

## I. IDENTIFICATION OF THE PROBLEM

For 10 years after the Liberation Day, Vietnam has faced the shortage of rice and been forced to import food, therefore to increase rice output is its natural target in developing the economy because Vietnam is an agricultural country and has potentials for rice production. Due to economic reform policy, industrious labor of millions of farmers and help from technicians and scientists, Vietnam's rice output, especially in the Mekong Delta, is on the increase. That is why Vietnam becomes a rice exporter (its rice export increased from 1.7 million tonnes in 1993 to 1.98 million (1994), 2 million (1995) and 3 million tonnes in 1996).

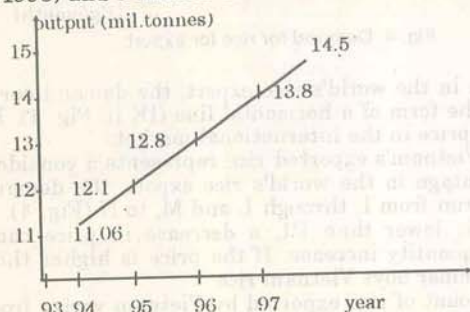


Fig. 1: Rice output of the Mekong Delta (in 1997, an increase of 5% is expected)

However it has been a paradox that the bigger the rice output, the smaller the farmers' income, because the rice price has showed a downward tendency while prices of agricultural materials (fertilizer, fuel, pesticide, etc.) kept on increasing. For example: the rice price in the Mekong Delta decreased from VND1,600-1,700 per kilo in November 1996 to VND1,300-1,400 in March 1997. Thus, farmers suffered a loss of VND300 producing a kilo of rice. If the situation isn't improved and some 14.2 million tonnes of rice (58% of them are to be sold) will be produced in 1997 as estimated, Mekong Delta farmers will suffer a total loss of some VND2,470 billion (US\$218 million).

The Government has recently fixed the buying price-floor offered by state-run food companies at VND1,500 per kilo, but in fact, the price has decreased to somewhere between VND1,300 and 1,400. The said paradox seems unavoidable to farmers. So both central and local governments should answer following questions: Why is the rice price on the decrease? How could it be kept stable without increasing the budget expenditure? Our budget deficit seems permanent so we can't increase budget expenditure in order to keep the rice price from falling.

In theory, the price of a commodity could fall because of the following reasons:

- Supply is unchanged but demand decreases.
- Demand is unchanged but supply increases.
- Both supply and demand increase, but supply increases faster.

The Vietnam population and its rice export are on the increase, so the demand for rice rises. The rice output also increases regularly, that is, the supply rises. Thus, is it deducible that the rice price falls because the supply increases faster than the demand? In reality, farmers couldn't sell rice directly to end-users but to traders, especially private ones, who are their main customers. So is it reasonable that the rice price could be kept stable and high when the state-run food companies purchase all cash crops offered by farmers so the Gov-

## FLUCTUATIONS IN RICE PRICE IN THE MEKONG DELTA AND SUGGESTIONS ABOUT THE POLICY TO DEVELOP RICE FARMING AND RICE EXPORT

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ernment needn't give price support? Right policy at present circumstance will depend on careful analyses of the situation. If the cause comes from an excess of supply over demand, there will be two solutions: to increase the demand by encouraging food processing industry, animal husbandry and rice exportation, or, to decrease the supply by advising farmers reducing rice output and producing other agricultural products (in this case, increasing the rice output is no longer a development target). If the cause comes from a low purchasing price offered by all private traders in an attempt to rig the market, the solution is to form a network of purchasing agencies within easy reach of farmers with the aim of competing successfully against private traders.

In the Vietnam rice market, there are some features concerning producers, consumers and middlepersons, so first of all, we had better study supply and demand curves, and then, analyze rice market in the Mekong Delta in recent period, thereby finding out the cause of present situation and necessary solutions.

