CHAPTER IV

MARKET STRUCTURE OF GLUTINOUS RICE TRADER

This chapter presents different elements of the market structure. Firstly, it describes the glutinous paddy to glutinous rice process, and then defines all intermediaries involved in the glutinous rice marketing channel in the Mekong Delta. Secondly, it analyzes the competitive process in the market such as measuring the level of buyer and seller concentration, barriers to entry in the market and the distribution price information market. The chapter continues to explore the marketing channel from farmers to final customers. Finally, it measures the factors effecting glutinous rice price for each type of the intermediary's trader.

4.1 Intermediaries involved in the glutinous rice marketing system

In the marketing system of GR in the MD, there are five participating intermediaries; assemblers, dryers, millers/polishers, wholesalers, and state owned enterprises. Each trader has different a responsibility in the glutinous rice commodity chain. They have a good relationship with each other through economic rights.

4.1.1 The assemblers

Assemblers were usually the first commercial purchasers of glutinous paddy in the marketing chain. They usually begin as farmers who graduate to the next stage in the system, i.e., bulking up surpluses of neighboring farmers to capture scale economies in transport to the local market. Those that are farmers raise their working capital from the sale of their own paddy immediately after the harvest. All they require to enter into the GR business is to rent a stall or shop, buy a weighing balance scale and acquire a license from the county council. After selling their products, the capital raised was reinvested back into the paddy assembling business. Assemblers

bought paddy from the farmers or bicycle traders and sold it to dryers or millers. Some assemblers, particularly in the surplus areas, acted as purchasing agents on behalf of the large-scale millers. Whereas assemblers are found in the largest numbers in the paddy surplus areas, a few of them operated sporadically in the deficit areas where they purchased paddy from the relatively smaller proportion of farmers with surplus production in these areas.

The assemblers usually are local people who have good knowledge about the products. They have a good relationship with the local farmers. Normally, the assemblers also are the large farmers, and are only involved in business for two months per season. They own some capital; about 25 million VND – 65 million VND and small transportation means such as a truck or boat.

4.1.2 The dryers

The dryers who have a good location and investment capital, normally near a street or canal, owned 2-4 dryer machines with capacity of about 8-25 tons. The dryers also are assemblers and will go into the field to purchase the glutinous paddy and purchase at the factory from farmers and local assemblers. The dryers need about 100,000 thousand VND to 200,000 thousand VND for investment in the dryer machine and warehouse, but the big problem with dryers is not maximizing the capacity of their machinery (one month per season). The dryers also will dry outwork (as providing drying services) for the assemblers or farmers for the price of about 80,000 -90,000VND per ton (base on dried paddy).

4.1.3 The millers and polishers

This category of this intermediary was involved in the processing of glutinous paddy into glutinous rice. Millers are those processors who deal with large volumes of paddy and do their own packaging. These millers are characterized by large-scale, capital intensive and roller-milling technology. Most of the millers were concentrated

in paddy deficit areas with a few of them in the surplus regions of town. The locations of millers are in town near a street or river; most millers acquired paddy from farmers, dryers and assemblers depending on the season.

In order to cope with the inter-seasonal variations of glutinous paddy availability or supplies, millers have hired storage facilities, including silos in the paddy surplus areas where paddy is stored. The millers need to have large investment capital (minimum about 978,200, 000 VND) for machines and warehouses. All of the millers have a large warehouse for storage which is also retained for dryers and assemblers who send their products to the millers until they want to process it.

The millers can purchase paddy from farmers, assemblers and dryers, after that they are engaged in milling and polishing activities and delivering milled glutinous rice to other traders such as wholesalers or retailers. Sometimes they merely provide milling and polishing paddy services for other traders. The millers received payment of about 150,000 – 160,000VND per ton of paddy for this service. In this study area, most millers are of medium scale with processing capacity of about 15 – 25 tons per day.

4.1.4 The wholesalers

Wholesalers are traders who buy GR from millers and transport the GR with their own truck to retail markets where they sell their product to the retailers. The wholesalers have a large retailer's market system in the city or downtown with a large amount of regular customers. They are involved in the glutinous rice business all year and some of them cooperate with the State Owned Enterprise (SOEs) to supply them glutinous rice when the SOEs have an export contract. They usually have good experience in glutinous rice trading, and a strong relationship with other traders and an excellent knowledge of glutinous rice quality and market information. They buy a large volume of glutinous rice from millers and delivery it to other provinces and cities through retailer shops where high consumption prevails.

4.1.5 The State Owned Enterprises

State Owned Enterprises (SOEs) are engaged in the glutinous rice marketing system as the major food companies. Normally, in the province level there is one SOE. The SOEs are controlled by the provincial government. In this study area, there were three SOEs such as Long An Food Company, Tien Giang Food Company and ANGIMEX An Giang. They are the biggest rice traders purchasing rice from millers and wholesalers to export. They are the main exporters in the export market. According to the Vietnamese Food Association in 2000, there were a total of 47 companies which have licenses to export rice; 39 were SOEs and eight others private enterprises.

4.2 The characteristics of glutinous rice traders in Mekong Delta

4.2.1 Personal profile of glutinous rice traders

The glutinous rice (GR) traders in the Mekong Delta are the local people who have capital and good knowledge about glutinous rice. In general, they are an older age group with the average age being more than 40 years old. The wholesalers are the oldest age group with the average age of 45 years old, because they need more experience and a longer relationship with the retail market and retailers. The assemblers, dryers and millers have similar average ages of about 41, 42 and 43, respectively (table 4.1).

The data from the table shows that on average, the GR trader's household has four to five members, which is the large scale family. The number of family laborers involved in the GR business is two or three laborers, normally, this is a husband and wife and some traders have one child to help them. In the group of millers the family members usually hold an important position such as technician or manager. The assemblers and wholesalers are 61.70% and 83.33% female but for the dryers and millers only 15.38% and 12.50% are female, because millers and dryers should have an in-depth knowledge about the technical aspects of the work, which is normally suitable for the male.

