels. The price is lower for the previous agent and got higher in the next chain due to the costs added such as the transportation fee, labor cost, and the profit for each chain as illustrated in table 6.

Pig traders, pork traders and pork retailers create their income through out the their

**Table 5.** Average price of pig and pork in the survey provinces

Items	(Thousand VND per kg)			
	Hanoi	Hungyen	Namdinh	Average
1. Pig: Farm gate level	10.98	10.10	10.63	10.57
Winter & Spring	11.50	10.55	11.10	11.05
Summer & Autumn	10.45	9.65	10.15	10.08
2. Pork: Butcher gate level	14.00	13.55	14.00	13.85
Winter & Spring	15.00	13.50	14.50	14.33
Summer&Autumn	14.10	13.15	14.00	13.75

Source: survey data, 1999

**Table 6.** The price of pig and pork through out the agents in the marketing channel  
(Thousand VND per kg)

Agents	For pig			For pork			
	Producer (farmer)	Pig trader	Butcher	Butcher	Pork trader	Retailer	Consumer (farmer)
1.Purchasing price	–	10.57	11.93	–	13.83	14.40	15.48
2.Selling price	10.57	11.93	–	13.83	14.40	15.48	–
3.Difference	–	+1.36	–	–	+0.77	+1.08	–

Source: survey data , 1999

trading activities, of which pig traders seem to get more income due to big variance between the selling and purchasing price (table 6). For pork retailers, the price gap is also big, however, their sold amount for one day is small (around 60 kg), so that their income is lower than pig and pork traders' (sold amount of pig or pork traders is from 300 to 600 kg per day)

Generally speaking, the prices of pig and pork in the region were freely set up based on the relationship between demand and supply. Since the Vietnamese government does not intervene or support for this sector, the pig producers (or farmers) sometimes face with a lot of difficulties: they do not have enough information about the market, and they sometimes produced too many pigs, this resulted in pig supply surplus and decreased the pig price, and consequently they lost; sometimes the pig traders and middlemen cooperate each others to lower price by tricks (they press farmers to sell pig at low price when farmers do not have another choice) and it caused farmers lose... These causes lead to a decrease in pig production or an unstable growth of pig production in the region.

For butcher, they make their decision on number of pig to be slaughtered one day based on their experience and sometimes on requirement of pork traders. They –including butchers, pork traders, and retailers– do not have the information of pork requirement, but they estimate it by their experience only. This results in improper perform of pork market in the region. In addition, they all do not have modern tools for processing and reserving the meat so that they lost on days when they could not sell out at normal price.

## CONCLUSION

Pig production, an important sector that meaningfully contributes to total household's income, had been well performed in the Red River Delta for recent years, especially after the renovation policies in 1988. However, due to differences in natural, socioeconomic conditions, achievement of pig production were various among provinces and farmer categories. Pig production was found stronger development in rich farm households while it was lower in poor farm households.

That the consumption channels of pig and pork market include only several private agents with out the support from the Governments resulted in setting up pig and pork prices mainly based on the supply and demand relationship. This problem caused loss for

farmers (pig producers), sometimes also for these agents, and constrained the pig production development.

The pork market was under the same situation as the pig market: no intervenes of Government, and improperly performed in consequence.

For sustainable development of pig production and pork market in the Red River Delta, following measures are advised to do:

- To launch policies to adjust supply and demand of pig and pork, stabilize their price in order to incentive the farmers to develop the pig production.
- To establish the pig and pork wholesale market system under the controls of Ministry of Agriculture and Rural Development.
- To invest for building the manufacture and installing the assemble for processing and reserving pork in localities.
- To research and publish the data of price for many producer (seller) and consumer (buyer) to get perfect information.

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