### II. FEATURES OF SUPPLY OF, AND DEMAND FOR, RICE IN VIETNAM

#### 1. Formation of the demand for rice in Vietnam

In Vietnam, rice could be used by buyers as food; animal feeds and raw materials for food processing industry; and a staple for export. Those three classes of buyers are different from one another so we have to study them separately.

The amount of rice bought and used as food will be affected by buyer's income, rice price and utility of rice eating. If rice is given free, the average amount of rice eaten by a person will always has its limit which is, for example, 13 kilos a month or 156 kilos a year. If the buyer has to buy rice, at low price, the amount consumed won't decrease because expenditure on rice is small compared with his/her income. If the rice price increases to a certain extent, the amount of rice bought will show a downward tendency when consumers substitute other foodstuffs which are cheaper in place of rice, and they will stop buying rice if its price is too high. In the following figure, we have the demand curve of a buyer whose income is VND200,000 per month.

The figure shows that when the rice price increases from zero to VND3,000 per kilo, the quantity consumed is unchanged (AB). When the rice price rises from VND3,000 to 10,000 per kilo, the amount consumed will decrease gradually (BC). And when the price tops the VND10,000 mark, the quantity falls briskly and comes to zero when the price rises to VND20,000 (CD).

If buyers earn bigger income, VND500,000 for exam-



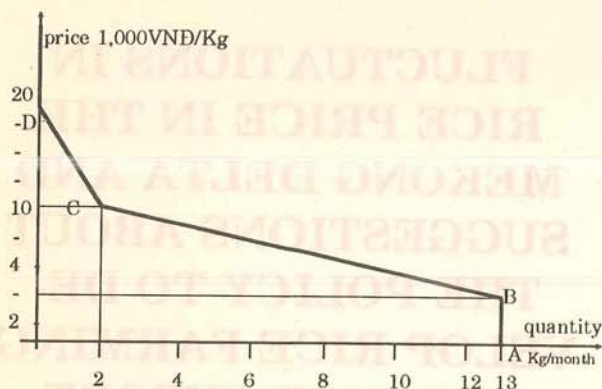


Fig. 2: Demand for rice by a buyer with a monthly income of VNĐ200,000

ple, although they can't eat more than 13 kilos a month, but they keep on buying 13 kilos a month when the price is higher than the VNĐ3,000 mark (at VNĐ7,000 per kilo for example). Above this mark, the buyer will eat less rice and more other foodstuffs. They will buy only 2 kilos when the price rises to VNĐ100,000 and stop eating rice when the price is VNĐ200,000 per kilo. The demand for rice of a community will equal the total of individual expenditures on rice and this demand curve will have the same pattern as the ABCD curve in Fig. 2.

The amount of rice bought and used as animal feeds depends on selling prices of, and market demand for, animal products. In this case, rice is a factor input and in theory, the rice demand curve has the shape shown in Fig. 3.

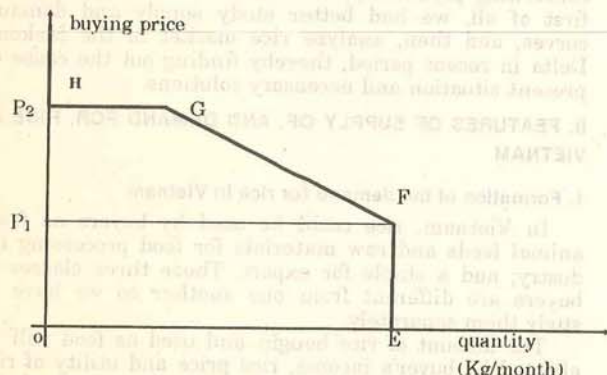


Fig. 3: Demand for rice by animal husbandry and food processing businesses

If the price is lower than  $P_1$ , all animal farming and food processing businesses will work at full capacity because this price enables them to make some profits. The quantity consumed is stable and free from effects caused by fluctuations in price (EF). When the price is higher than  $P_1$ , businesses with poor performance will suffer losses and shut up shop, therefore the quantity decreases gradually (FG). With prices above  $P_2$ , all businesses couldn't make any profit and they are forced to stop trading, the demand falls to zero (GH).