Table 4.1: Personal profile of glutinous rice traders

Characteristics	Assemblers	Dryers	Miller/ polishers	Wholesalers
1. Average age of traders	41	42	43	45
2. Number of family laborers	5	5	4	5
3. Number of family laborers involved GR business	2	3	3	2
4. Gender of traders				
- Male (%)	38.30	84.62	87.50	16.67
- Female (%)	61.70	15.38	12.50	83.33

Source: Survey, 2006

4.2.2 Commercial profile of glutinous rice traders

The average number of years of experience in the GR business of traders is more than ten years. The wholesalers have the most years of experience with an average of 15 years. The assemblers have smallest years of experience with an average of ten years. The employees need to run the business and the miller needs the biggest labor force (about three permanent and ten temporary workers at peak season), because there are many stages in their activities. The dryer also needs ten workers (both part-time and full-time workers) for their business. The assemblers and wholesalers only need four to five laborers, normally, husband, wife, children or a relative. In general, the assemblers and dryers only run their business about two months per season (six months per year), but they also have other activities, so the percentage of total family income from GR business are 59.87% and 66.08% for assemblers and dryers. The millers and wholesalers work on a full time basis. In addition, the majority of GR millers and wholesalers are highly specialized in their field, so they receive 87.92% and 93.67% total family income from the GR business (table 4.2).

Table 4.2: Commercial profiles of glutinous rice traders

Characteristics	Assemblers	Dryers	Miller/ polishers	Wholesalers
1. Average year experience in GR business (years)	10	13	11	15
2. Average number of employees (laborers)				
- Permanent workers	2	3	3	2
- Temporary workers at peak season	2	7	10	3
3. Percentage of total family income from GR business (%)	59.87	66.08	87.92	93.67
4. Main reason for GR business (%)				
- Business location advantage	10.64	35.90	41.67	22.22
- High profit	46.81	41.03	29.17	55.56
- Passed down from family	6.38	7.69	8.33	5.56
- Lack of land for cultivation	34.04	10.26	16.67	11.10
- Others	2.13	5.11	4.16	5.56

Source: Survey, 2006

When asked about their reasons for being involved in the GR business, most of the GR traders answered that high profit is the main reason, (46.81% of assemblers, 41.03% of dryers and 55.56% of wholesalers). The 41.67% of millers answered they have an advantageous business location as the main reason for involvement in the GR business. Consequently, the location is very important with millers as whether the business is successful or not. The second main reason is lack of land for cultivation (34.04% of assemblers) and after this living in a good location (35.90% of dryers and 22.22% of wholesalers), and finally high profit (29.17% of millers).

4.2.3 Other business activities of glutinous rice traders

The GR traders also have other business activities such as paddy cultivation, growing livestock or poultry, retailing, renting vehicles, selling animal food or others forms of making income (such as working in the government office, teachers etc) (table 4.3).

Table 4.3: Other business activities of glutinous rice traders

Types of other business	Percentage of response (%)			
	Assemblers	Dryers	Miller/ polishers	Wholesalers
1. Paddy cultivation	93.62	92.31	83.33	44.44
2. Growing livestock or poultry	34.04	92.31	100.00	0
3. Retailing	6.38	5.13	0	0
4. Renting vehicle (truck, boat)	0	5.13	0	0
5. Selling animal food	4.26	7.69	4.17	0
6. Others	36.17	15.38	12.50	38.89

Source: Survey, 2006

Note: One respondent may have more than one answer

The table 4.3 presented that besides glutinous paddy purchasing and selling, the assemblers also are farmers with 93.62% having paddy cultivation activity, 34.04% of them raise livestock and 36.17% have other activities; only a few assemblers sell animal food and have retailing businesses(4.26% and 6.38%, respectively). The dryers have other major activities which are paddy cultivation and growing livestock at 92.31%. All of the millers grow livestock (100% of millers) because they want to use their by-products in processing paddy milling, and 83.33% millers also have paddy cultivation. Nearly half of the wholesalers (44.44%) have paddy cultivation, and 38.89% have others activities.

4.2.4 The investment of glutinous rice traders

The investment capitals are divided into two parts; fixed assets and equipment and working capital. Equipment necessary for GR business is: transportation means, weighing scale, drying facility, milling/polishing facility and warehouse, and office etc. The investment depends on the traders and equipment requirement with each trader and they have different investment value. There are two sources of working capital; capital owned and capital borrowed. All traders have more capital borrowed than capital owned. The assemblers, dryers, millers and wholesalers have 209,149; 258,692; 446,667 and 337,889 thousand VND capital owned respectively, however, they have 378,289; 441,282; 776,250 and 547,778 thousand VND capital borrowed (table 4.4).

Table 4.4: Average investment of glutinous rice traders

Unit: 1,000 VND

Items	Assemblers	Dryers	Miller/ polishers	Wholesalers
I. Fixed assets and equipment	*67,441*	*224,060*	*1,665,835*	*119,895*
1. Transportation equipment	65,143	60,000	74,167	114,167
2. Weight scale	498	484	544	428
3. Drying facility	0	91,718	110,375	0
4. Milling/polishing facility	0	0	1,123,333	0
5. Storage building	0	69,359	322,917	3,200
6. Others	1,800	2,500	34,500	2,100
II. Working capital	*587,447*	*699,974*	*1,222,917*	*921,667*
1. Capital owned	209,149	258,692	446,667	373,889
2. Capital borrowed	378,289	441,282	776,250	547,778