Surveying animal farming and food processing businesses, we could find out what  $P_1$  and  $P_2$  are. We assume here  $P_1$  equals VNĐ3,000 per kilo and  $P_2$ , VNĐ10,000 per kilo for presentation purposes.

The demand for rice for export has two characteristics. If Vietnam's exported rice represents a small

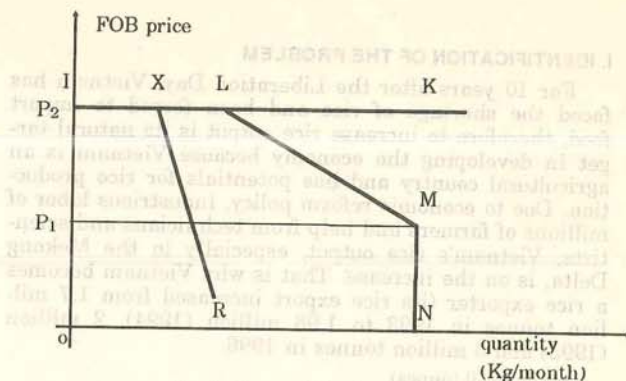


Fig. 4: Demand for rice for export

percentage in the world's rice export, the demand curve will take the form of a horizontal line (IK in Fig. 4).  $P_2$  is the rice price in the international market.

If the Vietnam's exported rice represents a considerable percentage in the world's rice export, the demand curve will run from I, through L and M, to N (Fig. 4). If the price is lower than  $P_1$ , a decrease in price can't make the quantity increase. If the price is higher than  $P_2$ , no customer buys Vietnam rice.

The amount of rice exported by Vietnam varies from 2 to 3 million tonnes a year in comparison with the world's rice export of some 10 million tonnes, the demand curve will have the ILMN shape. LM represents the maximum amount of Vietnam's rice that could be sold in foreign markets in the best conditions. If conditions are poor, the quantity demanded will be smaller (IXR curve, for example), that is, when the price falls the amount of exported rice can rise little by little and very slowly. With present conditions in the Vietnam rice export business, we are of the opinion that the demand curve IXR reflects the consumption of Vietnam's rice in the world market. From this demand curve, we can deduce food export companies' demand for rice from private traders and private traders' demand for rice from farmers (see Fig. 5)

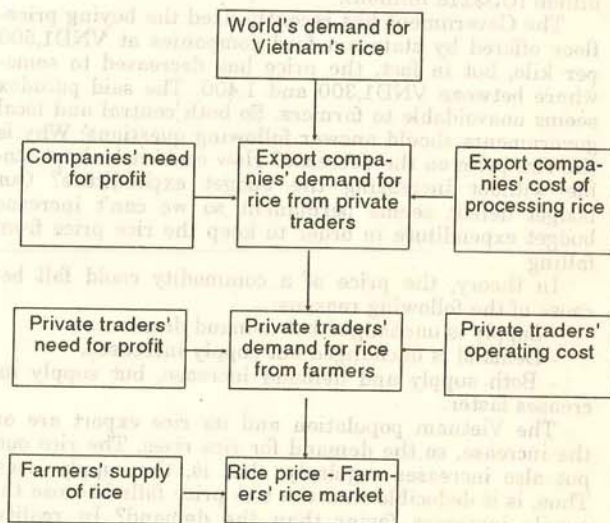


Fig. 5: Formation of private traders' demand for farmers' rice and rice price

Fig. 5 shows that the world's demand for Vietnam's rice is affected by the need for rice in foreign markets