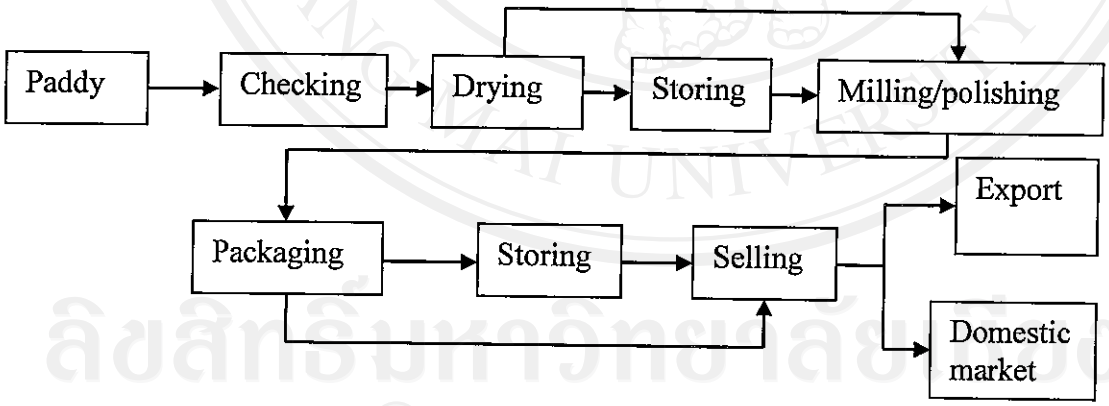
Source: Survey, 2006

Note: Others: Communication system, office etc

The table 4.4 shows the details on the investment of each glutinous rice trader in the Mekong Delta. The results indicate that the millers have the largest fixed assets and equipment (1,665,835 thousand VND about 103,887 USD[1]), because they have to invest a lot in machinery and equipment. The most expensive equipment of millers is milling/polishing system, priced from 350,000 to 2,150,000 thousand VND depending on quality and capacity. The dryer also needs to invest a lot of capital for equipment because they need to have a drying machine and warehouse for stocks. The average capital invested for fixed assets and equipment of dryers is 224,060 thousand VND (about 13,973 USD). The assemblers and wholesalers only invest about 67,441 and 119,895 thousand VND, respectively, for fixed assets and equipment.

4.3 Steps in the glutinous paddy to glutinous rice process

Figure 4.1 shows the process of product from glutinous paddy to glutinous rice in the MD.



Source: Survey, 2006

Figure 4.1: Steps in the glutinous paddy to rice in the marketing process.

[1] Exchange rate 1 USD = 16,035 VND (Dec, 2006)

There are seven different steps; the first step is checking the standard requirement regarding moisture content and dependent on the varieties of the paddy, they make a decision to mix the same varieties and similar moisture content with others. The next step is drying the paddy until the dried paddy has a moisture degree of about 14-15^0. The glutinous paddy cannot dry by the sun because according to some farmers and traders if sun dried, the quality is not good and not uniform. Next step is storing or milling/polishing, depending on market demand, the traders will determine whether to store or mill the paddy. The next step is packaging, which depends on the customer's requirements about the percentage of broken (usually, 5%, 10%, and 25% broken). Finally, selling or storing will apply.

4.4 Competition of glutinous rice market in Mekong Delta

4.4.1 Barriers to entry into the glutinous rice market

The barriers to entry into the market mirror the competitive relationships between existing traders and potential traders. If the barriers to entry are high, new traders find it difficult to enter the markets. Established traders are protected from potential rivals. In this study, we discovered some of these barriers and asked questions to the traders who were interviewed by a designed questionnaire. Each trader will have only one answer about the most difficult barrier, so that the total of responses on different levels is equal with total sample. They revealed that the major barriers are the lack of investment capital, lack of paddy or rice supply, unstable output market, high taxes, difficulty in getting a license, severe rivalry and others (any others difficulties such as market price unstable, quality control etc.). Barriers to entry faced by all traders are shown in the tables 4.5; 4.6; 4.7 and 4.8).

Table 4.5: Barriers to entry the market for assemblers in Mekong Delta

Barrier to entry	Number of response on different levels (n=47)				
	Not important	Less important	Important	Very important	Weighed average score
Lack of investment capital	3	4	12	28	2.38
Lack of paddy/rice supply	19	18	8	2	0.85
Unstable output market	4	24	16	3	1.38
High taxes	15	22	10	0	0.89
Difficult to get license	28	15	4	0	0.49
Severe rivalry	2	10	20	15	2.02
Others	36	8	2	1	0.32

Source: Survey, 2006

Note: Average score was calculated based on the number of responses on different levels and by using Weighed Average method.

Score for different levels:

Not important: = 0 score

Less important: = 1 score

Important: = 2 score

Very important: = 3 score

Example: Lack of investment capital in table: $\frac{(3x0)+(4x1)+(12x2)+(28x3)}{(3+4+12+28)} = 2.38$

The table 4.5 shows that the most important difficulty faced by assemblers is the lack of investment capital with an average score of 2.38, because when they want to borrow money from the bank, they need to have assets (usually used land certificate as collateral) and the bank always limits the amount of borrowed money, normally, equaling 70% of total value of collateral. The second important barrier is

severe rivalry (average score is 2.02), due to high profit of the GR business. Difficulty acquiring a license is no problem (average score is 0.49) because with assemblers, there is no need to get a license except for some larger scale businesses.

Table 4.6: Barriers to entry market for dryers in Mekong Delta

Barrier to entry	Number of response on different levels (n=39)				
	Not important	Less important	Important	Very important	Weighed average score
Lack of investment capital	7	6	14	12	1.79
Lack of paddy/rice supply	6	7	12	14	1.87
Unstable output market	25	9	3	2	0.54
High taxes	8	21	7	3	1.13
Difficult to get license	24	7	5	3	0.67
Severe rivalry	18	15	3	3	0.77
Others	17	10	8	4	0.97

Source: Survey, 2006

Note: Method to calculate weighted average score same assemblers

With dryers, the most important barrier is lack of paddy supply (average score 1.87) because if there is not enough paddy supply, they can not maximize dryer utilization, so the business is not economically efficient. Next, the lack of investment capita and high taxes are 1.79 and 1.13 average score, respectively. The dryers need to invest in drying machines and warehouses so they need a large amount investment capital. They seem to have fewer problems with output market and business licensing. When they finished drying the paddy, they would easily sell their product to the millers. Most of the dryers said that it was very easy to get the business license and sell the product after drying it.

Table 4.7: Barriers to entry market for millers in Mekong Delta

Barrier to entry	Number of response on different levels (n=24)				
	Not important	Less important	Important	Very important	Weighed average score
Lack of investment capital	2	2	4	16	2.42
Lack of paddy/rice supply	9	12	2	1	0.79
Unstable output market	1	7	7	9	2.00
High taxes	2	3	10	9	2.08
Difficult to get license	15	9	0	0	0.38
Severe rivalry	1	1	8	14	2.46
Others	13	6	3	2	0.75

Source: Survey, 2006

Note: Method to calculate weighed average score same assemblers

The table 4.7 shows that, the two key constraints are severe rivalry and lack of investment capital for glutinous rice millers in the Mekong Delta (with average scores of 2.46 and 2.42). High taxes was also perceived as important barriers for millers, the average score is 2.08, the taxes such as revenue tax, income tax, environmental tax and community tax. Besides these taxes they usually must provide support for charity organizations in the local area. The next problem for millers is an unstable output market (with 2.00 average score). During the harvesting season, there is a lot of glutinous paddy available for milling, but demand of glutinous rice is stable, so storage is very important for millers who run business continuously. If the millers do not have a stable output market, they will not control their business and maximize utilization of their machinery and workers. Their business depends on the market. All millers have no difficulty in licensing and paddy supply, the average scores are 0.38

and 0.79 respectively. Because the millers have regular suppliers such as dryers and assemblers, sometimes the miller will buy glutinous paddy directly from the farmers.

Table 4.8: Barriers to entry market for wholesalers in Mekong Delta

Barrier to entry	Number of response on different levels (n=18)				
	Not important	Less important	Important	Very important	Weighed average score
Lack of investment capital	1	1	3	13	2.56
Lack of paddy/rice supply	12	3	2	1	0.56
Unstable output market	6	10	2	0	0.78
High taxes	10	7	1	0	0.50
Difficult to get license	13	5	0	0	0.28
Severe rivalry	1	6	10	1	1.61
Others	4	10	2	2	1.10

Source: Survey, 2006

Note: Method to calculate weighed average score same assemblers

As shown in the table 4.8, the most important obstacle for the wholesalers is also the lack of investment capital with an average score of 2.56. Normally, wholesalers want to have a lot of retail customers. They use promotional strategies such as selling their product to retailers in the retail market without receiving money until the retailers finish selling their products. This mean the wholesalers needs a large capital for business. After that, the severe rivalry is the second most important barrier to wholesalers (1.61 average score), because when purchasing and selling to others in the provinces, they are faced with a lot of competitors in the market. The difficulty in acquiring a license and high taxes are not problems for the wholesalers with an average score of 0.28 and 0.50 respectively.

4.4.2 Degree of buyer and seller concentration

The degree of buyer and seller concentration refers to the number of the GR traders in the glutinous rice market. The Lorenz curve and GINI coefficient were used to estimate the degree of seller and buyer concentration. In order to calculate the GINI coefficient, the volume of paddy or rice sold by the traders is ranked from highest to lowest, while their respective market shares will be computed by getting the percentage of total sales or purchases handled by each trader group.

In this section the Lorenz curve and GINI ratio are analyzed for each type of traders (assemblers, dryers, millers and wholesalers) (more details about how will calculate it in appendices A; B; C and D). The results in Figures 4.2, 4.3, 4.4 and 4.5, reveal low market concentration in all market levels, the GINI coefficient range from 2.2122 (assemblers) to 0.3109 (millers).