From the export companies' demand for traders' rice (curve c in Fig.6) we can also deduce the traders' demand for farmers' rice. Traders' demand curve will be below the export companies' demand curve and depends on purchasing cost and planned profit (curves d and e). P4 is the price paid by export companies to traders when the amount bought is under q1. This price ensures companies a satisfactory profit. P5 is the price paid by traders to farmers and this price ensures a reasonable profit for traders. Statistics in 1996 in the Mekong Delta supply us with the following data:

- Adding three demand curves (rice as food, raw materials and animal feeds, and for export) together, we could find out the aggregate demand for rice in the Mekong Delta (see Section III)

After harvest, a certain amount of rice will be kept back by the farmers as food, seed for the next crop or animal feeds. Farmers sell the rest for cash which will be used for covering family expenditures, paying bank loans, buying materials needed for the next crop, etc. If the selling price is higher than production cost, they make some profits, but when the selling price rises, they can't supply more because they have only a limited amount of rice for sale. If the selling price falls, even lower than the production cost (around VND1,200 per kilo in 1996), they are forced to sell because they have no barn for the yield and they are in need of cash. Thus the supply curve will take a form of a vertical line



In 1996, the Mekong Delta produced some 13.8 million tonnes of brown rice, or 9.2 million tonnes of white rice. Around 58% of them (or 5.336 million tonnes) are for sale. The price paid by traders to farmers was VNĐ2,240 per kilo (or VNĐ1,500 for a kilo of brown rice). In 1997, it's planned that the output would be 14.5 million tonnes of brown rice, or 9.7 million tonnes of white rice, and 5.63 million tonnes of them would be for sale.

With above-mentioned results, we can show the rice market in 1996 in Fig.8.



The Mekong Delta exported some 2.7 million tonnes of rice in 1996 (or 90% of Vietnam's rice export last year). The average f.o.b price is US\$285 per tonne (or VNĐ3,200 per kilo). In Fig.8, ABC represents the world's demand for Vietnam's rice. As stated above, the price paid by traders to farmers is VNĐ2,240 per kilo and the traders' demand curve is DEF. The Fig.8 shows that, with the f.o.b price of VNĐ3,200 per kilo and the quantity exported of 2.7 million tonnes, the total demand is 5 million tonnes (point E) while the total sup-



ply is 5.336 million tonnes (point G), that is, the supply exceeds the demand by 0.336 million tonnes, and this amount is held by farmers, whereas in the market comprising traders and export companies, the supply and demand are equal (2.7 million tonnes) because traders sell rice to order given by export companies. In principle, all 5.336 million tonnes of rice could be sold out if the world's demand increases from 2.7 to 3.036 million tonnes (point H) and the price falls to VNĐ2,700 per kilo. But export companies will suffer losses from this price, because they pay to traders VNĐ2,240 for a kilo of rice and pay VNĐ550 for processing and transport cost, totalling VNĐ 2,790 per kilo. That is why they can't buy up rice output from farmers although they want to. To keep themselves from suffering losses, they have to pay a lower price to traders, and traders will lower the buying price offered to farmers (point I) with the result that farmers will suffer losses because this price is lower than production cost.

If export companies carry out a new marketing campaign successfully and obtain a bigger market share, the world's demand curve will be able to shift to AB'C' (Fig.8). At this time, the f.o.b price is unchanged but the quantity demanded increases by 0.336 million tonnes. Farmers can sell out their rice with a profit of VNĐ300 per kilo.

In 1996, although farmers could make a profit of VNĐ300 per kilo but they are facing a danger of a decrease in the rice price. At the price of VNĐ2,240, the supply is greater than the demand, that is, if traders offer a lower buying price, farmers are forced to sell because they are in need of cash and find no other buyer. If the buying price falls from VNĐ2,240 to 1,790 (from E to L) farmers will make no profit, and if it falls to M, farmers will suffer losses. As long as the Vietnam's rice export at the f.o.b price of VNĐ3,200 makes no increase, the supply is always greater than the demand, traders will have chances to lower their buying price and farmers have no way to prevent it.