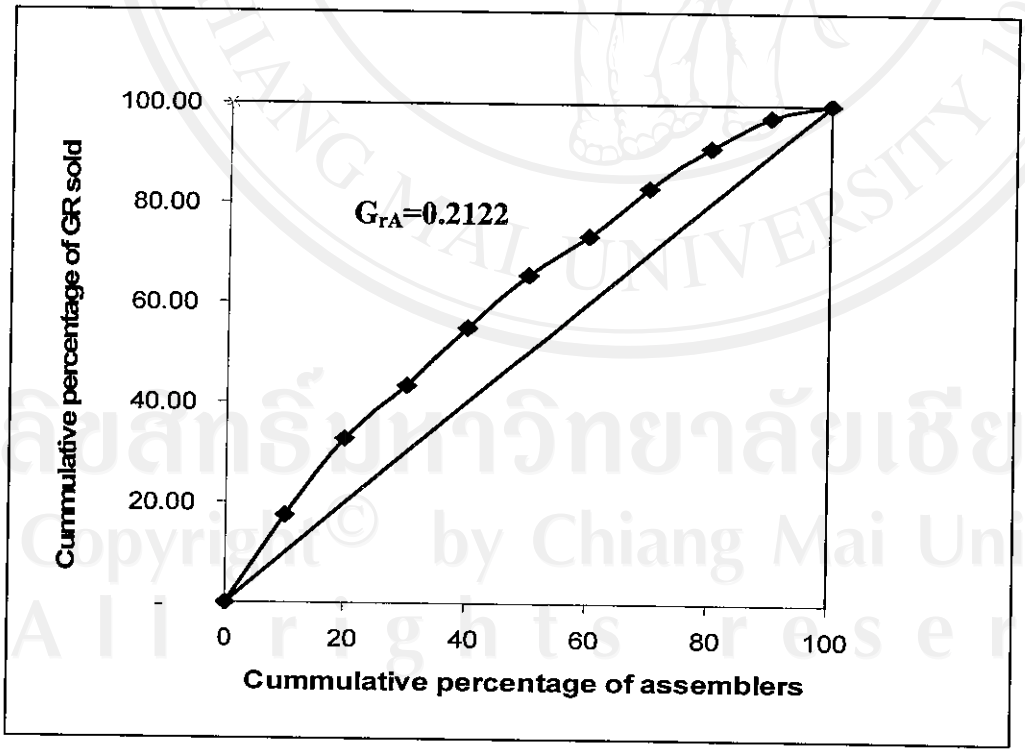


Figure: 4.2: Lorenz curve of glutinous rice assemblers in Mekong Delta

Source: Survey, 2006

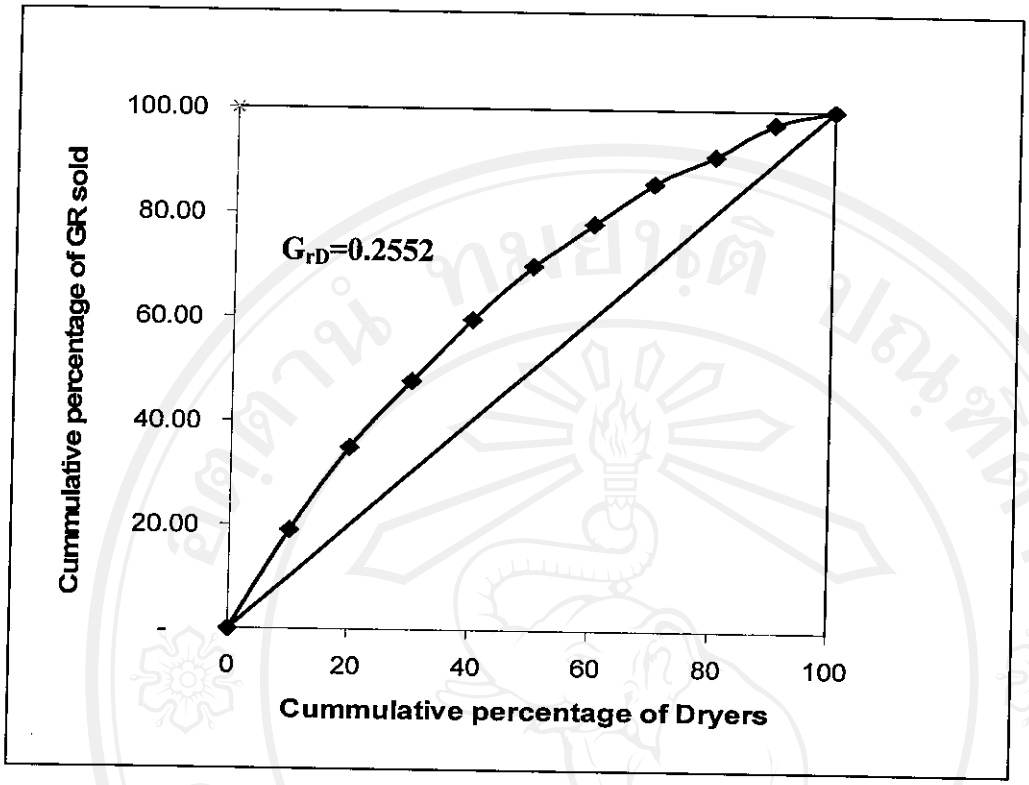


Figure: 4.3: Lorenz curve of glutinous rice dryers in Mekong Delta

Source: Survey, 2006

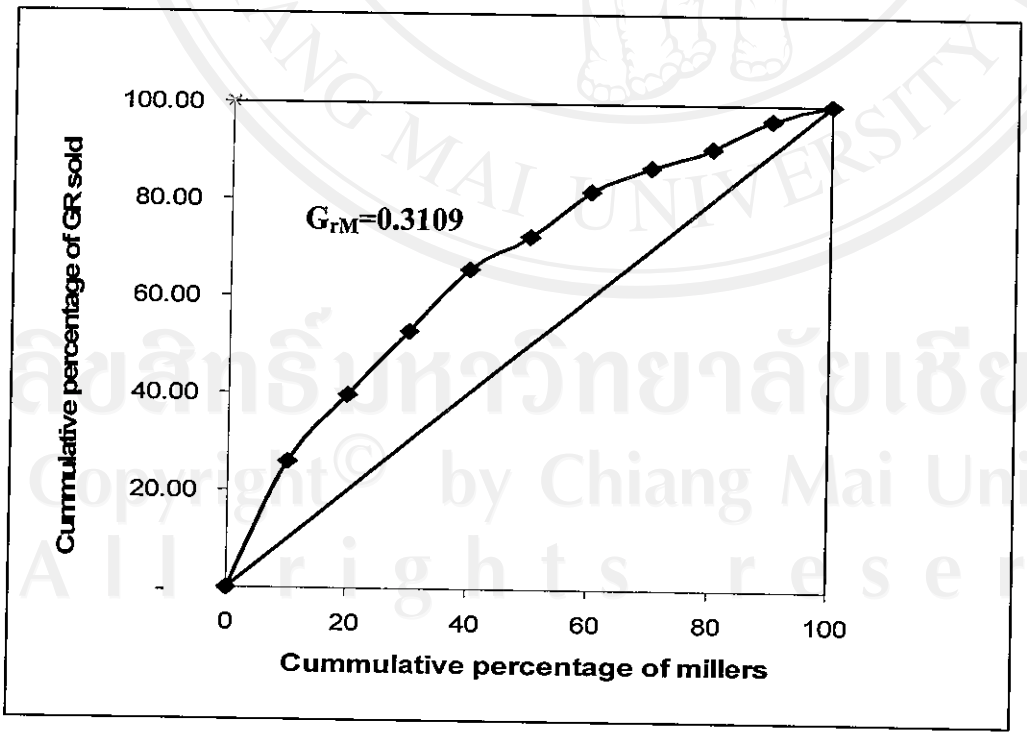


Figure: 4.4: Lorenz curve of glutinous rice millers in Mekong Delta

Source: Survey, 2006

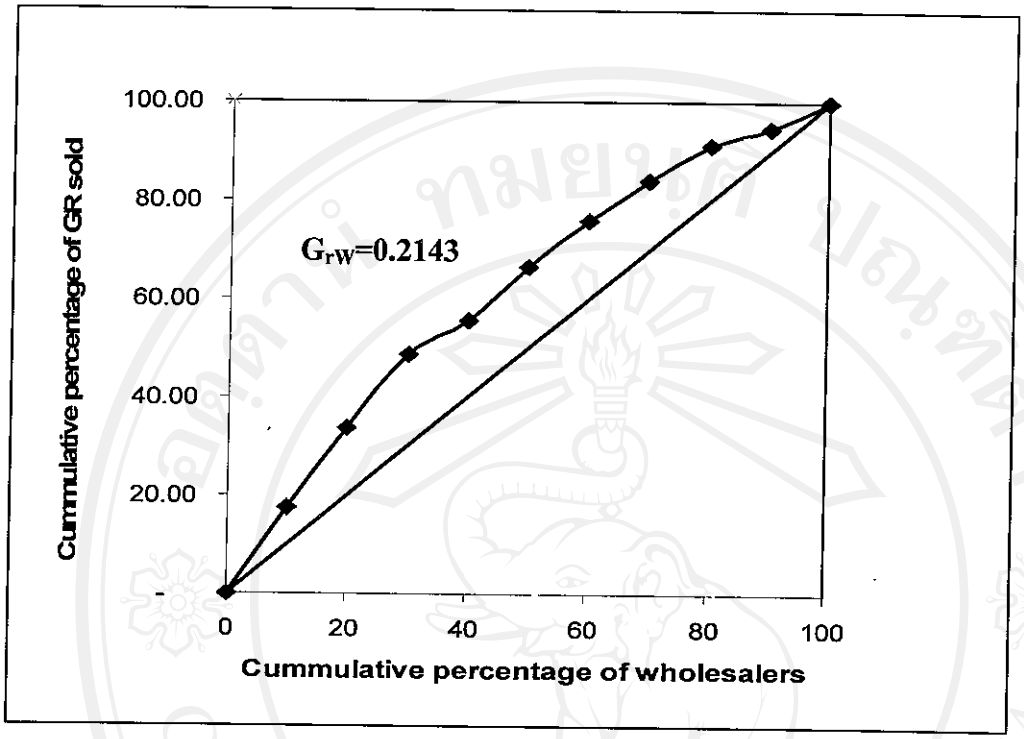


Figure: 4.5: Lorenz curve of glutinous rice wholesalers in Mekong Delta
Source: Survey, 2006

In the figures 4.2, 4.3, 4.4 and 4.5 indicate that the GINI ratio is the highest for GR miller with G_{rM}=0.3109, and the lowest is G_{rA}=0.2122 for GR assemblers. The GINI ratio of dryers and wholesalers are 0.2552 and 0.2143 respectively. In general, the GINI coefficient of all GR traders in MD is not so high, meaning there is equity volume purchased and sold among producers and among traders groups in the market. The GR market in the MD is a highly competitive market. There are not dominant traders in the market. The percentage of traders handle a little bit higher percentage of paddy/rice sold in market.

The glutinous rice market in the Mekong Delta is a highly competitive market, which means the market share will be equal for every trader and the farmers have the right to choose the buyer to sell their product. In this market, all agents will share the benefits with others. Different from the past, when the market was an enterprise controlled and owned by the state, including the input market and output market.

4.4.3 Distribution of price information in market

The distribution of price information refers to the availability of market information to assemblers, dryers, millers and wholesalers. The survey reveals that about 53% of assemblers obtain price information very easy, 40% find it difficult and only 7% answer very difficult (table 4.9).

Table 4.9: Access to price information in market

Traders	Percentage of response on different levels (%)		
	Easy to obtain	Difficult	Very difficult
1. Assemblers	53	40	7
2. Dryers	59	31	10
3. Millers	46	42	12
4. Wholesalers	61	28	11

Source: Survey, 2006

Table 4.9 indicates that more than half of the traders obtain price information in the market very easily (53% of assemblers, 59% of dryers, 46% of millers and 61% of wholesalers). Some of them find it difficult to acquire with 40%, 31%, 42% and 28% for assemblers, dryers, millers and wholesalers respectively. Few traders answered that price information was very difficult to get with 7% (assemblers), 10% (dryers), 12% (millers) and 11% (wholesalers), of them finding exact price information in the market very difficult to procure. The price in the market is transmitted among the traders by mobile phone, and traders also find price information in the international market by the internet. Subsequently, nowadays they think the price information is very easy to obtain. Some traders think that it is difficult because they want to have a price for every local market and update this price all the time. The traders will trade information with each other about the price in the market every morning, but sometimes it is not exact because they want to have the formal channel distribution price information. The farmers will get price information from

assemblers and dryers; some can obtain it from millers when they want to sell their products. What are the sources of the price information? (Table 4.10)

Table 4.10: Source of price information in market

Source of information	Percentage of response on different source (%)			
	Assemblers	Dryers	Millers	Wholesalers
1. Media (Newspaper, Radio, TV	12	10	8	11
2. State Owned Enterprises	19	15	16	11
3. Private traders	40	41	38	39
4. Friend and relatives	23	23	21	22
5. Others	6	11	17	17
Total	100	100	100	100

Source: Survey, 2006

Table 4.10 indicates that the main channel for the price information is private traders with 40%, 41%, 38% and 39% for assemblers, dryers, millers and wholesalers respectively. The second source is from friends and relatives (23% for assemblers and dryers). Some of traders get it through media systems, for example, they read newspapers, listen to radio and watch television. But this information is only for reference because according to traders the price information presented by the media is highly generalized depicting averages for all of the provinces. It provides no details on specific quality or grades of the products. The State Owned Enterprises was an important channel for distribution price information. When the SOEs came and signed the buying contract with farmers, they negotiated with others about the price in the contract, and the private traders would then set up the price for purchasing with farmers dependent on this price. The percentages of traders who obtained price information from SOEs are 19% (assemblers), 15% (dryers), 16% (millers) and 11% (wholesalers). The other resources such as internet and telephone were an advanced method applied by the traders who had a good knowledge of technology systems.