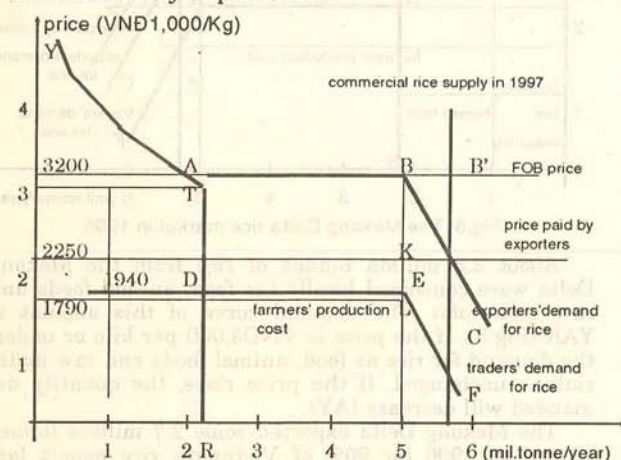


Fig.9: Mekong Delta rice market in 1997 deduced from what happened in March 1997

In 1997, Vietnam's rice for sale will be able to reach 5.63 million tonnes, if the export demand makes no shift (ABC), the supply curve will shift to the right. Assume that the amount of locally - consumed rice doesn't change, that is, the demand curve YTDEF is unchanged

in 1997, the excess of supply over demand will be greater and the rice price will fall. But this is what is happening in the Mekong Delta. Private traders paid only VNĐ1,940 to farmers for a kilo of white rice (or VNĐ1,300 for a kilo of brown rice), and export companies paid only VNĐ2,250 to traders. Figure 9 presents private traders' trade with farmers and with export companies.

Comparing figures 8 and 9, we could make the following remarks:

- Because of the excess of supply over demand, traders could decrease their buying price from VNĐ2,240 to 1,940 per kilo, and as a result, farmers' profit reduced from VNĐ450 to 150 per kilo (table 1).

Table 1: Export rice market in 1996 and 1997 (estimated)

	CPnd	Pttm	LNnd	Pxkm	CPtt	LNtt	Pxk	CPxk	LNxk	TCP	TLN
1996	1,790	2,240	450	2,350	60	50	3,200	550	300	2,400	800
1997	1,790	1,940	150	2,250	60	250	3,200	550	400	2,400	800

CPnd: production cost

Pttm: price paid by traders

LNnd: farmers' profit

Pxkm: price paid by export companies

CPtt: traders' purchasing cost

LNtt: traders' profit

Pxk: f.o.b price

CPxk: processing and transport cost

LNxk: profit for export companies

TCP: total cost

TLN: total profit

- Private traders were also forced to accept a lower price paid by export companies (VNĐ2,250 instead of 2,350 per kilo), however, traders could buy rice from farmers at a much lower price thereby increasing their profit from VNĐ50 to 250 per kilo.

- Export companies paid a lower price to traders and increased their profit from VNĐ300 to 400 per kilo, that is, a decrease in farmers' profit has increased profits for both private traders and export companies. If those state - run companies are required to maximize their profit, they certainly force traders to sell rice at a lower price, or in other words, they encourage traders to pay a lower price to farmers.

- The total cost of producing a kilo of rice for export was unchanged (VNĐ2,400), so was the total profit (VNĐ800 per kilo). The fall in buying price caused by the excess of supply over demand had led to the redistribution of profit among farmers, traders and export companies. How to make the redistribution more reasonable and satisfactory to those three parties is a difficult matter that requires many experts to solve. We want to suggest here two main measures:

#### 1. Keeping supply and demand in equilibrium

In order to satisfy the home market demand and ensure food safety for the country, the Government, for a long time, has encouraged the development of agricultural production, especially rice farming and has even forbidden farmers from growing other plants in rice fields. When the rice output was low and the rice price was high, there was no conflict between farmers' interests and the policy on rice farming development. But until recently, the supply has started to exceed the demand. The bigger the rice output, the lower its price.