4.5 Glutinous rice marketing channels in Mekong Delta

In the glutinous rice market channels in the Mekong Delta there are nine types of intermediaries involved in the marketing systems. These are the farmers, assemblers, dryers, millers, wholesalers, SOEs, retailers, consumers and exporters (figure 4.6). The linkage network among marketing agents involved in the glutinous rice marketing system is highly complex. The farmers, assemblers, dryers, millers, wholesalers, retailers and SOEs interact with one another and they have a responsibility in the shipping, storing, processing and distributing of the glutinous paddy/rice in the Mekong Delta.

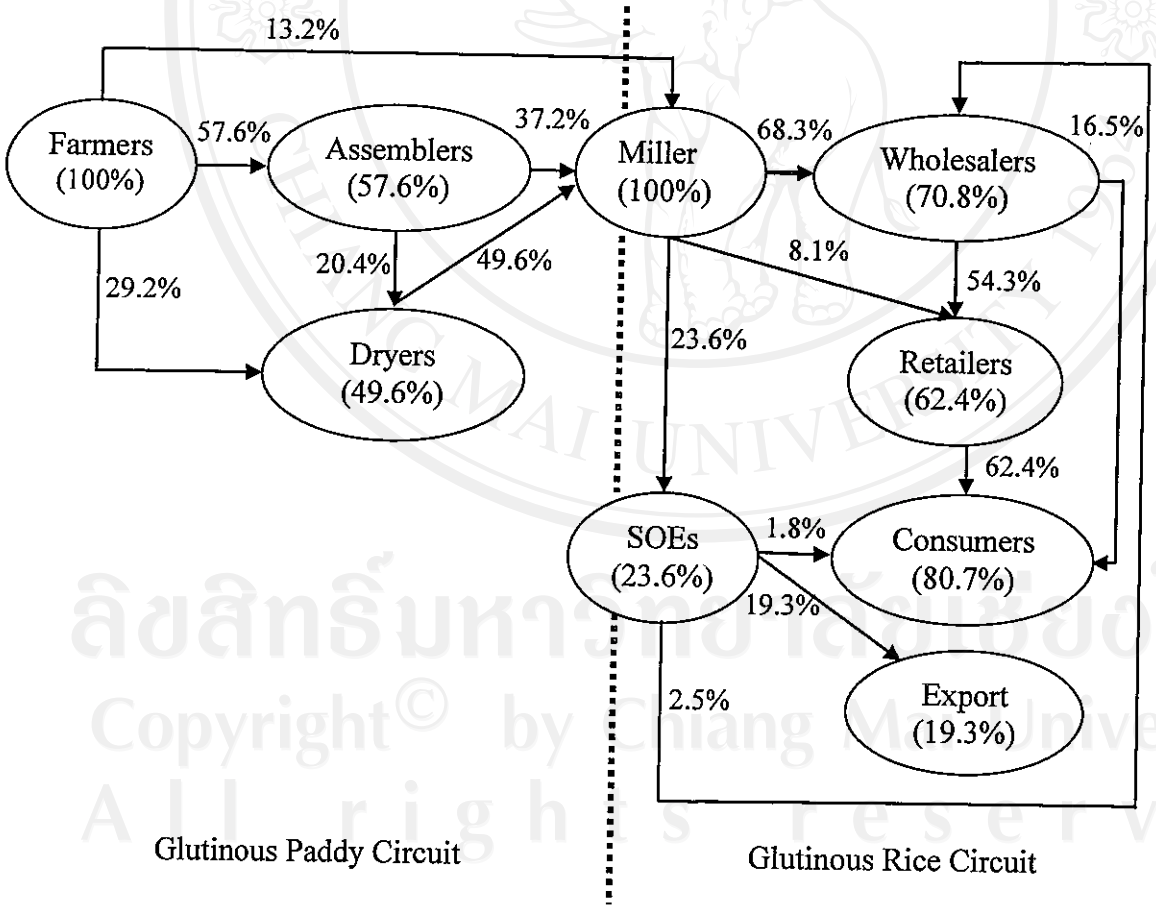


Figure 4.6: Marketing channel of glutinous rice in Mekong Delta.

Source: Survey, 2006

The marketing channel of the GR in the MD starts with farmers who sell their products for assemblers, dryers and millers. There are three main customers of the farmers (same result found of Dung, 1998 and IFPRI 1996). In general, the marketing channel of the GR in the MD is dominated by private traders.

Figure 4.6 shows that in the glutinous rice market of Mekong Delta, there are three distribution channels from farmers to final consumers. There are:

1. Farmers – assemblers – millers/dryers – wholesalers/retailers/SOEs – retailers/export – consumers.
2. Farmers – dryers – millers – SOEs/retailers/wholesalers – consumer/exporters
3. Farmers – millers - SOEs/retailers/wholesalers – consumer/exporters

The biggest volume of paddy changes hands from farmers to assemblers (57.6%), the assemblers play a significant role at the farm level, only 29.2% and 13.2% of glutinous paddy sell to dryers and millers respectively because the assemblers usually have a better relationship with farmers. When the farmers have problems about financing, the assemblers will give loans for farmers without interest, after that when farmers harvest the paddy they will sell it for them. One more reason the farmers like to sell products to the assemblers is because it is easy and can be done anytime and anywhere. After the farmers harvest the product they need to only send a message or call by telephone to the assemblers and they will go to the field and give them a price. There is a strong linkage between farmers and assemblers because the farmers lack of price information and means of transportation, and they also need quick cash to repay loans or prepare to buy material for the next crop as well as current household living expenses. There was no linkage between farmers with SOEs although the SOEs also signed the buying contract with farmers in these areas. According to farmers, the SOEs had a long purchasing procedure. It took many steps in testing for quality standard. The SOEs also did not want to buy paddy directly from farmers. According to SOEs, when they went to buy paddy in the field, the cost was higher than when they bought from millers or wholesalers. So that when the SOEs

wanted to have glutinous rice for their costumers, they would contact directly the miller or wholesalers.

Three distribution channels above, we found that channel (1) is the most important in the marketing system with the biggest amount of glutinous paddy/rice flow among traders. There were farmers to assemblers (57.6%), assemblers to millers (37.2%), millers to wholesalers (68.3%), wholesalers to retailers (54.3%) and retailers to consumers (62.4%).

4.6 The factors effecting glutinous rice price

When the traders negotiate with farmers or others traders about the price for purchasing and selling they depend on the characteristics of the products, namely quality (varieties and % broken) and moisture content. Also the quantity of transaction distance of transporting and time of season are counted. However, traders give different importance level between these factors (tables 4.11; 4.12; 4.13 and 4.14)

Table 4.11: Factors influencing buying and selling price according to assembler

Factors	Number of response on different levels (n=47)				
	Not important	Less important	Important	Very important	Weighed average score
1. Quality (Varieties, % broken)	11	24	7	5	1.13
2. Moisture content	9	10	13	15	1.72
3. Buying large or small volume	14	22	10	1	0.96
4. Long or short distance of transport.	11	8	19	9	1.55
5. Seasons	17	12	12	6	1.15

Source: Survey, 2006

Note: Average score was calculated based on number of response on different levels and by using Weighed Average method.

Score for different levels:

Not important: = 0 score

Less important: = 1 score

Important: = 2 score

Very important: = 3 score

Example: Quality in table: $\frac{(11x0)+(24x1)+(7x2)+(5x3)}{(11+24+7+5)} = 1.13$

Table 4.11 found that when assemblers negotiate with farmers about the buying price, the most important factor is moisture content (with average score 1.72) because according to traders the moisture content is very significant, at this stage, moisture will directly effect the length of time to dry and also the percentage of loss when they dry product (from fresh to dried paddy). The next factor of importance is the length in distance of transporting (average score 1.55). If it is a long distance, the cost of transportation will increase. The season and quality (varieties) seem be not as an important factor with 1.15 and 1.13 average score respectively. In one area the farmers only use limited varieties which mean there is no difference between the varieties. The large or small volume is not an important factor at this stage (average score 0.96)

The results investigated in table 4.12 show that the most important factor with dryers is moisture content (average score is 1.79). If the glutinous paddies have high moisture content, the dryers have to pay more for time and cost for drying. The percentage of loss in the drying process also increases. The quality of the product and season are the second and third main factors in influencing the purchasing price with an average score of 0.92 and 0.90 respectively. The buying of large or small volumes and long or short distance of transporting are not an important factor with the dryers, with average lowest score of 0.72 and 0.77. Normally, the dryers only purchased at the factory, only in small volumes by directly purchasing from the paddy field.

Table 4.12: Factors influencing buying and selling price according to dryer

Factors	Number of response on different levels (n=39)				
	Not important	Less important	Important	Very important	Weighed average score
1. Quality (Varieties, % broken)	17	13	4	5	0.92
2. Moisture content	5	11	10	13	1.79
3. Buying large or small volume	20	12	5	2	0.72
4. Long or short distance of transport.	18	13	7	1	0.77
5. Seasons	16	13	8	2	0.90

Source: Survey, 2006

Note: Method to calculate weighed average score same assemblers

Table 4.13: Factors influencing buying and selling price according to miller

Factors	Number of response on different levels (n=24)				
	Not important	Less important	Important	Very important	Weighted average score
1. Quality (Varieties, % broken)	7	6	6	5	1.38
2. Moisture content	12	9	2	1	0.67
3. Buying large or small volume	10	9	3	2	0.88
4. Long or short distance of transport.	13	5	4	2	0.79
5. Seasons	10	6	5	3	1.04

Source: Survey, 2006

Note: Method to calculate weighed average score same assemblers

The results in table 4.12 and table 4.13 shows that the millers and wholesalers think quality is the most important factor when they negotiate purchasing and selling prices with average scores of 1.38 and 2.56 respectively. The second important factor with millers is the season (average score 1.04), because the season will influence the quality of the product and conversion ratio (rate of return). According to millers the Winter-Spring crop is the highest quality. Some other factors have similar average scores (0.67; 0.88; 0.79 for difference in moisture content, buying large or small volume and long or short distance of transport respectively).

Table 4.14: Factors influencing buying and selling price according to wholesalers

Factors	Number of response on different levels (n=18)				
	Not important	Less important	Important	Very important	Weighed average score
1. Quality (Varieties, % broken)	0	2	4	12	2.56
2. Moisture content	13	5	0	0	0.28
3. Buying large or small volume	7	6	3	2	1.00
4. Long or short distance of transport.	1	4	7	6	2.00
5. Seasons	11	6	1	0	0.44

Source: Survey, 2006

Note: Method to calculate weighed average score same assemblers

The wholesalers believe the long or short distance transport is the second factor influencing price negotiation with an average score of 2.00, because with the wholesalers, transportation costs are a principal cost in the total cost. If it is very far, the cost will increase and affect the profit. After that buying large or small volumes with an average score of 1.00. The moisture content and season are not important factors with 0.28 and 0.44 average scores, respectively.