This has led to the conflict\* between farmers' interests and the aim of ensuring national food safety. The following are our suggested solutions to this problem:

- In 1997, the rice output in the Mekong Delta would increase compared with 1996 and there will be a rice surplus of some 0.6 million tonnes (compared with 0.336 million tonnes in 1996). Thus, to keep supply and demand in equilibrium, Vietnam has to export about 3.6 million tonnes of rice on the condition that the quality of exported rice must be improved and a marketing strategy must be carried out successfully in order to keep the price of export rice from falling. Otherwise, a fall in f.o.b price will make the rice price in the home market much lower.

- It's necessary to make national programs to develop and export foodstuffs made from rice and encourage animal husbandry using rice as feeds with a view to increasing the demand for rice.

- To slow down the growth rate of food production is also a feasible measure. This growth rate could be kept close to the birth rate, that is, around 2% per year, instead of 7% or 8% at present. The production of high-quality rice for export must be encouraged. In short, more attention must be paid to the improvement of rice quality, not the quantity produced.

- When the rice yield is high enough (rising by 3 - 4% a year for example), a part of areas used for growing rice could be used for growing other plants such as perennials, vegetables or flowers which could yield higher profits.

## 2. Reforming the network of concerns purchasing, processing and exporting rice

Many people are of the opinion that private traders could lower their buying price because they almost hold a monopoly in purchasing rice from farmers and they suggest that there must be a system of state-run agencies specializing in purchasing rice from farmers with a view to competing against private traders, or at least, this system will operate alongside private traders and offer a higher buying price, thereby forcing traders to do the same.

However, this solution seems infeasible as long as the profit motive still predominates among state-run export companies. If state-run purchasing agencies offer a high buying price (VNĐ1,500 per kilo for example), farmers will supply rice to them, instead of selling to

traders who offer a lower price (VNĐ1,300 per kilo). Tragically, in their turn, those purchasing agencies are forced to require export companies to pay a higher price for rice supplied by them (VNĐ2,350 for example). This price is at least VNĐ100 higher than what required by traders who has bought rice from farmers at a lower price. The more those export companies buy from purchasing agencies, the less profit they gain, and as a result, they prefer buying from traders to trading with purchasing agencies. That is why export companies have been reluctant to buy rice\* from farmers at the price-floor of VNĐ1,500 as required by the Prime Minister. If private traders are allowed to export rice, they certainly buy rice from other private traders and refuse to trade with purchasing agencies, and sooner or later, state-run export companies will lose out to private export companies.

To solve this problem, we suggest two solutions:

- To eliminate intermediaries between farmers and export companies: The linkage between producers and exporters will certainly help to develop their businesses and increase their profits. Farmers could form cooperatives in order to purchase and supply rice to order placed by export companies. It will be easier for cooperatives to secure loans from banks or build barns for storing rice before supplying to exporters.

Export companies could easily establish close relations with those cooperatives and help them to produce high- quantity rice. Commercial banks also feel sure about loans supplied to cooperatives and their solvency.

- To establish the price stabilization fund from profits of export companies: when intermediaries are eliminated, profits for export companies will certainly rise. A part of companies' profits will be put in this fund. This part is exempt from corporate tax and deposited in an account with the central bank, but this fund is under the ownership of those export companies. This fund will help to stabilize the rice price without affecting the budget income or companies' business performance. Besides this fund, the Government could form a general stabilization fund for all agricultural products (sugarcane, coffee, rubber, rice, etc.) and use it to support funds for each product.

Rice farming and exporting has posed many urgent and demanding problems. We hope that our suggestions will help to make farmers in the Mekong Delta wealthier■

